AECOM

Construction Completion Report

Hudson River Operable Unit 2

BASF Corporation Rensselaer
Rensselaer, New York

November 29, 2023



Certification

I, Michael Gardner, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Design Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Design Work Plan.

I certify that the data submitted to the Department with this Construction Completion Report demonstrates that the remediation requirements set forth in the Remedial Design Work Plan and in all applicable statues and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class “A” misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Michael Gardner, of AECOM, Inc., am certifying as BASF’s Designated Site Representative for the Site.

089344	11/30/2023	Michael Gardner
NYS Professional Engineer #	Date	Signature



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List of Acronyms

AAC	acceptable ambient concentration
AECOM	AECOM Technology Services
BASF	BASF Corporation
CAMP	Community Air Monitoring Plan
CCR	Construction Completion Report
CFR	Code of Federal Regulations
COC	constituent of concern
CWA	Clean Water Act
CY	cubic yards
Hudson River OU-2	the Hudson River portion of OU-2
LRI	Land Remediation, Inc.
mg/Kg	milligrams per kilogram
MNR	monitored natural recovery
NSMA	Northern Sediment Management Area
NYCRR	New York Code Rules and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OUs	Operable Units
PAM	portable air monitoring
PCB	polychlorinated biphenyl compound
PM10	respirable particulate matter
RA	Remedial Action
RAMP	Remedial Action Monitoring Plan
RAOs	Remedial Action Objectives
RCRA	Resource Conservation Recovery Act
RD/RAWP	Remedial Design/Remedial Action Work Plan
RI	Remedial Investigation
RM	river miles
ROD	Record of Decision
SAP	Super Absorbent Polymer
SAV	submerged aquatic vegetation
SMP	Site Management Plan
SPDES	New York State Pollution Discharge Elimination System
SSMA	Southern Sediment Management Area
TFS	temporary fabric structure
TSCA	Toxic Substances Control Act
TVOC	total volatile organic compound
USACE	United States Army Corps of Engineers
VOC	volatile organic compound

1. Background and Site Description

AECOM Technology Services (AECOM), on behalf of BASF Corporation (BASF) has prepared this Construction Completion Report (CCR) for the remediation of the impacted sediment in the Hudson River adjacent to the Former BASF Facility (the "Site") located in Rensselaer, New York. The BASF Manufacturing Plant, DEC Site #: 442027, is located at 36 Riverside Avenue Rensselaer, NY 12144 (Figure 1).

The Site is located on the Hudson River, approximately 148 river miles (RM) north of New York Harbor, and 10 RM below the Federal Dam in Troy. The Hudson River is tidal below the Federal Dam. In Albany, across the river from and to the west of Rensselaer, the mean tidal range is 4.6 feet and the spring range is 5.0. The Hudson River is maintained by the United States Army Corps of Engineers (USACE) for commercial navigation from New York City to the Port of Albany, at RM 148. The northern end of the Site is located at approximately RM 148.

In 1881 the Hudson River Aniline and Color Works began use of the former BASF manufacturing plant in Rensselaer. In 1905, the Hudson River Aniline and Color Works facility began to supplement its dyestuffs with pharmaceuticals and aspirin. In 1913 the official name was changed to the Bayer Company. The facility was seized by the United States government during both world wars and functioned as part of the war economy. In 1968, the official name of the site was changed to the GAF Corporation, and in 1978 BASF purchased the manufacturing plant from the GAF Corporation. The facility ceased all operations and closed in December 2000.

In 1992, the New York State Department of Environmental Conservation (NYSDEC) listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. In June 1994, a baseline environmental assessment of the wastewater lagoons was performed. This assessment included the installation of monitoring wells to determine if groundwater had been impacted by site operations and historical disposal practices. It concluded that volatile organic compounds (VOCs) and soluble arsenic were detected in groundwater exceeding New York State Class GA Standards. This groundwater contamination was primarily located on the manufacturing plant, up gradient of the lagoons.

BASF entered into a Consent Order on February 24, 1998. In April 1998, a Remedial Investigation (RI) Work Plan for the site was developed. The scope of the RI Work Plan was agreed upon by the NYSDEC and BASF in a Scope of Work and modified by subsequent letters of understanding.

There are two Operable Units (OUs) at the Site:

- OU-1 consists of the Manufacturing Plan on-site; and
- OU-2 includes Hudson River sediment and off-Site areas.

This CCR address the Hudson River portion of OU-2 (referred to herein as "Hudson River OU-2").

2. Remedial Action Objectives

The Remedial Action Objectives (RAOs) were based on New York Code Rules and Regulations (NYCRR) (6 NYCRR Part 375) and were presented in the Record of Decision (ROD, NYSDEC, 2016a) as follows:

- RAOs for Public Health Protection
  - Prevent direct contact with contaminated sediments.
- RAOs for Environmental Protection
  - Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
  - Restore sediments to pre-release/background conditions to the extent feasible.

BASF's overall goals for this remedy were: (1) to eliminate unacceptable risk to benthic ecological receptors by eliminating exposures to Site-related constituents of concern (COCs) including metals and VOCs in surficial sediments; and (2) to restore and enhance habitat for ecological receptors.

3. Description of Selected Remedy

The remedy for the Hudson River OU-2 is summarized in the March 2016 ROD for this portion of the Site (NYSDEC, 2016a). As described in the ROD, the Hudson River OU-2 has been sub-divided into two areas known as the Northern Sediment Management Area (NSMA) and the Southern Sediment Management Area (SSMA) (Figure 1).

The selected remedy for the NSMA and SSMA is a combined remedy that includes dredging impacted sediments, installing backfill and cover materials, habitat restoration activities, and monitored natural recovery (MNR).

3.1 Northern Sediment Management Area (NSMA)

The approximately 7-acre NSMA is situated immediately adjacent to the Site and is bordered by the Hudson River federal navigational channel. The NSMA extends approximately 300 feet into the river from the eastern shore. Water depths in this area range from 3 to 35 feet and vary daily due to tidal influences. The Hudson River in the vicinity of the Site is a net depositional environment, where sediments collect from upstream sources. The primary COC in NSMA sediments are related to former operations on the Site and the adjacent property to the north. These COCs include VOCs (primarily chlorobenzene, dichlorobenzenes, and benzene), as well as several metals, including lead. Other regional urban sources also contribute to the metals found in sediments in the NSMA.

The Selected Remedy for the NSMA includes a combination of dredging, backfill, cover system installation, ecological enhancement, and monitoring. The NSMA has been operationally sub-divided into four discrete areas, summarized below and depicted in Figure 2:

- Upper NSMA Reach. This approximately 0.9-acre area is located at the northern end of the NSMA. Approximately 0.7 acres of this area were dredged to a 2-foot depth and covered with a 2-foot cover system.
- Central NSMA Reach. This approximately 2.2-acre area is located in the central portion of the NSMA. To optimize removal of sediments impacted with VOCs, approximately 1.7 acres of the Central NSMA Reach were dredged to a depth ranging from 4 to 8 feet. This area was restored with backfill and a cover system ranges from 4 to 8 feet in thickness.
- Lower NSMA Reach. This approximately 3.9-acre area is located at the southern end of the NSMA. Approximately 2.4 acres of the Lower NSMA were dredged to a depth of 3 feet in certain areas and to 2 feet in the remaining areas. This area was restored with a cover system that will range from 2 to 3 feet in depth.
- Areas of Upstream Deposition: Sediments in these portions of the NSMA have undergone natural recovery and the top 4 feet of sediment in these areas is not impacted by Site COCs. Because these regions of the NSMA are durable and stable, and essentially are covered with an isolation barrier that encapsulates deeper sediment, no active remediation activities were required for the Areas of Upstream Deposition.

The NSMA remedy removed approximately 39,260 cubic yards (CY) of impacted sediment and resulted in placement of an approximately 4.8-acre clean cover over the dredged areas where lower concentrations of Site-related COCs remain at depth.

The remediation in the NSMA included measures to further enhance the ecological habitat at the Site. Where water depths allow, submerged aquatic vegetation (SAV) was planted resulting in a substantial increase in the surface area of SAV currently at the Site (approximately 0.6 acres of SAV were planted to replace the existing 0.1 acres that was removed during remedy implementation).

The approximately 6.7-acre SSMA is located in a depositional environment within a historic navigational dredging area. This area has been potentially influenced by the Site, as well as other upstream and anthropogenic sources. The SSMA extends approximately 500 feet into the Hudson River and water depths commonly exceed 40 feet. Lead and several other inorganic COCs are present in SSMA surficial

sediments, with highest concentrations occurring in the deeper central portions of the river. No VOCs were detected at concentrations above NYSDEC sediment screening values in the SSMA.

3.1.1 Polychlorinated Biphenyl Impacts

Sediments in the NSMA are also impacted with non-Site related polychlorinated biphenyl compounds (PCBs). The selected remedy for the NSMA, while not specifically designed for PCBs, resulted in the removal of sediments with elevated PCBs and isolated the remaining PCB-impacted sediments beneath a minimum of 2 feet of clean cover material.

Sediments within the remediation limits contained PCBs in excess of the 50 milligrams per kilogram (mg/Kg) Toxic Substances Control Act (TSCA) standard. TSCA regulations (Code of Federal Regulations (CFR) 40 CFR Part 761) and New York State regulations (6 CRR-NY 371.4NY-CRR) require special management provisions for materials containing more than 50 mg/Kg of PCBs).

During Design, a 35x35 foot grid was established across the dredge area at depth intervals of 0 to 2 feet, 2 to 3 feet, 2 to 4 feet, 4 to 6 feet, and 6 to 8 feet below mudline. Based on a linear interpolation of the PCB sample results (from all previous investigations) each grid at each depth interval was designated as a TSCA Grid (sediment PCB concentrations equal to or greater than 50 mg/Kg) or non-TSCA (sediment PCB concentrations less than 50 mg/Kg). Sediment from the TSCA grids was managed as described in according to the TSCA and applicable State regulations as described in Section 4.

3.2 Southern Sediment Management Area

The levels of metals in surface sediments in the SSMA are expected to gradually decrease overtime as a result of natural processes such as sedimentation and MNR is the Selected Remedy for the SSMA. Therefore, the remedial design for the SSMA includes development and implementation of a monitoring plan to evaluate the rate of sediment deposition and changes in sediment chemistry over time. The SSMA MNR Monitoring Plan (included in the 100% Design as described in Section 4) provides specific provisions for the SSMA monitoring.

4. Description of Remedial Actions Performed

Remedial activities completed at the Site were conducted in accordance with the Hudson River Operable Unit 2 Remedial Design/Remedial Action Work Plan (RD/RAWP) (AECOM, 2017). NYSDEC approved the RD/RAWP for the Site in a letter dated February 1, 2018 (See Appendix A).

4.1 Governing Documents

The following governing documents were implemented during the Remedial Action (RA).

4.1.1 Site Specific Health and Safety Plan

All remedial work performed under this RA was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The governing Health and Safety Plan for the remediation activities was prepared by the remediation contractor Land Remediation, Inc. (LRI) (LRI, 2018).

4.1.2 Design Documents

The Hudson River Operable Unit 2 100% Remedial Design (100% Remedial Design) (AECOM, 2018) was approved by the NYSDEC on September 14, 2018 (see Appendix A). The 100% Remedial Design provided the Drawings, Specifications and Workplans needed to ensure that the RA was implemented according to the approved RD/RAWP. The Workplans appended to the 100% Design Remedial Design include the following.

4.1.2.1 Attachment D - Construction Quality Assurance Plan

The Construction Quality Assurance Plan established the project procedures and general responsibilities for the Contractor's Quality Control program and the Engineer's Quality Assurance program. These programs were used to verify and document that all elements of the work were completed according to the Contract Documents established for the work.

4.1.2.2 Attachment E – Bulkhead Mitigation Work Plan

The Bulkhead Mitigation Work Plan described procedures to reconstruct and reinforce sections of the existing bulkhead to support the sediment removal activities.

4.1.2.3 Attachment F- Upland Site Preparation Workplan

The upland Site Preparation Workplan described installation of the upland support features required to support the sediment removal.

4.1.2.4 Attachment G - Surface Water Remedial Action Monitoring Plan

The Surface Water Remedial Action Monitoring Plan (RAMP) presented the scope of work for in-water monitoring/sampling activities, action levels, best management practices, and corrective measures to implement to minimize potential impacts to the river during bulkhead replacement, debris removal, dredging, and cover system placement.

4.1.2.5 Attachment H - Water Treatment Plant State Pollution Discharge Elimination System Permit Application

The Water Treatment Plant New York State Pollution Discharge Elimination System (SPDES) Permit Application was filed with the NYSDEC and defined sampling procedures and criteria for discharge to treated waters generated during the sediment removal to the Hudson River.

4.1.2.6 Attachment I - Baseline Bathymetric and Debris Survey

The Baseline Bathymetric and Debris Survey was conducted to establish the baseline bathymetry in the sediment removal area.

4.1.2.7 Attachment J - Community and Environmental Response Plan

The Community and Environmental Response Plan summarized the controls, monitoring and work practices implemented to provide the necessary protection of the community and ecologic resource

including protection from odor, vapor, dust, noise, vibration, and traffic generated during the sediment remediation.

4.1.2.8 Attachment K - Odor, Vapor, and Dust Control Plan

The Odor, Vapor, and Dust Control Plan summarized the potential mitigation options that could be implemented to control, reduce, and minimize the effects of potential fugitive emissions resulting from remedial activities. It identifies construction activities that may be potential sources of fugitive emissions, distinctive impacts of odor, or dusts, and the corresponding control measures to ensure that the community and workers are not exposed to constituents of interest at levels greater than federal, state, and local health-based guidelines.

4.1.2.9 Attachment L - Community Air Monitoring Plan

The Community Air Monitoring Plan (CAMP) provided information on the ambient levels of total volatile organic compounds (TVOCs), particulates (i.e., dust), or odors near the project site because of remedial activities. The early detection of emissions was intended to expedite the implementation of any necessary mitigation measures to reduce the potential for the community to be exposed to constituents at levels above accepted regulatory limits and recommended guidelines.

4.1.2.10 Attachment M - Noise Monitoring Plan

The Noise Monitoring Plan provided a summary of noise monitoring activities to be implemented to monitor potential noise impacts resulting from upland site preparation, bulkhead improvements, remedial dredging, sediment handling, and restoration activities. The Noise Monitoring Plan identified the relevant criteria, proposed monitoring locations, and mitigation procedures for responding to observed exceedances of the noise thresholds.

4.1.2.11 Attachment N - Vibration and Settlement Monitoring Plan

The Vibration and Settlement Monitoring provided a summary of vibration and settlement monitoring activities implemented to monitor potential vibration and settlement impacts resulting from the sediment remediation implementation. It identified the relevant damage criteria, proposed monitoring locations, and mitigation procedures for responding to observed exceedances of the vibration and settlement monitoring thresholds.

4.1.2.12 Attachment O - Transportation Plan

The Transportation Plan provide truck routes and procedures for hauling sediment from the site to the designated off-site disposal facilities.

4.1.2.13 Attachment P - Ecological Restoration, Monitoring and Maintenance Plan

The Ecological Restoration, Monitoring and Maintenance Plan described procedures to install and monitor ecological habitat called for in the RD/RAWP.

4.1.2.14 Attachment Q - Southern Sediment Management Area Monitored Natural Recovery Monitoring Plan

The SSMA MNR Monitoring Plan describes monitoring procedures document changes in bathymetry and sediment chemistry within the SSMA over time.

4.1.3 Contractors Site Operations Plans (SOPs)

AECOM reviewed all plans and submittals for this remedial project (i.e., those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RD\RAWP and the 100% Remedial Design. All remedial documents were submitted to NYSDEC and New York State Department of Health (NYSDOH) in a timely manner and prior to the start of work.

4.1.4 Permits

Several permits and approvals were obtained work related to dredging, on-Site treatment, and off-Site disposal of dredge spoils begin. They included the following

- A New York State SPDES General Permit for Stormwater Discharges

- A temporary New York State SPDES permit for discharge of treated water to the Hudson River or other surface water body
- A Joint Application Permit (JAP) to the USACE for authorizations under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 under its Nationwide Permit Program in New York State (NYS); to the NYSDEC for CWA Section 401 Water Quality Certification, authorizations under the NYSDEC Protection of Waters program, Tidal Wetlands, Coastal Erosion Management and NYS Endangered/Threatened Species programs; a Coastal Consistency Review from the NYS Department of State; and, from the NYS Office of General Services for work in State Owned Lands Under Water.
- On September 22, 2017 the NYSDEC issued environmental permit authorizations for bulkhead improvements at this site. On November 1, 2017 the Upstate New York Section of the U.S. Army Corps of Engineers issued approval for bulkhead improvements to occur at this site under Nationwide Permit No, 3.
- Several local permits were received by the Contractor performing the work (Land Remediation, Inc.) from the City of Rensselaer.

All permits relating to the remediation project are provided in Appendix B.

4.2 Remedial Program Elements

Implementation of the remedial program elements took place from May 2018 to January 2020. Additional site activities were conducted from June 2020 to July 2020 to complete the restoration activities. The following lists the key remedial elements and dates:

- Mobilization and Site Preparation: May 2018 – June 2018
- Bulkhead Enhancements: June 2018 – December 2018
- Dredging: November 2018 – November 2019
- Backfill and Cover Placement: November 2019 – January 2020
- Submerged Aquatic Vegetation (SAV): June 2020 – July 2020
- Demobilization: September 2020

The final conditions documenting each of the remedial program elements are included in Appendix C.

4.2.1 Contractors and Consultants

AECOM was contracted by BASF as Project Engineer and on-site representative during the RA. AECOM personnel provided management of the remedial activities to ensure general compliance with the RD/RAWP and the Contract Documents. AECOM also performed the perimeter air monitoring, recording, and reporting in accordance with the CAMP. The following companies completed the major tasks for this project:

- **Land Remediation Inc. (LRI) of Waterford, NY.** General contractor
- **Alpha Analytical of Westborough, MA.** Analytical laboratory
- **Adirondack Environmental Services, Inc. of Albany, NY.** Analytical laboratory
- **Eurofins Scientific of Lancaster, PA.** Analytical laboratory
- **Allsite Structural Rentals of Las Vegas, NV.** Temporary fabric structure rental and installation
- **NMB Land Surveying PLLC of Wynantskill, NY.** Surveying
- **New Castle Paving LLC of Troy, NY.** Asphalt paving
- **Samleen, LLC of Denville, NJ.** Geotextile/geosynthetic liner installation
- **Double LL Electrical, Inc. of Queensbury, NY.** Electrician

- **Morris Fence of Schaghticoke, NY.** Fence installation
- **Applied Ecological Services of Albany, NY.** SAV planting

4.2.2 Mobilization and Site Preparation

LRI initialized mobilization to the project site on May 21, 2018 and commenced site preparation activities thereafter. Mobilization and site preparation activities included:

- Acquisition of agency approvals and permits. Documentation of agency approvals is included in Appendix A.
- Establishment of parking areas, construction entrance, and work zones.
- Installation of temporary security fencing.
- Clearing and grubbing, installation of silt fencing and erosion controls in accordance with local, state, and federal regulations. The erosion and sediment controls were maintained throughout the duration of the work.
- Setup of perimeter air monitoring stations and CAMP program.
- Site grading and construction of the temporary fabric structure and site access roads.

Following the completion of the upland site preparation, the following activities were conducted:

- Automated turbidity monitoring equipment was installed and/or equipment and personnel for manual measurements deployed.
- Notification to United States Coast Guard (notice to mariners).
- Identification of locations and necessary approvals to deploy water-based equipment.
- Installation of turbidity curtains.
- Mobilization of in-water equipment (dredging equipment and platform, sediment transfer barges, pumps, and other support equipment).

A NYSDEC-approved project sign was erected at the project entrance and remained in place during all phases of the RA.

4.2.3 Bulkhead Enhancements

An inspection of the bulkhead at the northern end of the property determined that the structure could not support additional loading caused by removal of sediment along the bulkhead. Prior to dredging, approximately 280 feet of pre-1936 concrete bulkhead and 230 feet of 1936 steel sheet pile were replaced with a new consisting of NZ19 sheet pile anchored to a continuous row of NZ14 deadmen sheet pile. The bulkhead sheet piles were driven to approximately elevation 29 feet (NAVD 88) on the northern end and elevation 39 feet NAVD88) at the southern end of the wall. The replacement bulkhead was placed riverside of the existing bulkhead and the area between the two was backfilled with flowable fill. Profile and plan views of the as-built sheet pile are provided in Appendix C. Sheet pile driving logs are also provided in Appendix C.

4.2.4 Dredging

The Site was divided into nine dredge prisms with dredge depths ranging from two to three feet in the lower and upper NSMA areas and four to eight feet in the central NSMA area. The dredging work occurred over two seasons. In the first season, all the TSCA regulated sediment within the TSCA Grids and overlying non-TCSA sediment were removed. The remaining non-TSCA sediment was removed in Season 2.

Season 1 dredging began on November 12, 2018 and was completed December 20, 2018. Season 2 dredging began in July 16, 2019 and was completed on November 8, 2019.

Turbidity curtains and oil booms were deployed to contain suspended sediments during dredging. Within the deep-water areas, material was dredged from within a dual turbidity curtain moonpool system. Dual turbidity curtains mounted on H-piles were utilized to control turbidity for near shore shallow areas.

Within the deep-water areas, material was dredged from within a dual turbidity curtain moonpool system. Silt curtains were utilized to control turbidity for near shore shallow areas.

A total of 39,259 CY of material was dredged from the Site. Dredging was conducted to the extents included in the 100% Design approved by the NYSDEC. The dredge extents and thicknesses are depicted on Figure 3.

4.2.5 Onshore Sediment Handling and Dewatering

Dredged material was loaded onto trucks and transported to the temporary fabric structure (TFS) shown on Figure 2. An air handling system maintained a negative pressure within the TFS. Discharge from the air handling system was treated with vapor phase activated carbon.

Material was separated within the TFS into one of twelve bins based on the extensive pre-characterization data presented in the 100% Remedial Design:

- Sediment with low VOC levels (not Resource Conservation Recovery Act [RCRA] characteristic waste) and low total PCB levels.
- Sediment with higher VOC levels (may exceed RCRA characteristic waste thresholds) and low total PCB levels.
- Sediment with low VOC levels (not RCRA characteristic waste) located within the TCSA designated grids where PCBs were measured above 50 mg/Kg in samples collected during previous investigations.
- Sediment with higher VOC levels (may exceed RCRA characteristic waste thresholds) and located within the TCSA designated grids where PCBs were measured above 50 mg/Kg in samples collected during previous investigations.

Sediment from the TSCA grids was dredged, offloaded, stored, and dewatered separately from the non-TSCA sediment. All equipment and structures used to handle the TSCA sediment were decontaminated with procedures approved by the United States Environmental Protection Agency. An approval letter for the decontamination procedures is provided in Appendix A.

The sediment was gravity dewatered prior to the addition of Portland cement amendment material. A total of 1943.49 tons of Portland cement was added to the dredged sediment. The use of Portland cement was not sufficient in stabilizing the sediments enough for transportation to the landfill. Super Absorbent Polymer (SAP) was utilized in phase 2 to stabilize the dredged sediments. A total of 335.2 tons of SAP was utilized during Phase 2. One sample was collected from each bin for waste characterization sampling. Results of the waste characterization sampling is included in Appendix D. During waste characterization testing, approximately 1500 tons of non-hazardous sediment had a pH greater than 12.5. Food grade citric acid was blended into the sediment to lower the pH and meet the disposal facility criteria. The results of the waste characterization testing showed no high-level VOC material encountered in the dredged sediment.

Amended non-TSCA material was loaded into trucks for disposal at Ontario County Landfill in Stanley, NY and Clinton County Landfill in Morrisonville, NY. TSCA material was disposed of at Wayne Disposal, Inc in Belleville, MI. Water generated from the dewatering activities was processed through the on-site water treatment system.

4.2.6 Cover System Placement

The backfill and cover system was placed in accordance with the backfill thickness shown on Figure 4 and the layering configuration shown on Figure 5. Riverbed bathymetry was restored to pre-construction conditions with the depth of removal being replaced by an equivalent depth of cover. In areas where two

feet of sediment was dredged, the cover included six inches of erosion protection stone and 18 inches of restoration cover. In areas where three feet of sediment was dredged, the cover included 12 inches of erosion protection stone and 24 inches of restoration cover. In areas dredged greater than three feet, the cover system was comprised of 24 inches of restoration cover placed over 6 inches of erosion protection with an aquatic backfill layer below placed to the thickness needed to meet final grade.

4.2.7 Habitat Restoration and Enhancement

Planting of the water celery (*Vallisneria americana*) tubers began on June 17, 2020 and was completed on July 1, 2020. Following installation, approximately 100 planting units were relocated and staked in place on July 8, 2020 and an additional 60 planting units were installed. In total, over 10,200 plants were installed at the locations established in the 2018 100% Design Drawings and Specifications.

4.3 Off-Site Disposal

Table 1 shows the total quantities of each category of material removed from the site and the disposal locations; weights are inclusive of the Portland cement and SAP amendment. A total of 46,775.08 tons of non-TSCA/low VOC material was disposed of off-site at Ontario County Landfill in Stanley, NY and Clinton County Landfill in Morrisonville, NY. A total of 8,784.81 tons of TSCA/low VOC material was disposed of off-site at Wayne Disposal, Inc in Belleville, MI. The results of the waste characterization sampling did not show high VOC dredged sediment.

A total of 16,286,400 gallons of water were treated in the on-site wastewater treatment system. A total of 26,250 gallons of wastewater were shipped off-site to Global Cycle.

Letters from Applicants to disposal facility owners and acceptance letters from disposal facility owners are attached in Appendix E1. Manifests and bills of lading are included in Appendix E2.

4.4 Imported Backfill

A table of all sources of imported backfill with quantities for each source is shown in Table 2. A figure showing the site locations where backfill was used at the site is shown in Figure 4. Additional documentation of the import materials is provided in Appendix F, material approvals are provided in Appendix A.

4.5 Quality Assurance

4.5.1 CAMP Results

Air monitoring and sampling activities were conducted during the RA to evaluate conditions at the property line (fence line) to ensure that the measures used to control potential fugitive emissions were effective, and to document ambient air quality/conditions at the fence line. The air monitoring locations are shown in the CAMP reports included in Appendix G.

The monitoring program consisted of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute TVOC and respirable particulate matter (PM10) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM10, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for PCBs conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during TSCA sediment removal operations, and active dredging and

sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Following the start of sediment processing activities in the TFS, process monitoring and sampling was conducted to ensure the effectiveness of each operational air handling system that was installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consisted of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM10 conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results were compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results were used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM10. These emission rates were then compared to a target emission rate that was calculated using the real-time PCB acceptable ambient concentration (AAC). The process monitoring VOC data was also used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The CAMP monitoring activities were reduced following the approval of the NYSDEC and the NYSDOH documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

Phase 2 of the remedial activities began on July 15, 2019 and included the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute TVOC and PM10 concentrations conducted at six (6) PAM stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM10, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for PCBs conducted at three (3) fence line PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

As documented in an email from the NYSDEC dated December 6, 2019 and implemented the following Monday, December 9, 2019, continuous fence line TVOC/PM10 monitoring and fence line PCB sampling was discontinued and replaced with periodic hand-held TVOC/PM10 monitoring. Process monitoring/sampling was to remain in effect until all sediment was removed from the TFS.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the Community Air Monitoring Plan reports.

The results from data collected during the active remediation period indicated that the majority of results were consistent with the baseline conditions at the project site. Additionally, the constituent-specific results were consistent with published ambient background levels developed by the NYSDOH.

The weekly CAMP summary reports which include detailed discussion of the implementation of the monitoring program and provides a summary of the results is presented in Appendix G.

Site response action activities were never shut down due to air monitoring exceedances. Air monitoring was conducted for a total of 65 weeks. During this time, the following exceedances were observed at the fence line air monitoring stations:

- PM10 action level exceedance on September 13, 2018 when welding was performed in close proximity to a monitoring station. Due to lack of soil disturbance or particulate matter leaving Site boundaries, work was not stopped.
- PM10 action level exceedances intermittently November 13, 2019 through November 15, 2019 due to loadout trucks exiting the Site. In the event of dust exceedances caused by vehicle traffic on the roadway, AECOM would notify the Contractor and the roadway would be sprayed with water.
- PM10 action level exceedance on December 4, 2018 due to Portland Cement being pumped into the TFS at a high flow rate while the TFS was under insufficient negative pressure (garage doors were open at the time). The site supervisor was notified, and operations were temporarily stopped. The flow rate of Portland Cement was decreased, filters were cleaned, and garage doors were closed and only reopened intermittently as required.
- TVOC concentration action level exceedance on July 25, 2019 due to fumes escaping the temporary fabric structure, the eastern facing vents were closed which reduced the TVOC concentrations below the action level.
- PM10 action level exceedance on August 5, 2019 while the Contractor was filling the north end silo with concrete
- PM10 action level exceedance on August 8, 2019 due to dust from the binder material being used while transferring sediment from the barge to the trucks.
- Additional action level exceedances occurred due to offsite sources or high humidity during the monitoring period.

The air handling system monitoring recorded VOC emission rate exceedances at one air handling system on May 29, 2019, June 3, 2019, and June 10, 2019. TVOC carbon breakthrough at 75% bed depth was exceeded at various air handling units for at various times throughout the program; upon observing these results, the need for operation and maintenance of one or more air handling systems was identified and an approach was reviewed by the project team. Following the maintenance, the TVOC carbon breakthrough at 75% bed depth was exceeded on November 15, 2019, November 18, 2019 through November 21, 2019, November 26, 2019, and November 27, 2019. However, during this time the project-to-date TVOC, PM10 and PCB emission rates remained below their respective target emission rates.

As noted above, the extensive air monitoring and sampling activities were successful in alerting the project team of exceedances so that corrective actions could be quickly implemented, and the work was able to continue.

4.5.2 Water Quality Results

Surface water monitoring activities were conducted to evaluate conditions within the river during sheet pile bulkhead installation activities and remedial dredging activities to ensure that the measures used to control off-site migration of Site related turbidity were effective, and to document ambient water quality/conditions in the river. The turbidity monitoring locations are shown in the Water Quality reports included in Appendix H.

The monitoring program consisted of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically;
- TSS samples collected from each monitoring buoy at approximately shallow, mid-depth, and near bottom in the water column. These samples are also analyzed for turbidity in the laboratory to allow comparison with the real-time measurements and TSS data;

- Samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week). Additionally, throughout the duration of marine construction, BASF maintained an off-Site background monitoring station. These buoys collected and transmitted turbidity data real time to Site staff to manage compliance with the NYSDEC approved Water Column Monitoring Plan and to alert the team to any excursions or anomalies in the data set.;
- Additionally, if plumes were observed, TSS samples were collected per the decision tree in the Weekly Water Quality Monitoring Summaries. These samples allow for comparison with the real-time/ field collected turbidity measurements.

The frequency of the sampling or monitoring activities as described above varied based on the activities being conducted (i.e. sheet pile installation, dredging, etc.). The weekly summary reports documenting the monitoring and sampling activities and are presented in Appendix H of this document.

From September 2018 through January 2020, there was never an instance when the Site operations were shut down due to turbidity concerns. More than 100,000 turbidity readings were collected, and turbidity never once exceeded the permitted thresholds due to Site operations. A total of 599 water samples were collected for VOC analysis over the two dredge seasons; in 96% of these samples, concentrations of VOCs were below the water quality standard. Additionally, a total of 770 water samples were collected for PCB analysis. PCB concentrations in 98% of these samples were below the compliance threshold and exceedances were only observed in the whole (non-filtered) water samples, never in the filtered (dissolved phase) samples (100% compliance). As documented by the water column sampling program, best management practices (BMPs) employed during marine construction were extremely successful in controlling off-Site migration of Site sediments/ compounds of interest and allowing the Site work to continue essentially uninterrupted.

4.5.3 Reporting

All RA activities were closely coordinated among BASF, NYSDEC, LRI, and AECOM. Project coordination included daily communications between on-site representatives, weekly conference calls conducted to update project site conditions and status, review of completed work, discussion of health and safety issues, and scheduling future activities. The Contractor provided daily reports to ensure adherence to the specifications.

5. Deviations from Remedial Action Work Plan

The following major variations or deviations from the approved RD/RAWP and Contract Documents were implemented during the RA. All variations were approved by the NYSDEC prior to implementation (provided in Appendix A).

- The designed dredge depth around the East Greenbush Outfall would have caused undercutting of the pipe resulting in structural instability. For this reason, The East Greenbush Outfall was capped instead of dredged.
- The initial design had three backfill/cover scenarios for the varying depths of removal. The three-foot cover system was comprised of three layers: a backfill layer overlain by six inches of erosion protection stone, overlain by two feet of restoration cover. During construction, this cover system was revised and the backfill layer was eliminated. A two-foot restoration cover layer was placed over an approximately one-foot thick erosion protection layer.

6. Summary of Site Management Plans

The OU-2 remedy was completed as outlined in the 2016 Record of Decision A minimum of two thick of clean cover is located over any remaining impacts in the NSMA. Monitoring requirements for the SSMA are presented in Attachment Q of the 100% Remedial Design.

A Site Management Plan (SMP) will be prepared for the site which will include post-construction monitoring and maintenance requirements for OU-2 to manage the remaining impacts.

The following components will be included in the SMP:

a. Engineering Control Plan that identifies all institutional and engineering controls for the site and details the media-specific requirements.

b. Monitoring Plan to assess the performance and effectiveness of the remedy.

An annual monitoring report will be prepared to document each SAV monitoring event according to Section 6 of Attachment P of the 100% Remedial Design.

7. References

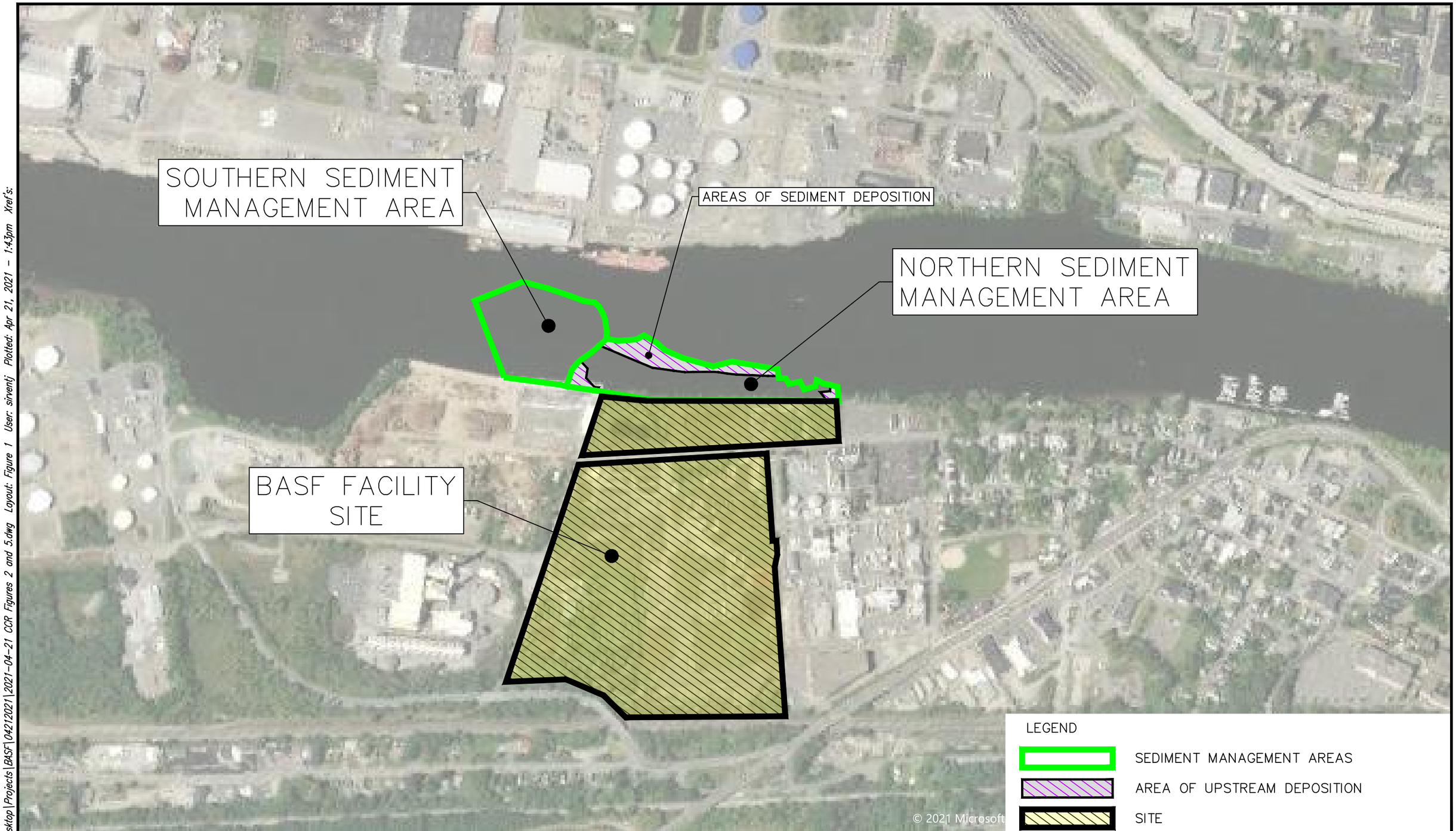
AECOM, 2017. Remedial Design/Remedial Action (RD/RA) Work Plan, Hudson River OU 2, BASF Rensselaer, November 2017.

AECOM, 2018. 100% Remedial Design, Hudson River OU 2, BASF Rensselaer, September 2018.LRI, 2018. Health and Safety Plan, Hudson River Operable Unit 2 Sediment Remediation, BASF Rensselaer, June 2018.

New York State Department of Environmental Conservation (NYSDEC), 2016. Record of Decision, BASF-Manufacturing Plant Operable Unit Number 02: Hudson River Sediment and Off-site Areas, State Superfund Project, Rensselaer, Rensselaer County, March 2016

NYSDEC, 2010. DER-10, Technical Guidance for Site Investigation and Remediation. May 2010.

Figures



AECOM

250 0 500

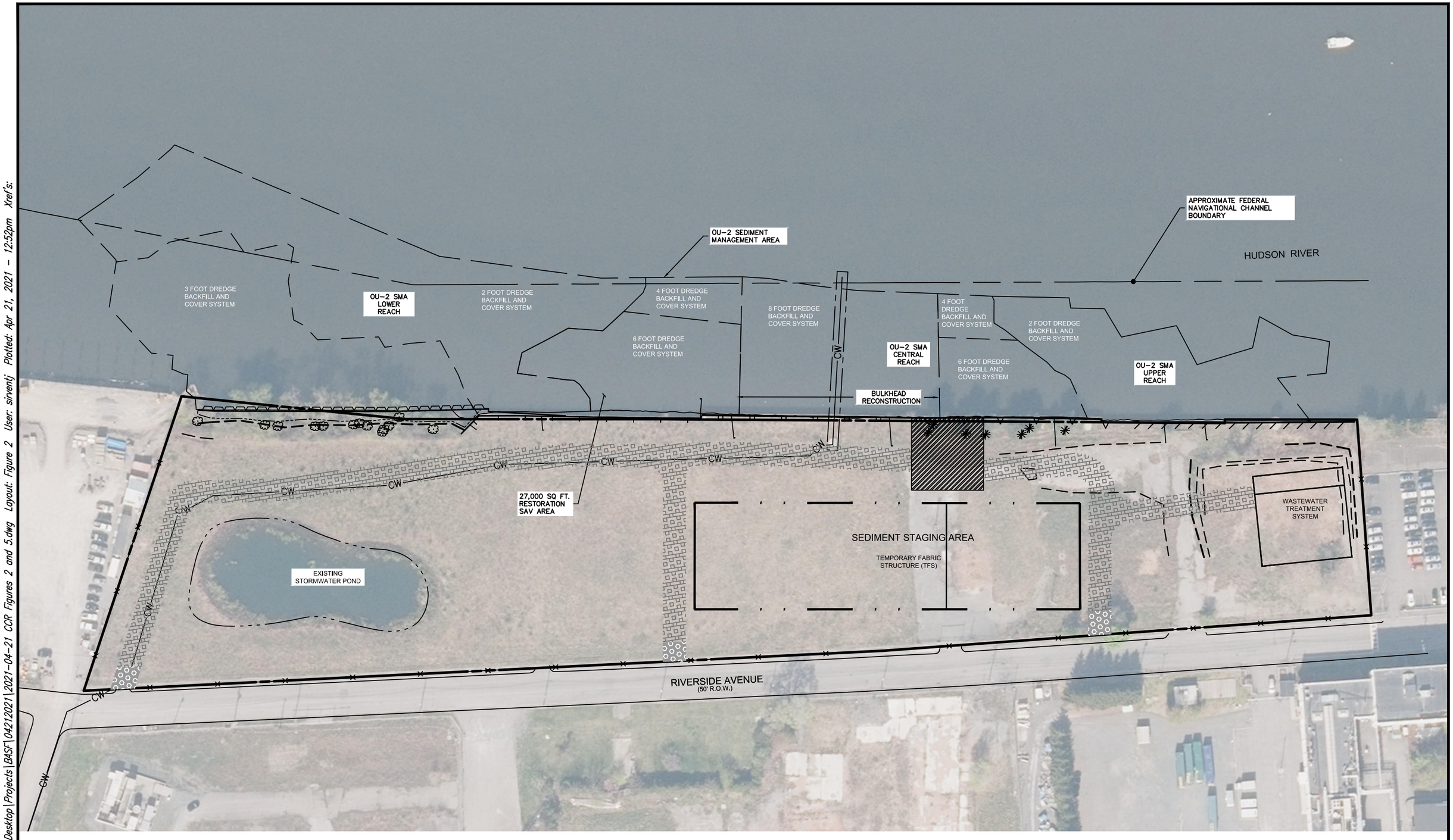
GRAPHIC SCALE IN FEET

BASF CORPORTION
HUDSON RIVER OU-2
RENSSELAER, NEW YORK

SITE LOCATION

DATE: 04/21/2021 | DRWN: JTS | **FIGURE 1**

File: C:\Users\sirventj\Desktop\Projects\BASF\04212021\2021-04-21 CCR Figures 2 and 5.dwg Layout: Figure 1 User: sirventj Plotted: Apr 21, 2021 - 1:43pm Xref's:



AECOM

50 0 100

GRAPHIC SCALE IN FEET

BASF CORPORTION
HUDSON RIVER OU-2
RENSSELAER, NEW YORK

SITE LAYOUT MAP

DATE: 04/21/2021 | DRWN: JTS | **FIGURE 2**

File: C:\Users\sirventj\Desktop\Projects\BASF\04212021\2021-04-21 CCR Figures 2 and 5.dwg Layout: Figure 2 User: sirventj Plotted: Apr 21, 2021 - 12:52pm Xref's:



LEGEND

----------20---------- FINAL DREDGE AS-BUILT 5' CONTOUR

---------- FINAL DREDGE AS-BUILT 1' CONTOUR

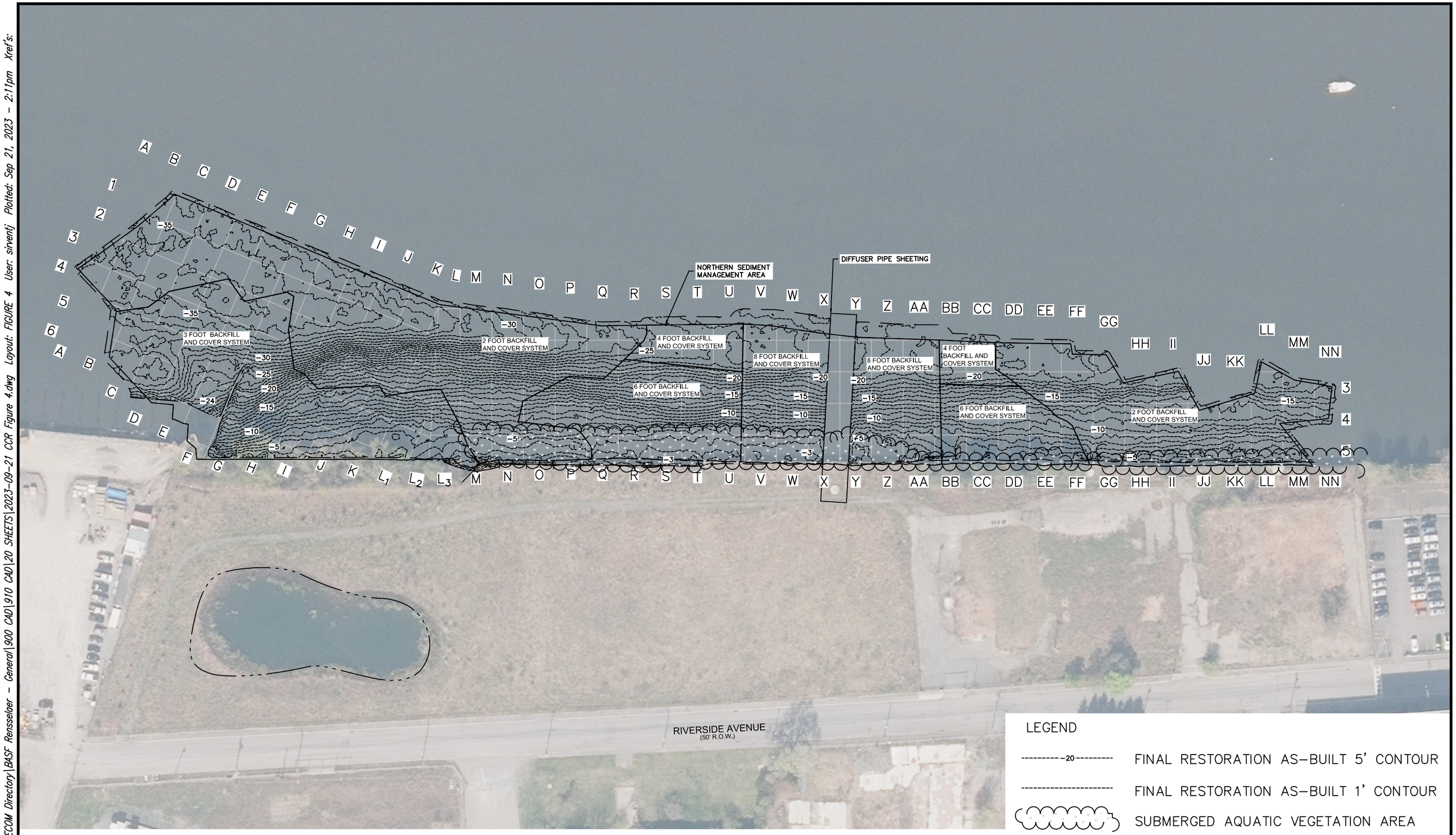
AECOM

50 0 100

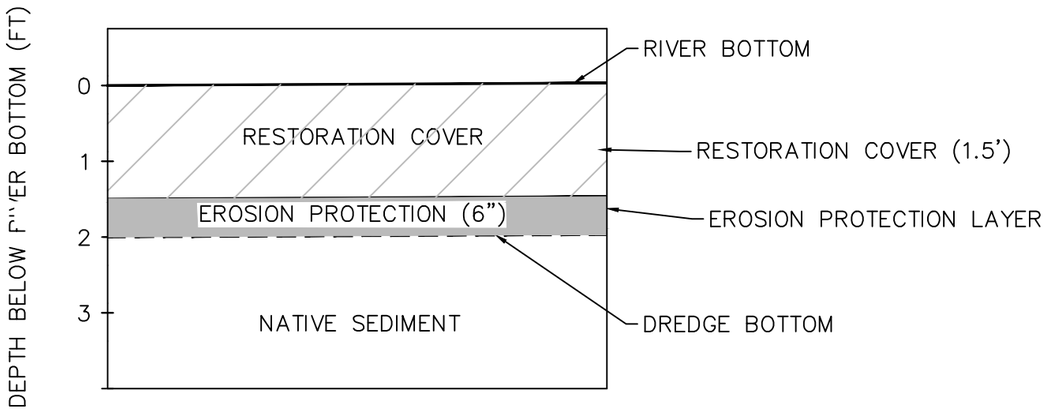
GRAPHIC SCALE IN FEET

BASF CORPORTION HUDSON RIVER OU-2 RENSSELAER, NEW YORK			**AS-BUILT DREDGE LOCATION AND THICKNESS**
DATE: 08/17/2023	DRWN: JTS		**FIGURE 3**

File: C:\Users\sirventj\Desktop\Projects\BASF\08172023\2023-08-17 CCR Figure 3.dwg Layout: FIGURE 3 User: sirventj Plotted: Aug 17, 2023 - 3:19pm Xref's:

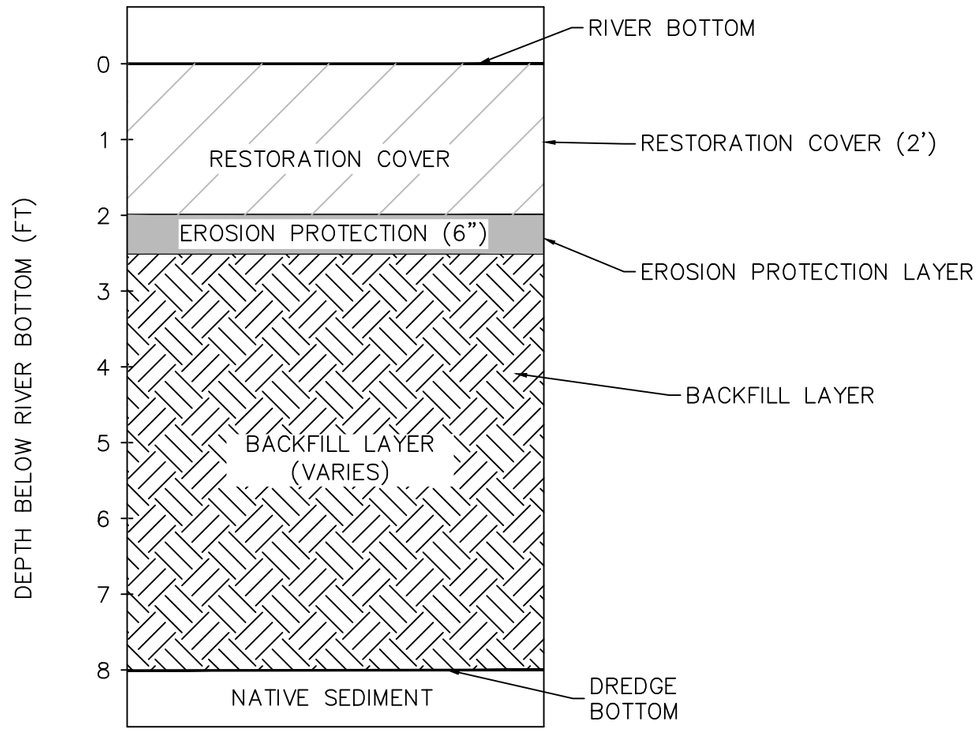


File: C:\Users\sirventj\AECOM Directory\BASF Rensselaer - General\900 CAD\910 CAD\20 SHEETS\2023-09-21 CCR Figure 4.dwg Layout: FIGURE 4 User: sirventj Plotted: Sep 21, 2023 - 2:11pm Xref's:



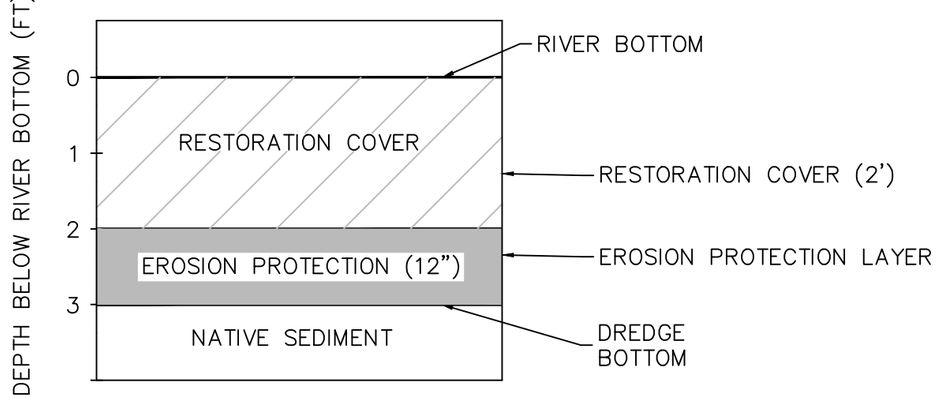
1 - TYPICAL TWO-FOOT COVER

SCALE: NTS



3 - TYPICAL FOUR TO EIGHT-FOOT BACKFILL/COVER

SCALE: NTS



2 - TYPICAL THREE-FOOT BACKFILL/COVER

SCALE: NTS

AECOM

BASF CORPORTION HUDSON RIVER OU-2 RENSSELAER, NEW YORK			**TYPICAL COVER DETAILS**
DATE: 04/21/2021	DRWN: JTS		**FIGURE 5**

File: C:\Users\sirventj\Desktop\Projects\BASF\04212021\2021-04-21 CCR Figures 2 and 5.dwg Layout: Figure 5 User: sirventj Plotted: Apr 21, 2021 - 10:17am Xref's:

Tables

Table 1
Summary of Disposal Quantities
Hudson River Operable Unit 2
BASF Rensselaer
Renssealer, New York

Material Type	Quantity	Disposal Facility	Transporter
Waste Water	56,250 Gal	Global Cycle 700a Richmond St. East Taunton, MA 02718	Global Remediation Services Inc. (Taunton, MA) and JP Noonan (West Bridgewater, MA)
Non-TSCA Debris	627.62 Tons	Ontario County Landfill 3555 Post Farm Road Stanley, NY 14561	Cedar Hill Trucking (Selkirk, NY) and Ron Allen Trucking (Canajoharie, NY)
Upland Soil	937.8 Tons	Ontario County Landfill 3555 Post Farm Road Stanley, NY 14561	Longhorn Trucking (Fort Plain, NY)
Non-TSCA Dredge Sediment	46,775.08 Tons	Clinton County Regional Landfill 286 Sand Road Morrisonville, NY 12962	Cedar Hill Trucking (Selkirk, NY), Ron Allen Trucking (Canajoharie, NY), and Longhorn Trucking (Fort Plain, NY)
TSCA Dredge Sediment	8784.81 Tons	Wayne Disposal, Inc. Site #2 Landfill 49350 North I-94 Service Dr Belleville, MI 48111	Page ETC Inc. (Weedsport, NY), U.S. Bulk Transport Inc. (Erie, PA), and Horwith Trucking (Northhampton, PA)
TSCA Debris	166.95 Tons	Wayne Disposal, Inc. Site #2 Landfill 49350 North I-94 Service Dr Belleville, MI 48111	U.S. Bulk Transport Inc., Goulet Trucking
Asphalt and Stone	2887 Tons	Waste Management Green Ridge Landfill 424 Peters Rd Gansevoort, NY 12831	Longhorn Trucking (Fort Plain, NY)

Table 2
Summary of Import Material Quantities
Hudson River Operable Unit 2
BASF Rensselaer
Renssealer, New York

Material Type	Quantity	Distributor	Transporter
Aquatic Fill (Backfill)	12,689 CY	R.J. Valente Gravel, Inc. 1 Madison St. Suite 300 Troy, NY 12180	R.J. Valente Gravel, Inc. 1 Madison St. Suite 300 Troy, NY 12180
Erosion Protection	7,028 CY	Troy Sand and Gravel, Inc. 36 Grange Road West Sand Lake, NY 12196	Troy Sand and Gravel, Inc. 36 Grange Road West Sand Lake, NY 12196
Restoration Cover	17,710 CY	R.J. Valente Gravel, Inc. 1 Madison St. Suite 300 Troy, NY 12180	R.J. Valente Gravel, Inc. 1 Madison St. Suite 300 Troy, NY 12180
Upland Common Fill	2,000 CY	Constantine Construction and Farm, Inc. 564 Albany Shaker Road Loudonville, NY 12211	Constantine Construction and Farm, Inc. 564 Albany Shaker Road Loudonville, NY 12211
Upland Topsoil	1,674 CY	Troy Sand and Gravel, Inc. 36 Grange Road West Sand Lake, NY 12196	Troy Sand and Gravel (West Sand Lake, NY), Best Paving and Seal Coating (Menands, NY), William M. Larned and Sons Inc. (Schenectady, NY), JTS Construction Inc. (Nassau, NY), and CK Companies LLC (Schenectady, NY)

Appendix A – NYSDEC Approvals of Substantive Technical Requirements

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2460
www.dec.ny.gov

September 7, 2018

Mr. John Bleiler
AECOM Corporation
250 Apollo Drive
Chelmsford, MA 01824

Re: BASF Manufacturing Plant, Site No 442027, Rensselaer
Hudson River Operable Unit 02
Attachment G in the 100% Remedial Design Specifications and Drawings

Dear Mr. Bleiler:

The New York State Department of Environmental Conservation (Department) has reviewed your response (enclosed) to the Department's September 4, 2018 comment letter. Following the August 31, 2018 conference call, BASF has agreed to incorporate all the Department changes and comments on Attachment G (Water Column Monitoring Plan). With this development, the 100% Remedial Design Specifications and Drawings for the OU02 Hudson River Sediment and Off-site Areas Project, will be revised.

The Department thereby approves, as the date of this letter, the revised Attachment G (Water Column Monitoring Plan). As agreed upon, BASF will submit the Final 100% Remedial Design Specifications and Drawings package for final review and approval by September 14, 2018. Contact me at (518) 357-2390, or by email at john.strang@dec.ny.gov with any questions.

Sincerely,

John R Strang

John R. Strang, P.E.
Division of Environmental Remediation
Region 4

Enclosure

ec: D. Reid-Green, BASF
K. Mack, BASF
H. Martin, ELM
W. St.Clair, BASF
R. McCarthy, AECOM
C. Bower, NYSDEC
J. Deming, NYSDOH
S. Karpinski, NYSDOH
R. Quail, NYSDEC - FWMR
C. Gosier, NYSDEC - FWMR
S. Edwards, NYSDEC
K. Farrar, NYSDEC
D. Tromp, NYSDEC
R. Mustico, NYSDEC Reg. 4
D. Hoffert, NYSDEC Reg. 4

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2460
www.dec.ny.gov

September 14, 2018

Mr. John Bleiler
AECOM Corporation
250 Apollo Drive
Chelmsford, MA 01824

Re: BASF Manufacturing Plant, Site No 442027, Rensselaer
Hudson River Operable Unit 02
09/10/18 100% Remedial Design Specifications and Drawings

Dear Mr. Bleiler:

The New York State Department of Environmental Conservation (Department) received the revised Final 100% Remedial Design Specifications and Drawings package on September 10, 2018. The Department has reviewed the submittal and hereby approves the revised Final 100% Remedial Design Specifications and Drawings package.

Place a paper copy and electronic copy of the 09/10/18 revised Final 100% Remedial Design Specifications and Drawings package in the document repositories for this project: the City of Rensselaer Public Library and the Rensselaer City Clerk's Office. Please contact me at (518) 357-2390, or by email at john.strang@dec.ny.gov with any questions.

Sincerely,

John R Strang

John R. Strang, P.E.
Division of Environmental Remediation
Region 4

ec: D. Reid-Green, BASF
K. Mack, BASF
H. Martin, ELM
W. St.Clair, BASF
R. McCarthy, AECOM
C. Bower, NYSDEC
J. Deming, NYSDOH
S. Karpinski, NYSDOH
R. Quail, NYSDEC - FWMR
C. Gosier, NYSDEC - FWMR
S. Edwards, NYSDEC
K. Farrar, NYSDEC
D. Tromp, NYSDEC
R. Mustico, NYSDEC Reg. 4
D. Hoffert, NYSDEC Reg. 4

From:	Hoffert, Drew N (DEC)
To:	Bleiler, John
Cc:	Karpinski, Steven (HEALTH); Tromp, David (DEC); Armitage, John L (DEC); John Douglas Reid-Green; karyllan.mack@basf.com; Gardner, Mike; Wayne St Clair; Bower, Caryn I (DEC); Mustico, Richard X (DEC); Gehan, Patrick; Arvanites, Matthew; McCarthy, Ryan
Subject:	BASF OU2 Noise and air monitoring
Date:	Friday, December 6, 2019 4:30:36 PM

Hi John,

The requests in your email below are approved effective immediately. Please notify me when the remaining sediment is removed from the TFS and process monitoring/sampling is suspended.

Sincerely,

-Drew

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, December 06, 2019 11:39 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Gardner, Mike <mike.gardner@aecom.com>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; Arvanites, Matthew <Matthew.Arvanites@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>
Subject: RE: BASF OU2 Rensselaer, NY

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hello Drew:

As a followup to our recent conversation, BASF submits the following requests:

- Effective immediately, we request the ability to terminate noise monitoring. The project is winding down for the season, and we have had no noise exceedences over 2 years of construction;
- Effective today (December 6, 2019), we request the ability to eliminate fenceline TVOC/PM10 monitoring and PCB sampling and replace with hand-held TVOC/PM10 monitoring. There are less than 1000 tons of material remaining in the tent, and these will be shipped out in the next few business days. We would continue process monitoring/sampling until all sediment is removed from the tent.

Please do not hesitate to contact me or Doug with any questions regarding this matter.

Thanks

John A. Bleiler
M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

Built to deliver a better world

LinkedIn Twitter Facebook Instagram

From:	Strang, John (DEC)
To:	Bleiler, John; John Douglas Reid-Green
Cc:	Hank Martin; Denman, Jeff; karyllan.mack@basf.com; Bower, Caryn I (DEC); Wayne St Clair; Karpinski, Steven (HEALTH); Vooris, Christine N (HEALTH); Deming, Justin H (HEALTH); Gardner, Mike; Farrar, Kevin (DEC); Tromp, David (DEC); Mustico, Richard X (DEC); Hoffert, Drew N (DEC); Armitage, John L (DEC)
Subject:	RE: BASF PCB and Process Monitoring Results - FOR IMMEDIATE REVIEW/COMMENT
Date:	Friday, January 18, 2019 11:20:04 AM

John and Doug,

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the email below. The Department and the NYSDOH have no objection to BASF reducing the Community Air Monitoring Program (CAMP) monitoring for the Hudson River OU02 Sediment Remediation Project at the BASF Manufacturing Plant, Site No. 442027 as follows:

Effective as to the date of this email:

1. All permanent real-time and integrated fence line air monitoring and sampling (PM10, TVOCs, and PCBs) at the 6 stations be terminated for the remainder of this field season. The program will transition to daily hand-held TVOC and PM10 monitoring at the perimeter of the TFS and the property fence line.
2. Process air monitoring of the Air Handling Systems be reduced from daily to once per week, in accordance with the CAMP.

I may be reached at (518) 357-2390, or by email at john.strang@dec.ny.gov if you have any questions.

Sincerely,

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]
Sent: Thursday, January 17, 2019 4:27 PM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: John Douglas Reid-Green <douglas.reid-green@basf.com>; Hank Martin <hmartin@elminc.com>; Denman, Jeff <jeff.denman@aecom.com>; karyllan.mack@basf.com; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Wayne St Clair <wayne.stclair@basf.com>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Vooris, Christine N (HEALTH) <Christine.Vooris@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>
Subject: BASF PCB and Process Monitoring Results - FOR IMMEDIATE REVIEW/COMMENT

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

John:

This communication has been prepared as a followup to my December 24, 2018 correspondence (attached) and your December 31, 2018 response with regard to the BASF OU2 sediment remediation and CAMP. In our earlier correspondence, we indicated that the

results of the first two weeks of the PCB fenceline sampling and the process monitoring for PM10, TVOC, and PCBs have been reviewed and tabulated. Based on our analysis of these data, and in accordance with the CAMP, we recommended reducing the frequency of fenceline monitoring and process air monitoring from daily monitoring to once weekly monitoring. Your response indicated that BASF should "Continue with daily air monitoring of PCB fence line and process air monitoring until all dredged sediment has been removed from the river scows and transferred into the temporary fabric structure (TFS). Upon notification to the Department that all dredged sediment is within the TFS, the frequency of PCB fence line air sampling and the process air monitoring sampling is to be reduced from daily to once per week."

I am writing to request that, based on the robust and positive data set collected to date, we be permitted to refine the CAMP monitoring program as described below. This recommendation is based upon the positive results we have now achieved from 6 weeks of intensive air monitoring during dredging, sediment translocating, in tent dewatering operations, and transportation and disposal activities.

- **Fenceline Monitoring**: The BASF Team has conducted real-time particulate matter (PM10) and TVOC monitoring at 6 fenceline monitoring locations, as well as PCB sampling at 3 of the fenceline monitoring locations (identified daily as 1 upwind and 2 downwind) since the start of TSCA dredging activities on November 19, 2018. As has been documented in the weekly reports that we have provided to NYSDEC, 100 percent of the PCB and VOC concentrations and the vast majority of PM10 concentrations have been well below action levels (PCBs have never been detected since the commencement of the program). Only one potentially site-related PM10 exceedence was observed (12/4/18, when Portland cement was being delivered to the TFS). This concern was immediately addressed through implementation of best management practices, and there were no other potentially site-related PM10 exceedences.
- **Process Air Monitoring**: Process monitoring has been performed daily at each of the operational Air Handling Systems (AHS) since the start of TSCA sediment processing within the Temporary Fabric Structure (TFS) (commencing November 29, 2018). Process monitoring includes the following activities: (a) Daily effluent exhaust PM10 measurements at each operational Air Handling System (AHS); (b) Daily influent and effluent exhaust TVOC measurements at each operational AHS, as well as measurements at 25%, 50% and 75% of the carbon bed; and (c) Daily effluent exhaust PCB 8-hour integrated sampling at 1 operational AHS. With the exception of 3 anomalous PM10 sampling events at the start of the program (described in detail in the December 24, 2018 correspondence), the results of the process air monitoring have demonstrated that all PM10 and VOC concentrations have been well below the target emission rates, and PCBs have remained undetected in all sampling events.

Given these results, and given that all dredging and the majority of barge offloading has been completed, we respectfully request that the following conditions apply for the remainder of

this field season, effective immediately:

1. All permanent real-time and integrated fenceline air monitoring and sampling (PM10, TVOCs, and PCBs) at the 6 stations be terminated for the remainder of the field season. The program will transition to daily hand-held TVOC and PM10 monitoring at the perimeter of the TFS and the property fenceline.
2. Process air monitoring of the AHS be reduced from daily to once per week, in accordance with the CAMP.

Please do not hesitate to contact me or Doug Reid-Green with any questions regarding this request.

Thank you

John A. Bleiler
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From:	Gardner, Mike
To:	Chin, Abby
Subject:	FW: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows A to G)
Date:	Tuesday, April 20, 2021 10:16:01 AM
Attachments:	image002.png image003.png

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, November 22, 2019 11:17 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows A to G)

Thanks Drew

John A. Bleiler
M 978.621.7080
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Chelmsford, MA 01824
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From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Friday, November 22, 2019 10:45 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-

green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows A to G)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows A to G are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the ~100 cubic yards of under dredge was primarily due to the East Greenbush stormwater outfall, which was discovered after the 100% Design was finalized. Please ensure that this discrepancy is noted in the FER.

Backfilling of rows A-G with the approved materials and in compliance with the 100% design may begin.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, November 20, 2019 8:29 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew,

BASF has completed dredging Rows A to GC (as shown in the attached Figures) and requests your approval to begin backfilling in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. Please note that he 103 cubic yards of over dredge was observed directly

over the East Greenbush stormwater outfall pipe and along the shoreline in Rows C – F where rip rap (installed during Port of Albany dock construction) was encountered. With your approval of dredge limits in these rows, dredging activities will be completed.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, November 12, 2019 2:48 PM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows H to BB are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the 53 cubic yards of under dredge was along the existing steel and wooded bulkhead where actual field observations did match the design exactly. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of rows H-BB with the approved Subaqueous Backfill and Erosion Protection stone may commence, however placement of the Restoration Cover should not begin until an appropriate fill material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov | | | |

From: Gardner, Mike <mike.gardner@aecom.com>

Sent: Friday, November 08, 2019 9:34 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew:

BASF has completed dredging Rows H to CC (as shown in the attached Figures) and requests your approval to begin backfilling the subaqueous backfill and erosion protection stone layers in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies. The 53 cubic yards of under dredge observed when the as-built survey surface was compared to the design dredge surface was along the existing steel and wooded bulkheads at the dredge limits and is primarily due to difference between the design and actual field observed locations of these structures.

LRI will complete erosion control stone placement in rows CC to NN (approved by DEC in the email chain below) by Monday (11/11/19) and hopes to begin placement of the subaqueous backfill in the deeper cut areas early next week. BASF has provided chemical and physical analyses for the subaqueous backfill material and would appreciate DEC's expediated review of this material to avoid any project delays as winter weather approaches.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter.

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, October 29, 2019 9:14 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower,

Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows CC to NN are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As a note, target elevations were not achieved in Rows II through MM immediately adjacent to the newly installed steel bulkhead. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of the dredge area between Rows CC to NN is approved. Placement of a six-inch-thick layer of erosion protection layer, as approved by DEC in an email dated November 7, 2018 and in compliance with the methods described in the 100% Remedial Design, may commence. As noted in your email below, the analysis of the subaqueous restoration cover material should be submitted for DEC approval prior to installation.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov | | |

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, October 25, 2019 4:15 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: Dredge Area Compliance Approval

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Drew:

BASF has completed dredging Rows CC to NN (shown in the attached Figure 1) and requests your approval to begin backfilling the erosion protection stone layer in these rows. On October 7, 2019, NMB land surveying completed a multi-beam survey of this portion of the dredge area to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited

the use of multibeam technologies.

Figure 1 depicts the target design and as-built elevations at 35 foot grid centers. In all case the dredge as-built elevations were below the dredge targets at the grid locations. The results of a comparison of the three dimensional design surface the as-built dredge surface is provided in the embedded table in Figure 1. The comparisons shows an over dredge across the entire area – design elevations were achieved throughout Rows CC to NN.

Based on this analysis, BASF requests approval to commence backfilling the dredge area between Rows CC to NN. Backfill will consist of erosion protections stone, which was previously approved for in-river use at this Site by DEC
(see attached email). Under separate cover, BASF will be providing you the chemical and physical analyses from the finer-grained backfill materials – no installation of these materials will proceed without DEC approval,.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

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From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike; Bleiler, John
Subject:	RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)
Date:	Friday, November 22, 2019 10:21:32 AM
Attachments:	image001.jpg image002.png image003.png

Hi guys, one quick question before I can approve backfilling gin rows A to G. Was the East Greenbush stormwater outfall pipe constructed recently? I was surprised that I didn't see it in any of the 100% design figures.
Also, an update on DEC's review of your requests. I have asked fish and wildlife to reconsider whether the low percentage of fines in your fill submittal warrants rejection, and their response is due COB Tuesday. However, I have confirmation that total organic content in the samples is acceptable, so I'm optimistic about the outcome.
Both of the requests regarding backfill placement were initially denied, however those are also being reconsidered (COB Tuesday).
-Drew

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, November 20, 2019 8:29 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

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Hi Drew,
BASF has completed dredging Rows A to GC (as shown in the attached Figures) and requests your approval to begin backfilling in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. Please note that he 103 cubic yards of over dredge was observed directly over the East Greenbush stormwater outfall pipe and along the shoreline in Rows C – F where rip rap (installed during Port of Albany dock construction) was encountered. With your approval of dredge limits in these rows, dredging activities will be completed.
Please don't hesitate to contact me or BASF if you have any questions regarding this matter
Thanks,
John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, November 12, 2019 2:48 PM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-

green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows H to BB are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the 53 cubic yards of under dredge was along the existing steel and wooded bulkhead where actual field observations did match the design exactly. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of rows H-BB with the approved Subaqueous Backfill and Erosion Protection stone may commence, however placement of the Restoration Cover should not begin until an appropriate fill material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
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From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, November 08, 2019 9:34 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

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Hi Drew:

BASF has completed dredging Rows H to CC (as shown in the attached Figures) and requests your approval to begin backfilling the subaqueous backfill and erosion protection stone layers in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies. The 53 cubic yards of under dredge observed when the as-built survey surface was compared to the design dredge surface was along the existing steel and wooded bulkheads at the dredge limits and is primarily due to difference between the design and actual field observed locations of these structures.

LRI will complete erosion control stone placement in rows CC to NN (approved by DEC in the email chain below) by Monday (11/11/19) and hopes to begin placement of the subaqueous backfill in the deeper cut areas early next week. BASF has provided chemical and physical analyses for the

subaqueous backfill material and would appreciate DEC's expediated review of this material to avoid any project delays as winter weather approaches.
Please don't hesitate to contact me or BASF if you have any questions regarding this matter.
Thanks,
John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, October 29, 2019 9:14 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)
John and Mike,
Based on the attached as-built figures, post-dredge elevations in Rows CC to NN are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As a note, target elevations were not achieved in Rows II through MM immediately adjacent to the newly installed steel bulkhead. The total under-dredged area is minimal, however this deviation should be noted in the FER.
Backfilling of the dredge area between Rows CC to NN is approved. Placement of a six-inch-thick layer of erosion protection layer, as approved by DEC in an email dated November 7, 2018 and in compliance with the methods described in the 100% Remedial Design, may commence. As noted in your email below, the analysis of the subaqueous restoration cover material should be submitted for DEC approval prior to installation.
Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, October 25, 2019 4:15 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: Dredge Area Compliance Approval

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Drew:
BASF has completed dredging Rows CC to NN (shown in the attached Figure 1) and requests your approval to begin backfilling the erosion protection stone layer in these rows. On October 7, 2019,

NMB land surveying completed a multi-beam survey of this portion of the dredge area to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies.

Figure 1 depicts the target design and as-built elevations at 35 foot grid centers. In all case the dredge as-built elevations were below the dredge targets at the grid locations. The results of a comparison of the three dimensional design surface the as-built dredge surface is provided in the embedded table in Figure 1. The comparisons shows an over dredge across the entire area – design elevations were achieved throughout Rows CC to NN.

Based on this analysis, BASF requests approval to commence backfilling the dredge area between Rows CC to NN. Backfill will consist of erosion protections stone, which was previously approved for in-river use at this Site by DEC

(see attached email). Under separate cover, BASF will be providing you the chemical and physical analyses from the finer-grained backfill materials – no installation of these materials will proceed without DEC approval,.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

Michael Gardner, P.E.
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Demers, Elizabeth

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Friday, November 22, 2019 10:21 AM
To: Gardner, Mike; Bleiler, John
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

Hi guys, one quick question before I can approve backfilling gin rows A to G. Was the East Greenbush stormwater outfall pipe constructed recently? I was surprised that I didn't see it in any of the 100% design figures.

Also, an update on DEC's review of your requests. I have asked fish and wildlife to reconsider whether the low percentage of fines in your fill submittal warrants rejection, and their response is due COB Tuesday. However, I have confirmation that total organic content in the samples is acceptable, so I'm optimistic about the outcome.

Both of the requests regarding backfill placement were initially denied, however those are also being reconsidered (COB Tuesday).

-Drew

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, November 20, 2019 8:29 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

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Hi Drew,

BASF has completed dredging Rows A to GC (as shown in the attached Figures) and requests your approval to begin backfilling in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. Please note that he 103 cubic yards of over dredge was observed directly over the East Greenbush stormwater outfall pipe and along the shoreline in Rows C – F where rip rap (installed during Port of Albany dock construction) was encountered. With your approval of dredge limits in these rows, dredging activities will be completed.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, November 12, 2019 2:48 PM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows H to BB are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the 53 cubic yards of under dredge was along the existing steel and wooded bulkhead where actual field observations did match the design exactly. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of rows H-BB with the approved Subaqueous Backfill and Erosion Protection stone may commence, however placement of the Restoration Cover should not begin until an appropriate fill material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, November 08, 2019 9:34 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew:

BASF has completed dredging Rows H to CC (as shown in the attached Figures) and requests your approval to begin backfilling the subaqueous backfill and erosion protection stone layers in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies. The 53 cubic yards of under dredge observed when the as-built survey surface was compared to the design dredge surface

was along the existing steel and wooded bulkheads at the dredge limits and is primarily due to difference between the design and actual field observed locations of these structures.

LRI will complete erosion control stone placement in rows CC to NN (approved by DEC in the email chain below) by Monday (11/11/19) and hopes to begin placement of the subaqueous backfill in the deeper cut areas early next week. BASF has provided chemical and physical analyses for the subaqueous backfill material and would appreciate DEC's expediated review of this material to avoid any project delays as winter weather approaches.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter.

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, October 29, 2019 9:14 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows CC to NN are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As a note, target elevations were not achieved in Rows II through MM immediately adjacent to the newly installed steel bulkhead. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of the dredge area between Rows CC to NN is approved. Placement of a six-inch-thick layer of erosion protection layer, as approved by DEC in an email dated November 7, 2018 and in compliance with the methods described in the 100% Remedial Design, may commence. As noted in your email below, the analysis of the subaqueous restoration cover material should be submitted for DEC approval prior to installation.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, October 25, 2019 4:15 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com;

Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: Dredge Area Compliance Approval

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Drew:

BASF has completed dredging Rows CC to NN (shown in the attached Figure 1) and requests your approval to begin backfilling the erosion protection stone layer in these rows. On October 7, 2019, NMB land surveying completed a multi-beam survey of this portion of the dredge area to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies.

Figure 1 depicts the target design and as-built elevations at 35 foot grid centers. In all case the dredge as-built elevations were below the dredge targets at the grid locations. The results of a comparison of the three dimensional design surface the as-built dredge surface is provided in the embedded table in Figure 1. The comparisons shows an over dredge across the entire area – design elevations were achieved throughout Rows CC to NN.

Based on this analysis, BASF requests approval to commence backfilling the dredge area between Rows CC to NN. Backfill will consist of erosion protections stone, which was previously approved for in-river use at this Site by DEC (see attached email). Under separate cover, BASF will be providing you the chemical and physical analyses from the finer-grained backfill materials – no installation of these materials will proceed without DEC approval,.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

Michael Gardner, P.E.
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Demers, Elizabeth

From: Strang, John (DEC) <john.strang@dec.ny.gov>
Sent: Wednesday, November 7, 2018 3:41 PM
To: Bleiler, John; John Douglas Reid-Green; karyllan.mack@basf.com; Hank Martin; Wayne St Clair; Gardner, Mike; Denman, Jeff; wpl@land-remediation.com; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Farrar, Kevin (DEC); Tromp, David (DEC)
Cc: Deming, Justin H (HEALTH); Edwards, Susan L (DEC); Quail, Rebecca A (DEC); Mustico, Richard X (DEC)
Subject: BASF Manufacturing Plant, Site No. 442027, Rensselaer
Attachments: file.hw442027.2018-10-17.Submittal Review #13C Erosion Protection Stone Compiled Response.pdf; letter.hw442027.2018-11-07.Department approval of erosion protection stone submittal.pdf

Approval of the Erosion Protection Stone submittal for the Hudson River OU02 Remedial Action

The attached electronic copy, regarding the New York State Department of Environmental Conservation approval of the Process Stone submittal at the BASF Manufacturing Plant Site for the Hudson River Operable Unit 2 Remedial Action, was signed by John R. Strang on November 7, 2018.

This email copies you on correspondence from the New York State Department of Environmental Conservation, Division of Environmental Remediation. Electronic attachments may be attached. A hard copy will not follow in the mail. Please contact John Strang at (518) 357-2390 if you experience problems with this transmission.

John R. Strang, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From:	Strang, John (DEC)
To:	Bleiler, John; John Douglas Reid-Green; karyllan.mack@basf.com; Hank Martin; Wayne St Clair; Gardner, Mike; Denman, Jeff; wpl@land-remediation.com; Bower, Caryn I (DEC); Deming, Justin H (HEALTH); Karpinski, Steven (HEALTH); Quail, Rebecca A (DEC); Farrar, Kevin (DEC); Tromp, David (DEC); Mustico, Richard X (DEC)
Cc:	Edwards, Susan L (DEC); Armitage, John L (DEC)
Subject:	BASF Manufacturing Plant, Site No. 442027, Rensselaer
Date:	Wednesday, November 21, 2018 1:58:37 PM
Attachments:	file.hw442027.2018-08-29.OU02 Analytical of Common Fill for Use Upland at BASF.pdf letter.hw442027.2018-11-21.Department approval of imported fill for use during upland site prep.pdf

Approval of the Common Fill submittal for the Hudson River OU02 Remedial Action

The attached electronic copy, regarding the New York State Department of Environmental Conservation approval of the Common Fill submittal for use at the BASF Manufacturing Plant Site for the Hudson River Operable Unit 2 Remedial Action, was signed by John R. Strang on November 21, 2018.

This email copies you on correspondence from the New York State Department of Environmental Conservation, Division of Environmental Remediation. Electronic attachments may be attached. A hard copy will not follow in the mail. Please contact John Strang at (518) 357-2390 if you experience problems with this transmission.

John Strang

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike; Wil Lindheimer; Bleiler, John; Gehan, Patrick; Denman, Jeff
Subject:	BASF OU2 Backfilling
Date:	Wednesday, December 4, 2019 10:09:04 AM
Attachments:	image002.jpg image004.png image006.png

Hi all,

The backfilling requests, including use of the subaqueous backfill as restoration cover, were denied internally (again). I'm still holding off on formal disapproval for the time being, but I wanted to let you all know.

I understand that you were looking at a new backfill source with a higher percentage of fines. As soon as I receive geotechnical data and sourcing information for the new material I can see if it would require emerging contaminant testing.

I am back in the office until the week of Christmas, so I should be easy to reach through them.

Thanks,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	Bleiler, John
Subject:	BASF OU2 Restoration Cover A questions
Date:	Thursday, December 12, 2019 12:04:48 PM
Attachments:	image001.jpg image002.png image003.png

Hi Mike, thank you for answering my phone call this morning. In your email summarizing your responses to my questions, please include the following:

1. What is meant by "blending upper brown loam with aquatic backfill material" under "Additional Notes" on the cover page.
2. Why page 2 and 3 of the submittal are named differently "AQUAFILL BROWN LOAM" vs. "AQUAFILL SAMPLE #5" if they are supposed to be sourced in the same way.
3. Why the COARSE / FINE GRAVEL percentages are significantly different between "AQUAFILL BROWN LOAM" and "AQUAFILL SAMPLE #5" if they are sourced in the same way.

I will be able to respond to the Restoration Cover A submittal after I receive your email.

Thanks again and all the best,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov | | |

From:	Hoffert, Drew N (DEC)
To:	Bleiler, John; Gardner, Mike; Will Lindheimer
Subject:	BASF OU2 Restoration Cover
Date:	Tuesday, November 12, 2019 4:06:17 PM
Attachments:	image007.jpg image008.png image009.png BASF OU2 - Subageuos Backfill and Restoration Cover Submittal.pdf EC Sampling Guidance - July 2018.pdf

---

Hi all,

As mentioned in my previous email, the attached fill material was rejected for use as Restoration Cover primarily because it did not contain enough fine materials. A potential solution to this would be mixing fine materials from a separate source with the Mackay Pit sand and gravel. We still need to discuss some details internally, but I have a few preliminary comments.

1. Finer materials mixed with the sand and gravel fill would need to be sampled at a frequency recommended in Table 5.4(e)10 of DER-10.
    a. These materials would need to be sampled for emerging contaminants under the following special testing requirements:

i. Soil imported to a site for use in a soil cap, soil cover, or as backfill must be tested for 1,4-dioxane and PFAS contamination in general conformance with DER-10, Section 5.4(e). Soil samples must be analyzed for 1,4-dioxane using EPA Method 8270, as well as the full list of PFAS compounds (currently 21) using modified EPA Method 537.1.

ii. For 1,4-dioxane, soil exceeding 0.1 ppm must be rejected in accordance with DER 10: Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e).

iii. If PFOA or PFOS is detected in any sample at or above 1 ppb, then a soil sample must be tested by the Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed. If the SPLP results exceed 70 ppt combined PFOA/S, then the source of backfill must be rejected. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays.

iv. Category B deliverables are required (until further notice) for PFAS analysis.

v. Please see the attached EC Sampling Guidance

    b. EC sampling was not required for the fill you submitted based on the following rationale: The waiver of the requirement to perform chemical testing on imported material (Section 5.4(e)5 of DER-10) doesn't apply to material placed directly in the water. Nevertheless, because the material originates from a permitted virgin sand and gravel pit with no known disposal of ECs having occurred, we believe the risk of introducing ECs to the site is insignificant and no testing is required.

1. The original submittal did not have any information on lightweight pieces (should be less than 0.5%) or soundness (magnesium sulfate) percent loss (should be less than 5%). Please let me know if you have any information on this.
2. Fish and Wildlife expressed some concerns about the organic content in the fill submitted to DEC. Conclusive comments are still pending.
    a. Fish and Wildlife was interested in seeing organic *carbon* content as opposed to organic content. I asked what ASTM method they would like you to use, and am awaiting a reply.

b. They indicated that the organic content totals were on the lower side (potentially unacceptably so).

Thank you, and I will follow up when I have more information,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov | | | |

Demers, Elizabeth

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Friday, November 22, 2019 10:21 AM
To: Gardner, Mike; Bleiler, John
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

Hi guys, one quick question before I can approve backfilling gin rows A to G. Was the East Greenbush stormwater outfall pipe constructed recently? I was surprised that I didn't see it in any of the 100% design figures.

Also, an update on DEC's review of your requests. I have asked fish and wildlife to reconsider whether the low percentage of fines in your fill submittal warrants rejection, and their response is due COB Tuesday. However, I have confirmation that total organic content in the samples is acceptable, so I'm optimistic about the outcome.

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Sent: Wednesday, November 20, 2019 8:29 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

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Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, November 12, 2019 2:48 PM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows H to BB are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the 53 cubic yards of under dredge was along the existing steel and wooded bulkhead where actual field observations did match the design exactly. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of rows H-BB with the approved Subaqueous Backfill and Erosion Protection stone may commence, however placement of the Restoration Cover should not begin until an appropriate fill material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
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From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, November 08, 2019 9:34 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

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Hi Drew:

BASF has completed dredging Rows H to CC (as shown in the attached Figures) and requests your approval to begin backfilling the subaqueous backfill and erosion protection stone layers in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies. The 53 cubic yards of under dredge observed when the as-built survey surface was compared to the design dredge surface

was along the existing steel and wooded bulkheads at the dredge limits and is primarily due to difference between the design and actual field observed locations of these structures.

LRI will complete erosion control stone placement in rows CC to NN (approved by DEC in the email chain below) by Monday (11/11/19) and hopes to begin placement of the subaqueous backfill in the deeper cut areas early next week. BASF has provided chemical and physical analyses for the subaqueous backfill material and would appreciate DEC's expediated review of this material to avoid any project delays as winter weather approaches.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter.

Thanks,

John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, October 29, 2019 9:14 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows CC to NN are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As a note, target elevations were not achieved in Rows II through MM immediately adjacent to the newly installed steel bulkhead. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of the dredge area between Rows CC to NN is approved. Placement of a six-inch-thick layer of erosion protection layer, as approved by DEC in an email dated November 7, 2018 and in compliance with the methods described in the 100% Remedial Design, may commence. As noted in your email below, the analysis of the subaqueous restoration cover material should be submitted for DEC approval prior to installation.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, October 25, 2019 4:15 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com;

Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: Dredge Area Compliance Approval

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Drew:

BASF has completed dredging Rows CC to NN (shown in the attached Figure 1) and requests your approval to begin backfilling the erosion protection stone layer in these rows. On October 7, 2019, NMB land surveying completed a multi-beam survey of this portion of the dredge area to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies.

Figure 1 depicts the target design and as-built elevations at 35 foot grid centers. In all case the dredge as-built elevations were below the dredge targets at the grid locations. The results of a comparison of the three dimensional design surface the as-built dredge surface is provided in the embedded table in Figure 1. The comparisons shows an over dredge across the entire area – design elevations were achieved throughout Rows CC to NN.

Based on this analysis, BASF requests approval to commence backfilling the dredge area between Rows CC to NN. Backfill will consist of erosion protections stone, which was previously approved for in-river use at this Site by DEC (see attached email). Under separate cover, BASF will be providing you the chemical and physical analyses from the finer-grained backfill materials – no installation of these materials will proceed without DEC approval,.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com

John A. Bleiler
D 978.905.2124 M 978.621.7080
john.bleiler@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike; Bleiler, John
Subject:	RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)
Date:	Friday, November 22, 2019 10:21:32 AM
Attachments:	image001.jpg image002.png image003.png

Hi guys, one quick question before I can approve backfilling gin rows A to G. Was the East Greenbush stormwater outfall pipe constructed recently? I was surprised that I didn't see it in any of the 100% design figures.
Also, an update on DEC's review of your requests. I have asked fish and wildlife to reconsider whether the low percentage of fines in your fill submittal warrants rejection, and their response is due COB Tuesday. However, I have confirmation that total organic content in the samples is acceptable, so I'm optimistic about the outcome.
Both of the requests regarding backfill placement were initially denied, however those are also being reconsidered (COB Tuesday).
-Drew

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, November 20, 2019 8:29 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

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Hi Drew,
BASF has completed dredging Rows A to GC (as shown in the attached Figures) and requests your approval to begin backfilling in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. Please note that he 103 cubic yards of over dredge was observed directly over the East Greenbush stormwater outfall pipe and along the shoreline in Rows C – F where rip rap (installed during Port of Albany dock construction) was encountered. With your approval of dredge limits in these rows, dredging activities will be completed.
Please don't hesitate to contact me or BASF if you have any questions regarding this matter
Thanks,
John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, November 12, 2019 2:48 PM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-

green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows H to BB)

John and Mike,

Based on the attached as-built figures, post-dredge elevations in Rows H to BB are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As noted in your email below, the 53 cubic yards of under dredge was along the existing steel and wooded bulkhead where actual field observations did match the design exactly. The total under-dredged area is minimal, however this deviation should be noted in the FER.

Backfilling of rows H-BB with the approved Subaqueous Backfill and Erosion Protection stone may commence, however placement of the Restoration Cover should not begin until an appropriate fill material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, November 08, 2019 9:34 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)

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Hi Drew:

BASF has completed dredging Rows H to CC (as shown in the attached Figures) and requests your approval to begin backfilling the subaqueous backfill and erosion protection stone layers in these rows. The attached Figures are based on a multi-beam as-built survey of this portion of the dredge area that NMB Land Surveying completed to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies. The 53 cubic yards of under dredge observed when the as-built survey surface was compared to the design dredge surface was along the existing steel and wooded bulkheads at the dredge limits and is primarily due to difference between the design and actual field observed locations of these structures.

LRI will complete erosion control stone placement in rows CC to NN (approved by DEC in the email chain below) by Monday (11/11/19) and hopes to begin placement of the subaqueous backfill in the deeper cut areas early next week. BASF has provided chemical and physical analyses for the

subaqueous backfill material and would appreciate DEC's expediated review of this material to avoid any project delays as winter weather approaches.
Please don't hesitate to contact me or BASF if you have any questions regarding this matter.
Thanks,
John / Mike

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Tuesday, October 29, 2019 9:14 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: BASF OU2 (442027) -- Dredge Area Compliance Approval (Rows CC to NN)
John and Mike,
Based on the attached as-built figures, post-dredge elevations in Rows CC to NN are sufficiently compliant with the target elevations in the approved September 2018 100% Remedial Design. As a note, target elevations were not achieved in Rows II through MM immediately adjacent to the newly installed steel bulkhead. The total under-dredged area is minimal, however this deviation should be noted in the FER.
Backfilling of the dredge area between Rows CC to NN is approved. Placement of a six-inch-thick layer of erosion protection layer, as approved by DEC in an email dated November 7, 2018 and in compliance with the methods described in the 100% Remedial Design, may commence. As noted in your email below, the analysis of the subaqueous restoration cover material should be submitted for DEC approval prior to installation.
Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, October 25, 2019 4:15 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>
Subject: Dredge Area Compliance Approval

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Drew:
BASF has completed dredging Rows CC to NN (shown in the attached Figure 1) and requests your approval to begin backfilling the erosion protection stone layer in these rows. On October 7, 2019,

NMB land surveying completed a multi-beam survey of this portion of the dredge area to confirm that target elevations were achieved. This multibeam survey was supplemented by soundings along the bulkhead area to confirm dredge elevations at the toe of bulkhead, where shallow water limited the use of multibeam technologies.

Figure 1 depicts the target design and as-built elevations at 35 foot grid centers. In all case the dredge as-built elevations were below the dredge targets at the grid locations. The results of a comparison of the three dimensional design surface the as-built dredge surface is provided in the embedded table in Figure 1. The comparisons shows an over dredge across the entire area – design elevations were achieved throughout Rows CC to NN.

Based on this analysis, BASF requests approval to commence backfilling the dredge area between Rows CC to NN. Backfill will consist of erosion protections stone, which was previously approved for in-river use at this Site by DEC

(see attached email). Under separate cover, BASF will be providing you the chemical and physical analyses from the finer-grained backfill materials – no installation of these materials will proceed without DEC approval,.

Please don't hesitate to contact me or BASF if you have any questions regarding this matter

Thanks,

John / Mike

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
John A. Bleiler
D 978.905.2124 M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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Demers, Elizabeth

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Wednesday, December 4, 2019 10:23 AM
To: Gardner, Mike; Wil Lindheimer; Bleiler, John; Gehan, Patrick; Denman, Jeff
Subject: RE: BASF OU2 Backfilling

Thanks, I'm on it.

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, December 04, 2019 10:18 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Wil Lindheimer <wpl@land-remediation.com>; Bleiler, John <John.Bleiler@aecom.com>; Gehan, Patrick <Patrick.Gehan@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: RE: BASF OU2 Backfilling

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Hi Drew,

Here is the grain size and analytical for alternate material the supplier can provide.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Wednesday, December 4, 2019 10:09 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>; Bleiler, John <John.Bleiler@aecom.com>; Gehan, Patrick <Patrick.Gehan@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: BASF OU2 Backfilling

Hi all,

The backfilling requests, including use of the subaqueous backfill as restoration cover, were denied internally (again). I'm still holding off on formal disapproval for the time being, but I wanted to let you all know.

I understand that you were looking at a new backfill source with a higher percentage of fines. As soon as I receive geotechnical data and sourcing information for the new material I can see if it would require emerging contaminant testing.

I am back in the office until the week of Christmas, so I should be easy to reach through then. Thanks,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation

New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike; Wil Lindheimer; Bleiler, John; Gehan, Patrick; Denman, Jeff
Subject:	RE: BASF OU2 Backfilling
Date:	Wednesday, December 4, 2019 10:46:28 AM
Attachments:	image001.jpg image002.png image003.png Aquatic Backfill Submittal - up to 15000 CY.msg

The attached material is the brown loam / subaquatic backfill blend, correct? I can see that although the proportion of fines has increased, the organic content has been reduced below approval ranges (2% compared to the minimum 5%). A blend with a topsoil material that is high in both fines and organics would likely be necessary.
-Drew

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Wednesday, December 04, 2019 10:18 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Wil Lindheimer <wpl@land-remediation.com>; Bleiler, John <John.Bleiler@aecom.com>; Gehan, Patrick <Patrick.Gehan@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: RE: BASF OU2 Backfilling

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Hi Drew,
Here is the grain size and analytical for alternate material the supplier can provide.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Wednesday, December 4, 2019 10:09 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>; Bleiler, John <John.Bleiler@aecom.com>; Gehan, Patrick <Patrick.Gehan@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: BASF OU2 Backfilling
Hi all,
The backfilling requests, including use of the subaqueous backfill as restoration cover, were denied internally (again). I'm still holding off on formal disapproval for the time being, but I wanted to let you all know.
I understand that you were looking at a new backfill source with a higher percentage of fines. As soon as I receive geotechnical data and sourcing information for the new material I can see if it would require emerging contaminant testing.
I am back in the office until the week of Christmas, so I should be easy to reach through them.
Thanks,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike; Bleiler, John
Subject:	RE: BASF OU2 Restoration Cover A
Date:	Monday, December 9, 2019 11:26:19 AM
Attachments:	image001.jpg image002.png image003.png Submittal 20-C aquatic fill.pdf RE BASF OU2 Backfilling.msg

---

Hey guys, one follow up question. The fill material currently being review by Fish and Wildlife for Restoration Cover A is attached. This was included in your email on Friday December 6th.

This is the same as the material submitted on December 4th, which was a blend of the "upper brown loam" and the previously approved. subaqueous backfill material. On the phone call today, you said that the material currently under review is not a blend.

It's not critical either way, but I'm not sure which part of the story I have wrong. Feel free to call or reply to this email to respond.

Thanks,

-Drw

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Monday, December 09, 2019 10:39 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Subject: RE: BASF OU2 Restoration Cover A

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I have not heard from John, he may be traveling this morning. I'll send a Teams meting invite and we can take it from there.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Monday, December 9, 2019 9:59 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Subject: RE: BASF OU2 Restoration Cover A

Sounds good. We can call whatever number you'd like

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Monday, December 09, 2019 9:48 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>
Subject: RE: BASF OU2 Restoration Cover A

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Yes. Does 11:00 work?

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Monday, December 9, 2019 9:22 AM
To: Bleiler, John <John.Bleiler@aecom.com>; Gardner, Mike <mike.gardner@aecom.com>
Subject: BASF OU2 Restoration Cover A

Hi John and Mike,

Do either/both of you have time for a quick phone call? Rick and I have a question about your non-SAV restoration cover (Restoration Cover A) submittal.

Thanks,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov | | | |

From:	Hoffert, Drew N (DEC)
To:	Bleiler, John
Cc:	Will Lindheimer; Wayne St Clair; John Douglas Reid-Green; Gardner, Mike; Rygiel, Lisa; Gehan, Patrick
Subject:	RE: BASF Rensselaer Work Shifts
Date:	Friday, January 3, 2020 1:35:25 PM
Attachments:	RE BASF OU2 (442027) -- Restoration Cover A.msg

Got it, thanks for the heads up. Will this change the timeline for Restoration B cover that Will sent earlier (attached)?
-Drew

From: Bleiler, John <John.Bleiler@aecom.com>
Sent: Friday, January 03, 2020 1:17 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Will Lindheimer <wpl@land-remediation.com>; Wayne St Clair <wayne.stclair@basf.com>; John Douglas Reid-Green <douglas.reid-green@basf.com>; Gardner, Mike <mike.gardner@aecom.com>; Rygiel, Lisa <Lisa.Rygiel@aecom.com>; Gehan, Patrick <Patrick.Gehan@aecom.com>
Subject: BASF Rensselaer Work Shifts

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Hi Drew
I left you a message a few minutes ago with regard to next week's scheduling. We are currently planning to add a second extended shift starting next Monday evening. With this second shift added and if the weather continues to cooperate, we are hoping to place as much as the restoration cover material as possible this season. The current long extended forecast shows workable weather through mid-January. We recognize that night time operations include higher hazards and Land is mobilizing additional light plants, crew, and PPE to ensure the crew is operating safely and has proper illumination. As you know, this plan can change instantly based on weather and we will keep you and the group updated as thing progress over the next 2 weeks.
Please let me know if you have any concerns or questions.
Thanks

John A. Bleiler
M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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From:	Hoffert, Drew N (DEC)
To:	Will Lindheimer; Gardner, Mike
Cc:	Gehan, Patrick; Bleiler, John
Subject:	RE: BASF OU2 (442027) -- Restoration Cover A
Date:	Friday, January 3, 2020 11:41:44 AM
Attachments:	image001.jpg image002.png image003.png

Thanks Will,
One of the people I need to check with will be back in the office Tuesday, but there's a chance I'll be able to get back to you sooner.
-Drew

From: Will Lindheimer <wpl@land-remediation.com>
Sent: Friday, January 03, 2020 11:30 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Gehan, Patrick <Patrick.Gehan@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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Drew and Mike,
Thanks for the followup. We are looking to begin importing Type B material by the middle of next week. We expect to start placing Type B one week from today.
Approval early next week would be great.
Thanks
Will

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
www.land-remediation.com

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, January 03, 2020 10:22 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Gehan, Patrick <Patrick.Gehan@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Will Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover A
Hi Drew,
Thanks for the quick review.
I think LRI would like to start placing the Type B ASAP. It will take a while to get the material made and delivered so a quick approval will improve our chance of getting off the water before ice sets in. If approval of the Attachment 3 material is lagging then getting the approval of the Attachment 2 independently would certainly help keep things moving.
Will, can you weigh in on Drew's questions?

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Sent: Friday, January 3, 2020 10:04 AM
To: Gardner, Mike <mike.gardner@aecom.com>
Cc: Gehan, Patrick <Patrick.Gehan@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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1. Copper content in Attachment 2 (Restoration Cover B)
2. The proportion of coarse and fine materials in Attachment 3 (backup Restoration Cover B)

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- By when would you need approval of the Attachment 2 material so as to not incur additional costs?
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Thanks, and nice work sourcing these mixtures.
-Drew

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of the Type A material from the Valente pit and a peat material provided by the Mariahville Peat Co. in Mariahville, NY.

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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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The “Aquafill Sample #5” blend of subaqueous backfill and upper brown loam is approved for use at Restoration Cover Type A. As described below, Restoration Cover Type A will be used in deeper water where no subaquatic vegetation (SAV) is present. Please ensure that the two materials are blended thoroughly so that the proportion of fines and organics is consistent throughout the cover.

As a reminder, DEC has not approved any material for use as Restoration Cover Type B.

Please contact me if you have any questions.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

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Subject: Restoration Cover

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As a follow-up to our 12/4/2019 call, BASF requests that the NYSDEC approve 2 different types of restoration cover at the BASF Rensselaer Site:

- **Restoration Cover Type A** will be used in deeper water, to support fish and benthic resources. No SAV is present in these areas;
- **Restoration Cover Type B** will be used in shallower nearshore environments, to support SAV, benthic, and fish resources.

Restoration Cover Type A

BASF requests your immediate approval to use backfill material (representative grain size and analytical results attached) for the Hudson River OU-2 subaqueous restoration cover layer in the deeper water area where submerged aquatic vegetation (SAV) is not being planted. The deep water area (e.g., deeper than 9 feet at Mean High Water (MHW), covers approximately 4.2 acres of the 4.8 acre remediation area. This backfill is from a virgin bank run source at RJ Valente's Mackay Pit in Mechanicville, New York. This material meets the grain size distribution presented in the 100% Design and generally matches the sediment texture observed in the deeper water areas that were not influenced by deposition from historic outfalls. As presented in the Ecological Restoration, Monitoring and Maintenance Plan (included in the 100% Design), the proposed material:

1. Provides a substrate suitable for colonization by benthic organisms and use by fish;
2. Possesses sufficient structural strength to achieve necessary slope stability;
3. Has adequate density to allow placement throughout the 4.2 acre entire remediation area;
4. Has sufficient density to prevent erosion during typical high flow periods, and,

The total organic carbon (TOC) of this material is less than the 1.5 to 3 percent specified in the 100% design. However, in the deep water areas where there is insufficient sunlight to support SAV growth, the lower TOC level will not influence the material's performance relative to the primary functions presented above.

Restoration Cover Type B

In the near future, BASF will propose an alternate subaqueous restoration cover material for the 0.6 acres of shallow water (e.g., nine feet or less at MHW) where SAV will be planted. This material will contain 1.5 to 3 percent TOC. These TOC levels will be achieved by using material from an alternate source or amending the above described granular fill with organic rich material (e.g., top soil, compost, or peat). Chemistry, TOC, and grainsize data from any amendment will be provided to the NYSDEC for approval prior to placement.

With regard to the 0.6 acre SAV planting zone, it should also be noted that the 100% Design requires that SAV planting units be planted at a density of 1 per 5.5 square feet. These planting units will be comprised of the SAV plants, a biodegradable planting pot, and an organic substrate. BASF is investigating the use of a TOC rich planting mixture, coupled with the use of a larger peat pot to enhance the TOC levels in the top 6 inches of the SAV planting zone. Additional detail will be provided in our request for approval of Restoration Cover Type B substrate (to be submitted next week).

LRI is currently proceeding with placement of approved subaqueous backfill and erosion protection stone, and anticipates to be completed mid next week. Therefore, your expediated review and approval of Restoration Cover Type A material for placement in the non-SAV areas would be greatly appreciated.

Please call if you have any questions and thank you for your help.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384

mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	Gehan, Patrick; Bleiler, John; Wil Lindheimer
Subject:	RE: BASF OU2 (442027) -- Restoration Cover A
Date:	Friday, January 3, 2020 10:03:38 AM
Attachments:	image001.jpg image002.png image003.png

Hi Mike, thank you for the submittal. At a glance, the materials meets all design criteria with the exception of:

1. Copper content in Attachment 2 (Restoration Cover B)
2. The proportion of coarse and fine materials in Attachment 3 (backup Restoration Cover B)

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Thanks, and nice work sourcing these mixtures.
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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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Hi Drew,
The following are attached for your review:

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- Attachment 2 – This includes geotechnical and laboratory anticyclical data for a proposed Type B Restoration cover that will be placed in the areas where SAV will be planted. This material is a mixture of the same Type A material from the Valente pit and a peat material provided by Hudson Peat in Hudson, NY. This is our preferred source for the Type B Restoration cover.

Attachment 3 – This includes geotechnical and laboratory anticyclical data for an alternate Type B Restoration cover (in case the Hudson Peat is not available). This material is a mixture of the Type A material from the Valente pit and a peat material provided by the Mariahville Peat Co. in Mariahville, NY.

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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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From:	Hoffert, Drew N (DEC)
To:	Will Lindheimer; Gardner, Mike
Cc:	Gehan, Patrick; Bleiler, John
Subject:	RE: BASF OU2 (442027) -- Restoration Cover A
Date:	Friday, January 3, 2020 11:41:44 AM
Attachments:	image001.jpg image002.png image003.png

Thanks Will,
One of the people I need to check with will be back in the office Tuesday, but there's a chance I'll be able to get back to you sooner.
-Drew

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Sent: Friday, January 03, 2020 11:30 AM
To: Gardner, Mike <mike.gardner@aecom.com>; Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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Drew and Mike,
Thanks for the followup. We are looking to begin importing Type B material by the middle of next week. We expect to start placing Type B one week from today.
Approval early next week would be great.
Thanks
Will

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
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Sent: Friday, December 06, 2019 12:39 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Gardner, Mike <mike.gardner@aecom.com>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: Restoration Cover

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

As a follow-up to our 12/4/2019 call, BASF requests that the NYSDEC approve 2 different types of restoration cover at the BASF Rensselaer Site:

- **Restoration Cover Type A** will be used in deeper water, to support fish and benthic resources. No SAV is present in these areas;
- **Restoration Cover Type B** will be used in shallower nearshore environments, to support SAV, benthic, and fish resources.

Restoration Cover Type A

BASF requests your immediate approval to use backfill material (representative grain size and analytical results attached) for the Hudson River OU-2 subaqueous restoration cover layer in the deeper water area where submerged aquatic vegetation (SAV) is not being planted. The deep water area (e.g., deeper than 9 feet at Mean High Water (MHW), covers approximately 4.2 acres of the 4.8 acre remediation area. This backfill is from a virgin bank run source at RJ Valente's Mackay Pit in Mechanicville, New York. This material meets the grain size distribution presented in the 100% Design and generally matches the sediment texture observed in the deeper water areas that were not influenced by deposition from historic outfalls. As presented in the Ecological Restoration, Monitoring and Maintenance Plan (included in the 100% Design), the proposed material:

1. Provides a substrate suitable for colonization by benthic organisms and use by fish;
2. Possesses sufficient structural strength to achieve necessary slope stability;
3. Has adequate density to allow placement throughout the 4.2 acre entire remediation area;
4. Has sufficient density to prevent erosion during typical high flow periods, and,

The total organic carbon (TOC) of this material is less than the 1.5 to 3 percent specified in the 100% design. However, in the deep water areas where there is insufficient sunlight to support SAV growth, the lower TOC level will not influence the material's performance relative to the primary functions presented above.

Restoration Cover Type B

In the near future, BASF will propose an alternate subaqueous restoration cover material for the 0.6 acres of shallow water (e.g., nine feet or less at MHW) where SAV will be planted. This material will contain 1.5 to 3 percent TOC. These TOC levels will be achieved by using material from an alternate source or amending the above described granular fill with organic rich material (e.g., top soil, compost, or peat). Chemistry, TOC, and grainsize data from any amendment will be provided to the NYSDEC for approval prior to placement.

With regard to the 0.6 acre SAV planting zone, it should also be noted that the 100% Design requires that SAV planting units be planted at a density of 1 per 5.5 square feet. These planting units will be comprised of the SAV plants, a biodegradable planting pot, and an organic substrate. BASF is investigating the use of a TOC rich planting mixture, coupled with the use of a larger peat pot to enhance the TOC levels in the top 6 inches of the SAV planting zone. Additional detail will be provided in our request for approval of Restoration Cover Type B substrate (to be submitted next week).

LRI is currently proceeding with placement of approved subaqueous backfill and erosion protection stone, and anticipates to be completed mid next week. Therefore, your expediated review and approval of Restoration Cover Type A material for placement in the non-SAV areas would be greatly appreciated.

Please call if you have any questions and thank you for your help.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384

mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	Karpinski, Steven (HEALTH); Tromp, David (DEC); Armitage, John L (DEC); John Douglas Reid-Green; karyllan.mack@basf.com; Sharma, Shailesh K (DEC); Wayne St Clair; Bower, Caryn I (DEC); Mustico, Richard X (DEC); Gehan, Patrick; McCarthy, Ryan; Bleiler, John; Wil Lindheimer
Subject:	RE: BASF OU2 (442027) -- Restoration Cover B
Date:	Thursday, January 9, 2020 9:10:06 AM
Attachments:	image005.jpg image006.png image007.png image008.jpg image009.jpg image010.png image011.png image012.jpg

Hi Mike,
Thank you for the clarification and additional sampling results.
The Attachment 2 material, which is a mixture of the Type A material from the Valente pit and a peat material provided by Hudson Peat in Hudson, NY, is approved for use as Type B Restoration Cover. This mixture meets all physical and chemical criteria specified in the approved 100% Design.
Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Thursday, January 09, 2020 9:02 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Sharma, Shailesh K (DEC) <Shailesh.Sharma@dec.ny.gov>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover B

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Hi Drew,
BASF requests that DEC reconsider approval of the Attachment 2 Type B restoration cover. The copper concentration of 104 mg/kg was measured in a sample of the raw peat from the Hudson Peat Source and did not account for the blending with the Valente sand and gravel that will generate backfill material.
The attached analytical result shows a copper concentration of 22.5 mg/kg measured in a sample of the blended peat and sand and gravel at the blending ratio that will be delivered to the Type B planting area. Based on this result, BASF request DEC approval to use the Attachment 2 blend to

complete the Type B restoration cover backfill.
Please call if you have any questions.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Wednesday, January 8, 2020 9:37 AM
To: Gardner, Mike <mike.gardner@aecom.com>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Sharma, Shailesh K (DEC) <Shailesh.Sharma@dec.ny.gov>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover B

Mike:
The material in Attachment 3 is approved for use as Type B Restoration Cover is described in your December 6, 2019 email below. The sieve analysis shows a higher proportion of fines and a lower proportion of coarse materials than is specified in the 100% Design. DEC determined that this deviation was non-substantial, however please ensure that it is noted in the FER.
The material in Attachment 2 is not approved for use as Type B Restoration Cover. Chemical analysis shows a copper content of 104 mg/kg, which exceeds design criteria. The 100% Design requires that imported sediments not exceed the ecological resource SCOs in 6 NYCRR Part 375 (50 mg/kg for copper) and the Freshwater Sediment Guidance Values for Class A sediment (32 mg/kg for copper).
Please contact me if you have any questions.
Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Thursday, January 02, 2020 5:34 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover A

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew,

The following are attached for your review:

- Attachment 1 – This includes geotechnical and laboratory anticyclical data from additional samples (2 composite and 4 discrete samples) of the approved Type A Restoration cover from RJ Valente's Mackay Pit. This data is for DEC approval to place up to an additional 10,000 cy of this material for Type A restoration cover in areas where SAV will not be planted based. NYDEC has approved the initial samples of this material (covering up to 5,000 cy) in the email chain below.
- Attachment 2 – This includes geotechnical and laboratory anticyclical data for a proposed Type B Restoration cover that will be placed in the areas where SAV will be planted. This material is a mixture of the same Type A material from the Valente pit and a peat material provided by Hudson Peat in Hudson, NY. This is our preferred source for the Type B Restoration cover.
- Attachment 3 – This includes geotechnical and laboratory anticyclical data for an alternate Type B Restoration cover (in case the Hudson Peat is not available). This material is a mixture of the Type A material from the Valente pit and a peat material provided by the Mariahville Peat Co. in Mariahville, NY.

Please call if you have any questions.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Thursday, December 12, 2019 3:30 PM
To: Gardner, Mike <mike.gardner@aecom.com>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover A

Mike:

The DEC has reviewed your request to use two different types of restoration cover for the BASF OU2 dredging Site. The data on page 3 of Attachment 1 (Valente Pit: Aquafill Sample #5) represents a blend of brown loam (page 3 of Attachment 1; Valente Pit Aquafill Brown Loam) and the previously approved subaqueous backfill material (Attachment 2).

The "Aquafill Sample #5" blend of subaqueous backfill and upper brown loam is approved for use at Restoration Cover Type A. As described below, Restoration Cover Type A will be used in deeper water where no subaquatic vegetation (SAV) is present. Please ensure that the two materials are blended thoroughly so that the proportion of fines and organics is consistent throughout the cover.

As a reminder, DEC has not approved any material for use as Restoration Cover Type B.

Please contact me if you have any questions.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Friday, December 06, 2019 12:39 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Gardner, Mike <mike.gardner@aecom.com>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: Restoration Cover

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Drew:
As a follow-up to our 12/4/2019 call, BASF requests that the NYSDEC approve 2 different types of restoration cover at the BASF Rensselaer Site:

- **Restoration Cover Type A** will be used in deeper water, to support fish and benthic resources. No SAV is present in these areas;
- **Restoration Cover Type B** will be used in shallower nearshore environments, to support SAV, benthic, and fish resources.

Restoration Cover Type A
BASF requests your immediate approval to use backfill material (representative grain size and analytical results attached) for the Hudson River OU-2 subaqueous restoration cover layer in the deeper water area where submerged aquatic vegetation (SAV) is not being planted. The deep water area (e.g., deeper than 9 feet at Mean High Water (MHW), covers approximately 4.2 acres of the 4.8 acre remediation area. This backfill is from a virgin bank run source at RJ Valente's Mackay Pit in Mechanicville, New York. This material meets the grain size distribution presented in the 100% Design and generally matches the sediment texture observed in the deeper water areas that were not influenced by deposition from historic outfalls. As presented in the Ecological Restoration, Monitoring and Maintenance Plan (included in the 100% Design), the proposed material:

1. Provides a substrate suitable for colonization by benthic organisms and use by fish;
2. Possesses sufficient structural strength to achieve necessary slope stability;
3. Has adequate density to allow placement throughout the 4.2 acre entire remediation area;
4. Has sufficient density to prevent erosion during typical high flow periods, and,

The total organic carbon (TOC) of this material is less than the 1.5 to 3 percent specified in the 100% design. However, in the deep water areas where there is insufficient sunlight to support SAV growth, the lower TOC level will not influence the material's performance relative to the primary functions presented above.

Restoration Cover Type B
In the near future, BASF will propose an alternate subaqueous restoration cover material for the 0.6 acres of shallow water (e.g., nine feet or less at MHW) where SAV will be planted. This material will contain 1.5 to 3 percent TOC. These TOC levels will be achieved by using material from an alternate source or amending the above described granular fill with organic rich material (e.g., top soil, compost, or peat). Chemistry, TOC, and grainsize data from any amendment will be provided to the NYSDEC for approval prior to placement.

With regard to the 0.6 acre SAV planting zone, it should also be noted that the 100% Design requires that SAV planting units be planted at a density of 1 per 5.5 square feet. These planting units will be comprised of the SAV plants, a biodegradable planting pot, and an organic substrate. BASF is investigating the use of a TOC rich planting mixture, coupled with the use of a larger peat pot to enhance the TOC levels in the top 6 inches of the SAV planting zone. Additional detail will be provided in our request for approval of Restoration Cover Type B substrate (to be submitted next week).

LRI is currently proceeding with placement of approved subaqueous backfill and erosion protection stone, and anticipates to be completed mid next week. Therefore, your expediated review and approval of Restoration Cover Type A material for placement in the non-SAV areas would be greatly appreciated.

Please call if you have any questions and thank you for your help.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
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From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	Karpinski, Steven (HEALTH); Tromp, David (DEC); Armitage, John L (DEC); John Douglas Reid-Green; karyllan.mack@basf.com; Sharma, Shailesh K (DEC); Wayne St Clair; Bower, Caryn I (DEC); Mustico, Richard X (DEC); Gehan, Patrick; McCarthy, Ryan; Bleiler, John; Wil Lindheimer
Subject:	RE: BASF OU2 (442027) -- Restoration Cover B
Date:	Thursday, January 9, 2020 9:10:06 AM
Attachments:	image005.jpg image006.png image007.png image008.jpg image009.jpg image010.png image011.png image012.jpg

Hi Mike,
Thank you for the clarification and additional sampling results.
The Attachment 2 material, which is a mixture of the Type A material from the Valente pit and a peat material provided by Hudson Peat in Hudson, NY, is approved for use as Type B Restoration Cover. This mixture meets all physical and chemical criteria specified in the approved 100% Design.
Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
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Sent: Thursday, January 09, 2020 9:02 AM
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Subject: RE: BASF OU2 (442027) -- Restoration Cover B

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Hi Drew,
BASF requests that DEC reconsider approval of the Attachment 2 Type B restoration cover. The copper concentration of 104 mg/kg was measured in a sample of the raw peat from the Hudson Peat Source and did not account for the blending with the Valente sand and gravel that will generate backfill material.
The attached analytical result shows a copper concentration of 22.5 mg/kg measured in a sample of the blended peat and sand and gravel at the blending ratio that will be delivered to the Type B planting area. Based on this result, BASF request DEC approval to use the Attachment 2 blend to

complete the Type B restoration cover backfill.
Please call if you have any questions.

From: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Sent: Wednesday, January 8, 2020 9:37 AM
To: Gardner, Mike <mike.gardner@aecom.com>
Cc: Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Sharma, Shailesh K (DEC) <Shailesh.Sharma@dec.ny.gov>; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Gehan, Patrick <Patrick.Gehan@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Wil Lindheimer <wpl@land-remediation.com>
Subject: RE: BASF OU2 (442027) -- Restoration Cover B

Mike:
The material in Attachment 3 is approved for use as Type B Restoration Cover is described in your December 6, 2019 email below. The sieve analysis shows a higher proportion of fines and a lower proportion of coarse materials than is specified in the 100% Design. DEC determined that this deviation was non-substantial, however please ensure that it is noted in the FER.
The material in Attachment 2 is not approved for use as Type B Restoration Cover. Chemical analysis shows a copper content of 104 mg/kg, which exceeds design criteria. The 100% Design requires that imported sediments not exceed the ecological resource SCOs in 6 NYCRR Part 375 (50 mg/kg for copper) and the Freshwater Sediment Guidance Values for Class A sediment (32 mg/kg for copper).
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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

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Hi Drew,

The following are attached for your review:

- Attachment 1 – This includes geotechnical and laboratory anticyclical data from additional samples (2 composite and 4 discrete samples) of the approved Type A Restoration cover from RJ Valente's Mackay Pit. This data is for DEC approval to place up to an additional 10,000 cy of this material for Type A restoration cover in areas where SAV will not be planted based. NYDEC has approved the initial samples of this material (covering up to 5,000 cy) in the email chain below.
- Attachment 2 – This includes geotechnical and laboratory anticyclical data for a proposed Type B Restoration cover that will be placed in the areas where SAV will be planted. This material is a mixture of the same Type A material from the Valente pit and a peat material provided by Hudson Peat in Hudson, NY. This is our preferred source for the Type B Restoration cover.
- Attachment 3 – This includes geotechnical and laboratory anticyclical data for an alternate Type B Restoration cover (in case the Hudson Peat is not available). This material is a mixture of the Type A material from the Valente pit and a peat material provided by the Mariahville Peat Co. in Mariahville, NY.

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Subject: RE: BASF OU2 (442027) -- Restoration Cover A

Mike:

The DEC has reviewed your request to use two different types of restoration cover for the BASF OU2 dredging Site. The data on page 3 of Attachment 1 (Valente Pit: Aquafill Sample #5) represents a blend of brown loam (page 3 of Attachment 1; Valente Pit Aquafill Brown Loam) and the previously approved subaqueous backfill material (Attachment 2).

The "Aquafill Sample #5" blend of subaqueous backfill and upper brown loam is approved for use at Restoration Cover Type A. As described below, Restoration Cover Type A will be used in deeper water where no subaquatic vegetation (SAV) is present. Please ensure that the two materials are blended thoroughly so that the proportion of fines and organics is consistent throughout the cover.

As a reminder, DEC has not approved any material for use as Restoration Cover Type B.

Please contact me if you have any questions.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
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To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
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Subject: Restoration Cover

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Drew:
As a follow-up to our 12/4/2019 call, BASF requests that the NYSDEC approve 2 different types of restoration cover at the BASF Rensselaer Site:

- **Restoration Cover Type A** will be used in deeper water, to support fish and benthic resources. No SAV is present in these areas;
- **Restoration Cover Type B** will be used in shallower nearshore environments, to support SAV, benthic, and fish resources.

Restoration Cover Type A
BASF requests your immediate approval to use backfill material (representative grain size and analytical results attached) for the Hudson River OU-2 subaqueous restoration cover layer in the deeper water area where submerged aquatic vegetation (SAV) is not being planted. The deep water area (e.g., deeper than 9 feet at Mean High Water (MHW), covers approximately 4.2 acres of the 4.8 acre remediation area. This backfill is from a virgin bank run source at RJ Valente's Mackay Pit in Mechanicville, New York. This material meets the grain size distribution presented in the 100% Design and generally matches the sediment texture observed in the deeper water areas that were not influenced by deposition from historic outfalls. As presented in the Ecological Restoration, Monitoring and Maintenance Plan (included in the 100% Design), the proposed material:

1. Provides a substrate suitable for colonization by benthic organisms and use by fish;
2. Possesses sufficient structural strength to achieve necessary slope stability;
3. Has adequate density to allow placement throughout the 4.2 acre entire remediation area;
4. Has sufficient density to prevent erosion during typical high flow periods, and,

The total organic carbon (TOC) of this material is less than the 1.5 to 3 percent specified in the 100% design. However, in the deep water areas where there is insufficient sunlight to support SAV growth, the lower TOC level will not influence the material's performance relative to the primary functions presented above.

Restoration Cover Type B
In the near future, BASF will propose an alternate subaqueous restoration cover material for the 0.6 acres of shallow water (e.g., nine feet or less at MHW) where SAV will be planted. This material will contain 1.5 to 3 percent TOC. These TOC levels will be achieved by using material from an alternate source or amending the above described granular fill with organic rich material (e.g., top soil, compost, or peat). Chemistry, TOC, and grainsize data from any amendment will be provided to the NYSDEC for approval prior to placement.

With regard to the 0.6 acre SAV planting zone, it should also be noted that the 100% Design requires that SAV planting units be planted at a density of 1 per 5.5 square feet. These planting units will be comprised of the SAV plants, a biodegradable planting pot, and an organic substrate. BASF is investigating the use of a TOC rich planting mixture, coupled with the use of a larger peat pot to enhance the TOC levels in the top 6 inches of the SAV planting zone. Additional detail will be provided in our request for approval of Restoration Cover Type B substrate (to be submitted next week).

LRI is currently proceeding with placement of approved subaqueous backfill and erosion protection stone, and anticipates to be completed mid next week. Therefore, your expediated review and approval of Restoration Cover Type A material for placement in the non-SAV areas would be greatly appreciated.

Please call if you have any questions and thank you for your help.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Gardner, Mike
To:	Chin, Abby
Subject:	FW: Site 442027, BASF OU02 Hudson River Sediment Remediation Project - Sacrificial Cover
Date:	Tuesday, April 20, 2021 10:13:17 AM
Attachments:	figure.hw442027.2018-12-11.OU02 Hudson River Sediment Remediation - Sacrificial Cover.pdf

---

From: Strang, John (DEC) <john.strang@dec.ny.gov>
Sent: Monday, December 17, 2018 1:27 PM
To: Gardner, Mike <mike.gardner@aecom.com>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Hank Martin <hmartin@elminc.com>; Wayne St Clair <wayne.stclair@basf.com>; Denman, Jeff <jeff.denman@aecom.com>; wpl@land-remediation.com; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Will Lindheimer <wpl@land-remediation.com>; Chin, Abby <Abby.Chin@aecom.com>; Ruiter, Aimee <aimee.ruiter@aecom.com>
Cc: Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Edwards, Susan L (DEC) <susan.edwards@dec.ny.gov>; Quail, Rebecca A (DEC) <rebecca.quail@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: RE: Site 442027, BASF OU02 Hudson River Sediment Remediation Project - Sacrificial Cover

Mike,

The New York State Department of Environmental Conservation approves the placement of the erosion protection stone in a 4 to 6 inch thickness over dredged cells where sediment with TSCA levels of PCBs were removed but underlying non-TSCA\high VOC sediment remains to be dredged next season. The figure showing the limits of this sacrificial cover is an attachment to this email.

Contact me if there are any questions.

Sincerely,

John R. Strang, PE

Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Gardner, Mike [mailto:mike.gardner@aecom.com]
Sent: Tuesday, December 11, 2018 9:32 AM
To: Strang, John (DEC) <john.strang@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Hank Martin <hmartin@elminc.com>; Wayne St Clair <wayne.stclair@basf.com>; Gardner, Mike <mike.gardner@aecom.com>; Denman, Jeff

<jeff.denman@aecom.com>; wpl@land-remediation.com; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Will Lindheimer <wpl@land-remediation.com>; Chin, Abby <Abby.Chin@aecom.com>; Ruiter, Aimee <aimee.ruiter@aecom.com>
Cc: Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Edwards, Susan L (DEC) <susan.edwards@dec.ny.gov>; Quail, Rebecca A (DEC) <rebecca.quail@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>
Subject: Sacrificial Cover

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John,

LRI will begin demobilizing marine equipment when the dredging of the remaining TSCA sediment is complete on or about December 21, 2018. Prior to demobilizing, LRI will place a 4 to 6-inch thick layer of sacrificial erosion protection stone over cells where TCSA sediment was removed but underlying non-TSCA\high VOC sediment remains to be dredged next season. The limits of this sacrificial cover are shown in the attached Figure. The erosion stone will be broadcast directly from the clamshell bucket without turbidity curtain. Water column monitoring will continue until the sacrificial cover placement is complete. NYSDEC approved the use of the erosion protection stone in an email dated November 7, 2018.

Please call if you have any questions or comments.

Thanks,

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Strang, John (DEC)
To:	Gardner, Mike; John Douglas Reid-Green; karyllan.mack@basf.com; Hank Martin; Wayne St Clair; Denman, Jeff; wpl@land-remediation.com; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Farrar, Kevin (DEC); Tromp, David (DEC); Will Lindheimer; Chin, Abby; Ruiter, Aimee
Cc:	Deming, Justin H (HEALTH); Edwards, Susan L (DEC); Quail, Rebecca A (DEC); Mustico, Richard X (DEC)
Subject:	RE: Site 442027, BASF OU02 Hudson River Sediment Remediation Project - Sacrificial Cover
Date:	Monday, December 17, 2018 1:27:01 PM
Attachments:	figure.hw442027.2018-12-11.OU02 Hudson River Sediment Remediation - Sacrificial Cover.pdf

Mike,

The New York State Department of Environmental Conservation approves the placement of the erosion protection stone in a 4 to 6 inch thickness over dredged cells where sediment with TSCA levels of PCBs were removed but underlying non-TSCA\high VOC sediment remains to be dredged next season. The figure showing the limits of this sacrificial cover is an attachment to this email. Contact me if there are any questions.

Sincerely,

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Gardner, Mike [mailto:mike.gardner@aecom.com]

Sent: Tuesday, December 11, 2018 9:32 AM

To: Strang, John (DEC) <john.strang@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Hank Martin <hmartin@elminc.com>; Wayne St Clair <wayne.stclair@basf.com>; Gardner, Mike <mike.gardner@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>; wpl@land-remediation.com; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Will Lindheimer <wpl@land-remediation.com>; Chin, Abby <Abby.Chin@aecom.com>; Ruiter, Aimee <aimee.ruiter@aecom.com>

Cc: Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Edwards, Susan L (DEC) <susan.edwards@dec.ny.gov>; Quail, Rebecca A (DEC) <rebecca.quail@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>

Subject: Sacrificial Cover

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John,

LRI will begin demobilizing marine equipment when the dredging of the remaining TSCA sediment is complete on or about December 21, 2018. Prior to demobilizing, LRI will place a 4 to 6-inch thick layer of sacrificial erosion protection stone over cells where TCSA sediment was removed but underlying non-TSCA\high VOC sediment remains to be dredged next season. The limits of this sacrificial cover are shown in the attached Figure. The erosion stone will be broadcast directly from the clamshell bucket without turbidity curtain. Water column monitoring will continue until the sacrificial cover placement is complete. NYSDEC approved the use of the erosion protection stone in an email dated November 7, 2018.

Please call if you have any questions or comments.

Thanks,

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	hmartin@elminc.com; Karpinski, Steven (HEALTH); Deming, Justin H (HEALTH); Tromp, David (DEC); Armitage, John L (DEC); John Douglas Reid-Green; karyllan.mack@basf.com; Wayne St Clair; Bower, Caryn I (DEC); Bleiler, John; Will Lindheimer; Denman, Jeff; Mustico, Richard X (DEC)
Subject:	Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover Submittal
Date:	Tuesday, November 12, 2019 2:50:37 PM
Attachments:	image001.jpg image002.png image003.png BASF OU2 - Subaqeuos Backfill and Restoration Cover Submittal.pdf

Mike,

Based on the data provided, the attached fill material is approved for use as Subaqueous Backfill as described in the September, 2018 100% Design Plan. BASF should provide DEC with additional sample results at the frequency detailed in your email below.

The attached fill material is not approved for use as Restoration Cover, primarily because it does not contain the proportion of fine materials specified in the 100% Design (10-20% fines). I will follow up with a separate email to discuss next steps for obtaining an approvable Restoration Cover material.

Thanks, and please let me know if you have any questions,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Monday, November 04, 2019 7:17 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover Submittal

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew,

The attached submittal provides geotechnical data, chemical analytical data, and a material certification letter from the certified quarry operator for a sand material that BASF proposes to use for the Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover layers. The attached Table 1 compares the analytical test results of this proposed sand material to the applicable New York State criteria.

Please note that the percent of this sand material passing the #200 sieve ranged from 1.9 to 4.8 (percent by dry weight) and is below the minimum of 10% passing the #200 sieve presented in the 100% Design Documents. However, this material was previously utilized as subaqueous backfill for the GE Hudson River Cleanup project and provides the closest match the design grain size distribution of the materials available from local sources. Based on these factors and a review the

attached geotechnical information, AECOM finds that this material will function ecologically and structurally as required.

BASF requests your approval (based on the analytical test results of 2 composites samples for SVOCs and metals, 4 discrete grab samples for VOCs, and 5 geotechnical results) to use 10,000 CY of this material for the Subaqueous Backfill and the Subaqueous Restoration Cover backfill layers. BASF will provide NYSDEC with additional sample results at a frequency of 1 geotechnical sample, 1 composite sample for SVOCs and metals, and 2 discrete grab samples for VOCs for each additional 5,000 cubic yards of soil required complete the back fill.

Please call if you have any questions and thank you for your help.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Hoffert, Drew N (DEC)
To:	Gardner, Mike
Cc:	Bleiler, John; Denman, Jeff; Will Lindheimer
Subject:	RE: Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover Submittal
Date:	Tuesday, November 12, 2019 2:48:32 PM
Attachments:	image007.jpg image008.png image009.png

Hi Mike,

Backfilling with the erosion protection stone and the subaqueous backfill (once the fill material is approved) may proceed without the moon pool, using the BMPs you described below. If water quality monitoring shows elevated turbidity or dissolved phase readings during the fill placement, corrective measures should be taken. Corrective measures could include deployment of a turbidity curtain wall, use of a tremie tube system, and/or redeployment of the moonpool. As of now, the moonpool should be used during placement of the restoration cover due to the higher percentage of fine materials. However, DEC will re-evaluate turbidity management after the restoration cover material is approved.

Sincerely,

Drew N. Hoffert
Assistant Engineer, Division of Environmental Remediation
New York State Department of Environmental Conservation – Region IV
1130 N. Westcott Rd, Schenectady, NY 12306
P: (518) 357-2393 | C: (484) 538-9298 | drew.hoffert@dec.ny.gov
www.dec.ny.gov |

From: Gardner, Mike <mike.gardner@aecom.com>
Sent: Thursday, November 07, 2019 12:25 PM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: Bleiler, John <John.Bleiler@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: RE: Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover Submittal

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi Drew,

An updated table with the fill analytical results compared to the applicable New York State criteria is attached. Please note that Samples AQ Fill 1 and AQ Fill 2 were composite samples collected from two different locations at the gravel source. Each composite was collected from 3 sublocations. These composite samples were inadvertently analyzed for VOCs so those results are included in the summary table. Samples AQ Fill 1A, 1B, 2A, and 2B are discrete samples collected from different locations at the gravel source and analyzed for VOCs only.

As we discussed on Tuesday, BASF would like to complete the backfill without using the moonpool. LRI believes that they can better control the fill placement without the moonpool. Their concern is that spreading the fill layers evenly is difficult in the limited moon pool area and fill will accumulate along the edges of the pool. Moving the pool and spreading the high spots in the fill layers becomes time consuming and may increase the opportunity to create turbidity. LRI proposes to place the granular fill outside the pool, by lowering the environmental bucket to within five feet of the bottom then slowly opening the bucket to spread the fill layer across the bottom. This will allow for an even layer placement across a wider area. If water quality monitoring show any elevated turbidity or

dissolved phase readings during the fill placement, then the moon pool structure will be re-deployed.
In addition, we understand you are discussing approval of the proposed fill material for use as the restoration cover layer with NYS fish and Wildlife. If, while this is taking place, you could review the material for use as the subaqueous backfill layer, then LRI can, with your approval, can begin to fill the deeper cut areas after the erosion protection stone placement is completed in the southern area.
Please call if you have any questions,
Mike

From: Gardner, Mike
Sent: Monday, November 4, 2019 7:17 AM
To: Hoffert, Drew N (DEC) <drew.hoffert@dec.ny.gov>
Cc: hmartin@elminc.com; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Tromp, David (DEC) <david.tromp@dec.ny.gov>; Armitage, John L (DEC) <John.Armitage@dec.ny.gov>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Bleiler, John <John.Bleiler@aecom.com>; Will Lindheimer <wpl@land-remediation.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover Submittal
Hi Drew,
The attached submittal provides geotechnical data, chemical analytical data, and a material certification letter from the certified quarry operator for a sand material that BASF proposes to use for the Hudson River OU-2 Subaqueous Backfill and the Subaqueous Restoration Cover layers. The attached Table 1 compares the analytical test results of this proposed sand material to the applicable New York State criteria.
Please note that the percent of this sand material passing the #200 sieve ranged from 1.9 to 4.8 (percent by dry weight) and is below the minimum of 10% passing the #200 sieve presented in the 100% Design Documents. However, this material was previously utilized as subaqueous backfill for the GE Hudson River Cleanup project and provides the closest match the design grain size distribution of the materials available from local sources. Based on these factors and a review the attached geotechnical information, AECOM finds that this material will function ecologically and structurally as required.
BASF requests your approval (based on the analytical test results of 2 composites samples for SVOCs and metals, 4 discrete grab samples for VOCs, and 5 geotechnical results) to use 10,000 CY of this material for the Subaqueous Backfill and the Subaqueous Restoration Cover backfill layers. BASF will provide NYSDEC with additional sample results at a frequency of 1 geotechnical sample, 1 composite sample for SVOCs and metals, and 2 discrete grab samples for VOCs for each additional 5,000 cubic yards of soil required complete the back fill.
Please call if you have any questions and thank you for your help.
Michael Gardner, P.E.
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D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2045 | F: (518) 357-2460
www.dec.ny.gov

February 1, 2018

Mr. John Bleiler
AECOM Corporation
250 Apollo Drive
Chelmsford, MA 01824

Re: BASF Manufacturing Plant, Site No 442027, Rensselaer
11/06/17 revised BASF Manufacturing Plant Site Operable Unit 02
Remedial Design / Remedial Action Work Plan

Dear Mr. Bleiler:

The New York State Department of Environmental Conservation (Department) has reviewed the 11/06/17 revised BASF Manufacturing Plant Site Operable Unit (OU) 02 Remedial Design / Remedial Action (RD/RA) Work Plan. The RD/RA Work Plan was revised as requested in the Department's 06/27/17 comment letter.

The Department thereby approves the 11/06/17 revised BASF Manufacturing Plant Site OU 02 RD/RA Work Plan. A copy of this approved OU 02 RD/RA Work Plan is to be placed in the document repository (Rensselaer Public Library). Contact me at (518) 357-2390, or at john.strang@dec.ny.gov with any questions.

Sincerely,

John R. Strang, P.E.
Division of Environmental Remediation
Region 4

ec: D. Reid-Green, BASF
K. Mack, Esq. BASF
H. Martin, ELM
W. St.Clair, BASF
C. Bower, Esq. NYSDEC
J. Deming, NYSDOH
S. Karpinski, NYSDOH
R. Quail, NYSDEC - FWMR
C. Gosier, NYSDEC - FWMR
G. Burke, NYSDEC - BURB
R. Mustico, NYSDEC Reg. 4 HWRE

From:	Strang, John (DEC)
To:	Gardner, Mike
Subject:	RE: BASF 100% Remedial Design Drawings
Date:	Tuesday, August 7, 2018 1:22:09 PM

Thanks Mike. John Strang

From: Gardner, Mike [mailto:mike.gardner@aecom.com]
Sent: Tuesday, August 07, 2018 1:19 PM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: Bleiler, John <John.Bleiler@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: RE: BASF 100% Remedial Design Drawings

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John,
Looks like the Drawings got to Albany on 8/2.

From: Strang, John (DEC) [mailto:john.strang@dec.ny.gov]
Sent: Wednesday, August 01, 2018 10:37 AM
To: Gardner, Mike
Cc: Bleiler, John
Subject: BASF 100% Remedial Design Drawings
Mike, tardy – but please if at all possible send a set of drawings to:
New York State Dept. of Environmental Conservation
ATTN: Mr. Corbin Gosier
625 Broadway – 5th Floor
Albany, NY 12233-4756
and
New York State Dept. of Environmental Conservation
ATTN: Mr. Kevin Farrar
625 Broadway – 12th Floor
Albany, NY 12233-7013
And myself at the address below. Thank you!

John R. Strang, PE
Environmental Engineer 2, Div. of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306-7014
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From:	Strang, John (DEC)
To:	Bleiler, John
Cc:	karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Anders, Krista M (HEALTH); Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Gardner, Mike; McCarthy, Ryan; Mustico, Richard X (DEC); Burke, Gerard (DEC); Gosier, Corbin J (DEC)
Subject:	RE: BASF Rensselaer SMP Notification/Request, Site No. 442027
Date:	Saturday, June 23, 2018 4:41:43 PM
Attachments:	figure.hw442027.2018-06-13.LAGOON CAP DELINEATION-TIEBACKCUT.aecom.pdf

John,

The New York State Department of Environmental Conservation (Department) has reviewed your proposed approach for excavation and management of cap and soils associated with the installation of the tie rods (which will be attached to the dead men) on the BASF Manufacturing Plant Site (Operable Unit 01). All other aspects of the Excavation Work Plan remain in place.

The Department accepts the following approach (with Department changes in italicized bold) for the tieback cut – lagoon cap (the blue area in the attached figure):

1. **Lagoon Area Vegetative Cap**. BASF proposes to manage all soils in the former lagoon area in accordance with Excavation Work Plan (Appendix D to the ***interim*** Site Management Plan (SMP)), with one exception. Rather than collecting one sample per 250 CY of stockpiled soil to evaluate on-site re-use vs off-site disposal options, we request that one composite sample ***and four grab samples*** per the 300 CY aliquot be collected, using pre-characterization techniques (either in-situ or test pit). This sample would be collected and analyzed in accordance with SMP requirements ***(Analyze the composite sample for metals, semi-volatiles and PCBS, and the grab samples for volatiles)***, using rapid laboratory turnaround, such that the ultimate disposition of the 300 CY soil from the Lagoon Vegetative Cap Area is determined prior to commencement of excavation.

The Department accepts the following approach for the tieback cut – north of lagoon cap (the red area in the attached figure):

2. **Existing Surface Cap**. Sampling of excavated soils under the one foot cover in the Existing Cap Area is required. The Department agrees with the proposal to pre-characterize the excavation area using test pits spaced evenly (according to the volume equaling 1000 CY) across the tieback cut. The Department is requiring two composite samples per 1,000 CY and four grab samples per 1,000 CY be collected. Analyze the composite sample for metals, semi-volatiles and PCBs, and the grab samples for volatiles. BASF's proposal to stage the soil on a liner directly adjacent to the tie rod excavation is acceptable. The cover location will be documented by an as-built survey. During the excavation, BASF will conduct visual, olfactory, and instrument-based soil screening (as described in the interim SMP) and any impacted soil detected will be disposed of off-site.

The above soil excavation approach is Addendum No. 1 to the Excavation Work Plan (Appendix D in the interim SMP) and is only for handling of excavated soil to install the tie rods as part of the dead men for the installation of the Steel Bulkhead.

Contact me if this is not the same as I have stated in our many phone conferences.

Sincerely,

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]

Sent: Wednesday, June 13, 2018 12:29 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: karyllan.mack@basf.com; John Douglas Reid-Green <douglas.reid-green@basf.com>; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>
Subject: BASF Rensselaer SMP Notification/Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

John:

Pursuant to our June 12, 2018 telephone call, this communication has been prepared to outline a proposed approach for excavation and management of soils associated with installation of tie rods in the northwestern portion of OU1, at the BASF Rensselaer Site.

Prior to commencement of the OU-2 Hudson River sediment remediation, BASF will construct a new sheet pile bulkhead beginning in September 2018. This summer, as part of upland site preparation activities, BASF will excavate a platform to elevation 4.5 (feet above NAVD88) and install tie rods that will connect the bulkhead to the deadmen anchor piles. The approximate excavation limits are shown in the attached figure. Approximately 6,000 cubic yards (CY) of soil will be excavated to reach the tie rod platform. A Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004) provides procedures to manage the excavated soil. The SMP states that soil excavated from beneath the demarcation layers for the various composite cover systems installed during the OU-1 remediation shall be:

- Staged (in lined areas according to the SMP) and disposed of off-site, or;
- Staged in lined areas in 250 CY allotments, sampled, and reused below a composite cover system if the concentrations of analytes in the soil are below the criteria presented in Table 12 of the SMP.

As depicted in the attached figure, the vast majority of soils (~5,700 CY) that will require management under the SMP are north of the lagoon area, in an area that was not disturbed during the OU-1 remediation. According to Sections 1.4.9.1 and 1.5 of the SMP, this area is categorized as an "Existing Surface Cap" area where the demarcation layer is defined as the existing ground surface (predominately soil cover with a few small asphalt remnant areas). Approximately 300 CY of the tie rod excavation soils are below the 30-inch thick "Lagoon Area Vegetative Cap" (section 1.4.9.4 of the SMP) where the demarcation layer is geotextile or a layer of crushed building debris.

Given that greater than 95% of the soils that require SMP management occur to the north of the lagoon area, BASF requests that NYSDEC allow the following practices to more efficiently manage soils generated from the tie rod excavation area.

3. **Lagoon Area Vegetative Cap**. BASF proposes to manage all soils in the former lagoon area in accordance with Excavation Work Plan (Appendix D to the SMP), with one exception. Rather than collecting one sample per 250 CY of stockpiled soil to evaluate on-site re-use vs off-site disposal options, we request that one composite sample per the 300 CY aliquot be collected in situ, using pre-characterization techniques (composite sampling from test pit). This sample would be collected and analyzed in accordance with SMP requirements, using rapid laboratory turnaround, such that the ultimate disposition of the 300 CY soil from the Lagoon Vegetative Cap Area is determined prior to commencement of excavation.
4. **Existing Surface Cap Area**. BASF proposes to stage the soil (on a liner as required in the SMP) directly adjacent to the tie rod excavation and then use the soil as backfill once the tie rods are placed. Given that this area is to the north of OU1 lagoon response actions, confirmation

sampling as described in the SMP would not be conducted. Once this soil is placed and compacted, it will be covered with a high visibility geotextile demarcation fabric and a 1 foot minimum thick vegetative cover. The cover location will be documented by as-built survey. During excavation BASF will conduct visual, olfactory, and instrument-based soil screening (as described in the SMP) and any impacted soil detected will be disposed of off-site.

5. **Decreased sample frequency**. If NYSDEC requires that the soil excavated beneath the Existing Surface Cap area be sampled for reuse, then BASF requests that the sample frequency be reduced to one sample per 1,000 CY or approximately 6 samples to evaluate reuse of the 6,000 CY excavated soil. A sample frequency of approximately one sample per 1,000 cy is consistent with procedures for on-site soil reuse outlined in DER 10. Table 5.4(e)10 for sites with more than 1,000 CY of soil reuse.
6. **Soil Pre-characterization.** If sampling of soils in the Existing Surface Cap area is required, BASF proposes to pre-characterize the excavation area. Composite samples will be collected from test pits spaced evenly (according to the volumetric sample frequency) across the excavation area. This will allow the Contractor to better plan for reuse or off-site disposal of the excavated soil.

Please do not hesitate to contact me or Mr. Doug Reid Green with any questions or concerns regarding this matter.
Thanks

John A. Bleiler
D 978.905.2124 M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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From:	Strang, John (DEC)
To:	Bleiler, John
Cc:	douglas.reid-green@basf.com; Keith Decker; Gardner, Mike; Chin, Abby; OSullivan, Tim; Wayne St Clair; Mustico, Richard X (DEC)
Subject:	RE: BASF Tree cutting
Date:	Tuesday, March 27, 2018 11:59:15 AM

John, we appreciate the notification. The Region has plans to stop by the site later in the week.

John R. Strang, PE

Professional Engineer 1, Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]

Sent: Monday, March 26, 2018 5:47 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: douglas.reid-green@basf.com; Keith Decker <kad@land-remediation.com>; Gardner, Mike <mike.gardner@aecom.com>; Chin, Abby <Abby.Chin@aecom.com>; OSullivan, Tim <Tim.OSullivan@aecom.com>; Wayne St Clair <wayne.stclair@basf.com>

Subject: BASF Tree cutting

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John:

As discussed earlier today, I wanted to let you know that in anticipation of summer/fall field activities, and in consideration of tree cutting time of year restrictions, Land Remediation Inc will have a crew on site tomorrow to remove select woody vegetation at the BASF Rensselaer site. The attached plan (and accompanying notes detailing restoration measures) indicates where these upland trees will be cut.

Please don't hesitate to contact me or Doug with any questions. Thanks!

John B

John A. Bleiler

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john.bleiler@aecom.com

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From:	Strang, John (DEC)
To:	Gardner, Mike; Bleiler, John; Denman, Jeff; wpl@land-remediation.com
Cc:	John Douglas Reid-Green; karyllan.mack@basf.com; Hank Martin; Nathan Epler; Wayne St Clair; McCarthy, Ryan; Bower, Caryn I (DEC); Deming, Justin H (HEALTH); Karpinski, Steven (HEALTH); Gosier, Corbin J (DEC); Farrar, Kevin (DEC); Tromp, David (DEC); Mustico, Richard X (DEC)
Subject:	BASF Manufacturing Plant, Site No. 442027, Rensselaer
Date:	Tuesday, August 14, 2018 4:10:41 PM
Attachments:	letter.hw442027.2018-08-01.Management OU1 Soils associated w-Upland Site Preparation.aecom.pdf letter.hw442027.2018-08-14.DEC approval of Management OU1 Soils re Upland Site Preparation.pdf

Management of Operable Unit 01 Soils Associated with Upland Site Preparation

The attached electronic copy, regarding the New York State Department of Environmental Conservation letter approving the management of soil excavated and stockpiled on the BASF Manufacturing Plant Site during the Upland Site Preparation work, was signed by John R. Strang on August 14, 2018.

This email copies you on correspondence from the New York State Department of Environmental Conservation, Division of Environmental Remediation. Electronic attachments may be attached. A hard copy will not follow in the mail. Please contact John Strang at (518) 357-2390 if you experience problems with this transmission.

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From:	Strang, John (DEC)
To:	Bleiler, John; Gardner, Mike; John Douglas Reid-Green
Cc:	karyllan.mack@basf.com; Wayne St Clair; Hank Martin; Anders, Krista M (HEALTH); Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); McCarthy, Ryan; Denman, Jeff; Mustico, Richard X (DEC); Farrar, Kevin (DEC); Thorsland, Derek T (DEC)
Subject:	RE: BASF Rensselaer, Site No. 442027, Upland Site Preparation - Management of 33,500 gallons removed from manholes and piping
Date:	Monday, July 2, 2018 2:28:38 PM

John, Doug, and Mike,
To address the management of the approximate 33,500 gallons of water removed from the manholes and piping (as part of the Decommissioning of the Pretreatment System completed in 2009) and stored in two on-site Frac Tanks, the New York State Department of Environmental Conservation (Department) requires a water sample be collected and analyzed from each Frac Tank. Analyze the samples for volatiles, semi-volatiles and metals. Upon the Department's receiving the water results, I suggest a meeting at the site to discuss the disposal options. Contact me with any questions.
Sincerely,

John R. Strang, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]
Sent: Wednesday, June 27, 2018 2:31 PM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: karyllan.mack@basf.com; John Douglas Reid-Green <douglas.reid-green@basf.com>; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>
Subject: BASF Rensselaer SMP Notification/Request

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John
Pursuant to our June 27, 2018 telephone call, this communication has been prepared to outline a proposed approach for water management associated with installation of tie rods in the northwestern portion of OU1, at the BASF Rensselaer Site.
During the week of June 15th, BASF encountered 2 historic manhole structures and piping while pre-trenching to remove debris from the sheet pile deadman wall alignment (approximately 125' south of the northern boundary). Approximately 6' of water was observed in each of the manholes. A total of approximately 33,500 gallons of water was removed from the manholes and piping. Following removal there was no appreciable recharge into the historical drainage system.
The water was pumped directly into two 20,000 gallon frac tanks and is currently stored on site. There are no visible sheens or oils in the water. There is no odor coming from the water and PID head space readings over the water are non-detect. Portions of the structures and pipe along the sheet pile alignment were removed and will be disposed of off-site.

BASF requests NYSDEC approval to discharge this water to the ground surface (slowly so infiltration can occur) in accordance with the Section 2.8 of Appendix D to the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004) which states:

"All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge, and development fluids may be recharged back to the land surface or subsurface of the site in the event that prior approval is obtained from the NYSDEC Case Manager. If this approval is not obtained, fluids will be managed via off-site disposal."

Please do not hesitate to contact me, Mike Gardner, or Mr. Doug Reid-Green with any questions or concerns regarding this matter.

John A. Bleiler
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LinkedIn Twitter Facebook Instagram

From:	Strang, John (DEC)
To:	Bleiler, John
Cc:	karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Anders, Krista M (HEALTH); Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Gardner, Mike; McCarthy, Ryan; Mustico, Richard X (DEC); Burke, Gerard (DEC); Gosier, Corbin J (DEC)
Subject:	RE: BASF Rensselaer SMP Notification/Request, Site No. 442027
Date:	Saturday, June 23, 2018 4:41:43 PM
Attachments:	figure.hw442027.2018-06-13.LAGOON CAP DELINEATION-TIEBACKCUT.aecom.pdf

John,

The New York State Department of Environmental Conservation (Department) has reviewed your proposed approach for excavation and management of cap and soils associated with the installation of the tie rods (which will be attached to the dead men) on the BASF Manufacturing Plant Site (Operable Unit 01). All other aspects of the Excavation Work Plan remain in place.

The Department accepts the following approach (with Department changes in italicized bold) for the tieback cut – lagoon cap (the blue area in the attached figure):

1. **Lagoon Area Vegetative Cap**. BASF proposes to manage all soils in the former lagoon area in accordance with Excavation Work Plan (Appendix D to the ***interim*** Site Management Plan (SMP)), with one exception. Rather than collecting one sample per 250 CY of stockpiled soil to evaluate on-site re-use vs off-site disposal options, we request that one composite sample ***and four grab samples*** per the 300 CY aliquot be collected, using pre-characterization techniques (either in-situ or test pit). This sample would be collected and analyzed in accordance with SMP requirements ***(Analyze the composite sample for metals, semi-volatiles and PCBS, and the grab samples for volatiles)***, using rapid laboratory turnaround, such that the ultimate disposition of the 300 CY soil from the Lagoon Vegetative Cap Area is determined prior to commencement of excavation.

The Department accepts the following approach for the tieback cut – north of lagoon cap (the red area in the attached figure):

2. **Existing Surface Cap**. Sampling of excavated soils under the one foot cover in the Existing Cap Area is required. The Department agrees with the proposal to pre-characterize the excavation area using test pits spaced evenly (according to the volume equaling 1000 CY) across the tieback cut. The Department is requiring two composite samples per 1,000 CY and four grab samples per 1,000 CY be collected. Analyze the composite sample for metals, semi-volatiles and PCBs, and the grab samples for volatiles. BASF's proposal to stage the soil on a liner directly adjacent to the tie rod excavation is acceptable. The cover location will be documented by an as-built survey. During the excavation, BASF will conduct visual, olfactory, and instrument-based soil screening (as described in the interim SMP) and any impacted soil detected will be disposed of off-site.

The above soil excavation approach is Addendum No. 1 to the Excavation Work Plan (Appendix D in the interim SMP) and is only for handling of excavated soil to install the tie rods as part of the dead men for the installation of the Steel Bulkhead.

Contact me if this is not the same as I have stated in our many phone conferences.

Sincerely,

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]

Sent: Wednesday, June 13, 2018 12:29 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: karyllan.mack@basf.com; John Douglas Reid-Green <douglas.reid-green@basf.com>; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>
Subject: BASF Rensselaer SMP Notification/Request

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John:

Pursuant to our June 12, 2018 telephone call, this communication has been prepared to outline a proposed approach for excavation and management of soils associated with installation of tie rods in the northwestern portion of OU1, at the BASF Rensselaer Site.

Prior to commencement of the OU-2 Hudson River sediment remediation, BASF will construct a new sheet pile bulkhead beginning in September 2018. This summer, as part of upland site preparation activities, BASF will excavate a platform to elevation 4.5 (feet above NAVD88) and install tie rods that will connect the bulkhead to the deadmen anchor piles. The approximate excavation limits are shown in the attached figure. Approximately 6,000 cubic yards (CY) of soil will be excavated to reach the tie rod platform. A Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004) provides procedures to manage the excavated soil. The SMP states that soil excavated from beneath the demarcation layers for the various composite cover systems installed during the OU-1 remediation shall be:

- Staged (in lined areas according to the SMP) and disposed of off-site, or;
- Staged in lined areas in 250 CY allotments, sampled, and reused below a composite cover system if the concentrations of analytes in the soil are below the criteria presented in Table 12 of the SMP.

As depicted in the attached figure, the vast majority of soils (~5,700 CY) that will require management under the SMP are north of the lagoon area, in an area that was not disturbed during the OU-1 remediation. According to Sections 1.4.9.1 and 1.5 of the SMP, this area is categorized as an "Existing Surface Cap" area where the demarcation layer is defined as the existing ground surface (predominately soil cover with a few small asphalt remnant areas). Approximately 300 CY of the tie rod excavation soils are below the 30-inch thick "Lagoon Area Vegetative Cap" (section 1.4.9.4 of the SMP) where the demarcation layer is geotextile or a layer of crushed building debris.

Given that greater than 95% of the soils that require SMP management occur to the north of the lagoon area, BASF requests that NYSDEC allow the following practices to more efficiently manage soils generated from the tie rod excavation area.

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sampling as described in the SMP would not be conducted. Once this soil is placed and compacted, it will be covered with a high visibility geotextile demarcation fabric and a 1 foot minimum thick vegetative cover. The cover location will be documented by as-built survey. During excavation BASF will conduct visual, olfactory, and instrument-based soil screening (as described in the SMP) and any impacted soil detected will be disposed of off-site.

5. **Decreased sample frequency**. If NYSDEC requires that the soil excavated beneath the Existing Surface Cap area be sampled for reuse, then BASF requests that the sample frequency be reduced to one sample per 1,000 CY or approximately 6 samples to evaluate reuse of the 6,000 CY excavated soil. A sample frequency of approximately one sample per 1,000 cy is consistent with procedures for on-site soil reuse outlined in DER 10. Table 5.4(e)10 for sites with more than 1,000 CY of soil reuse.
6. **Soil Pre-characterization.** If sampling of soils in the Existing Surface Cap area is required, BASF proposes to pre-characterize the excavation area. Composite samples will be collected from test pits spaced evenly (according to the volumetric sample frequency) across the excavation area. This will allow the Contractor to better plan for reuse or off-site disposal of the excavated soil.

Please do not hesitate to contact me or Mr. Doug Reid Green with any questions or concerns regarding this matter.
Thanks

John A. Bleiler
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Chelmsford, MA 01824
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From:	Strang, John (DEC)
To:	Bleiler, John
Cc:	douglas.reid-green@basf.com; Keith Decker; Gardner, Mike; Chin, Abby; OSullivan, Tim; Wayne St Clair; Mustico, Richard X (DEC)
Subject:	RE: BASF Tree cutting
Date:	Tuesday, March 27, 2018 11:59:15 AM

John, we appreciate the notification. The Region has plans to stop by the site later in the week.

John R. Strang, PE

Professional Engineer 1, Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]

Sent: Monday, March 26, 2018 5:47 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: douglas.reid-green@basf.com; Keith Decker <kad@land-remediation.com>; Gardner, Mike <mike.gardner@aecom.com>; Chin, Abby <Abby.Chin@aecom.com>; OSullivan, Tim <Tim.OSullivan@aecom.com>; Wayne St Clair <wayne.stclair@basf.com>

Subject: BASF Tree cutting

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John:

As discussed earlier today, I wanted to let you know that in anticipation of summer/fall field activities, and in consideration of tree cutting time of year restrictions, Land Remediation Inc will have a crew on site tomorrow to remove select woody vegetation at the BASF Rensselaer site. The attached plan (and accompanying notes detailing restoration measures) indicates where these upland trees will be cut.

Please don't hesitate to contact me or Doug with any questions. Thanks!

John B

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From:	Strang, John (DEC)
To:	Bleiler, John; Gardner, Mike; John Douglas Reid-Green
Cc:	Hank Martin; karyllan.mack@basf.com; Wayne St Clair; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Mustico, Richard X (DEC); Denman, Jeff; Deming, Justin H (HEALTH)
Subject:	RE: Management of Old Process Pipe: BASF Rensselaer, Site No. 442027
Date:	Friday, July 27, 2018 4:18:07 PM
Attachments:	email.hw442027.2018-07-25.management of old process pipe - BASF OU02 Upland Site Prep.pdf

John, Doug and Mike,
The New York State Department of Environmental Conservation (Department) and the New York State Department of Health accept BASF's approach to clean and manage the old process pipes exposed during the installation of the sheet pile deadmen. A copy of BASF's plan with the figure is attached. Contact me if there are any questions. The Department plans to be at the site for the removal/cleaning of the pipes.
Sincerely,

John R. Strang, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]
Sent: Wednesday, July 25, 2018 5:13 PM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: Gardner, Mike <mike.gardner@aecom.com>; Hank Martin <hmartin@elminc.com>; John Douglas Reid-Green <douglas.reid-green@basf.com>; karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>
Subject: Management of Old Process Pipe: BASF Rensselaer

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John:
Presented below is BASF's plan to manage the old process pipes encountered during installation of the sheet pile deadmen. LRI plans to removes the pipe contents next Monday (July 30, 2018).
Please provide any comments or questions to either me or Doug Reid-Green.
Thanks

John A. Bleiler
D 978.905.2124 M 978.621.7080
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LinkedIn Twitter Facebook Instagram

From: Will Lindheimer [mailto:wpl@land-remediation.com]

Sent: Wednesday, July 25, 2018 11:51 AM
To: Denman, Jeff; Pat Payne
Cc: Gardner, Mike; Bleiler, John; Keith Decker; Glenn Mulholland
Subject: RE: Call from NYSDEC today

Good morning gentlemen. Below is the approach we feel will be effective to dealing with the historical lagoon pipes that are currently in conflict with the southern tierod installation.

Scope of Work:

There are (2) historical pipes associated with the former BASF lagoons. One is believed to be the influent line and the other is assumed to be the effluent line based on historical drawings. LAND will utilize a small excavator to expose the pipes in several locations. See attached pdf showing locations to expose the lines. The pipe are fiberglass and an 18" x 4' port will be cut into the tops of each pipe to access the contents. Access ports will be created at the low end of the pipe when feasible.

LAND will utilize Precision Industrial Maintenance (PIM) to perform pipe cleaning services. 2 roll-off vacuum boxes will be mobilized. 1 box will be staged at the northern access location and 1 box will be staged at the southern access location. PIM will utilize a jetting / vacuum truck for cleaning the historical pipes. A 6" vacuum suction hose will be placed in the access ports. PIM will then push up a water jetting hose to the furthest uphill point. The jetting line will operate at 80 gpm and 2000 psi. This jetting line will then be retracted while flushing and pulling the entire pipe contents to the downhill access point. The 6" suction hose will transfer the contents of the pipe and the wash water to the vacuum boxes. This process will be repeated for each line within the limits of the southern deadman sheet pile and tierod alignment.

Once the lines are flushed, LAND will remove the piping that is in conflict with the tierods and easily removable. If the pipes are not easily removable, they will be grouted in place using 300 psi flowable fill (after being cleaned). Prior to removal PIM can perform a camera inspection and document the condition of the remaining lines (within the tierod area).

Sections of the historical piping that are not in conflict with the tierod installation will be bulkheaded and the ends will be plugged and grouted with mortar.

The scope of work above is for the onsite work to clean, remove, and abandon the lines. Once the quantity of material is finalized, LAND will work with AECOM to provide the analytical requirements to profile the waste for disposal. Transportation and Disposal of the material will be determined once the wash water / pipe contents are analyzed.

LAND is in the process of preparing the costs for the scope of work above, excluding the future transportation and disposal costs.

If you have any questions regarding this scope, please let us know. We are hoping to complete the cleaning on Monday next week. Your concurrence with this approach is appreciated.

Thank you

Will

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
www.land-remediation.com

From: Strang, John (DEC)
To: Gardner, Mike
Subject: RE: Monitoring Well Decommissioning - BASF Rensselaer
Date: Friday, August 3, 2018 4:46:32 PM

Mike, received. Thank you!

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Gardner, Mike [mailto:mike.gardner@aecom.com]
Sent: Friday, August 03, 2018 3:16 PM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: karyllan.mack@basf.com; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>; Thorsland, Derek T (DEC) <derek.thorsland@dec.ny.gov>; John Douglas Reid-Green (douglas.reid-green@basf.com) <douglas.reid-green@basf.com>; Will Lindheimer <wpl@land-remediation.com>; Bleiler, John <John.Bleiler@aecom.com>; Chin, Abby <Abby.Chin@aecom.com>
Subject: RE: Monitoring Wells

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

John,

The three monitoring wells (LGPZ-10R, LGMW-25, and LGMW-26) encountered along the modified bulkhead deadman alignment were decommissioned in accordance with CP-43 and your letter approving the well decommissioning dated July 5, 2018. The well decommissioning logs you requested are attached.

Please call me if you have any questions.

From: Gardner, Mike
Sent: Tuesday, July 03, 2018 1:31 PM
To: john.strang@dec.ny.gov
Cc: karyllan.mack@basf.com; Wayne St Clair; Hank Martin; Anders, Krista M (HEALTH); Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); McCarthy, Ryan; Denman, Jeff; Mustico, Richard X (DEC); Farrar, Kevin (DEC); Thorsland, Derek T (DEC); John Douglas Reid-Green (douglas.reid-green@basf.com); 'Will Lindheimer'; Bleiler, John
Subject: FW: Monitoring Wells

John,

Three monitoring wells need to be decommissioned to complete the bulkhead deadman and wale installation. BASF proposes to decommission these wells according to NYSDEC's "CP-43: Groundwater Monitoring Well Decommissioning Policy" issued on November 3, 2009 (NYSDEC, 2009) as required by the SMP. BASF will provide NYSDEC Plans to reinstall the wells (if necessary) at a later date.

Can you provide concurrence that the wells can be decommissioned as described above? Please call

me if you have any questions.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From: Will Lindheimer [mailto:wpl@land-remediation.com]
Sent: Tuesday, July 03, 2018 12:03 PM
To: Denman, Jeff; Gardner, Mike
Cc: Pat Payne
Subject: Monitoring Wells

Jeff and Mike,

Please see the attached. There are 3 monitoring wells that will be virtually impossible to protect. LRI believes these wells need to be abandoned in place. The wells are all directly within the footprint of either the newly proposed sheet pile alignment or where the waler excavation is to occur. Can you please provide your concurrence that these wells should be abandoned. I would like to get a driller here asap to tremie grout these wells. I do not believe we have any records for the wells. These wells are in a direct conflict with the work and need to get abandoned later this week or first thing next week.

Thank you.

Will

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
www.land-remediation.com

From:	Strang, John (DEC)
To:	Gardner, Mike; Denman, Jeff
Cc:	Mustico, Richard X (DEC); Karpinski, Steven (HEALTH); Farrar, Kevin (DEC); Karyllan Dodson Mack; John Douglas Reid-Green; Bower, Caryn I (DEC); Deming, Justin H (HEALTH); Anders, Krista M (HEALTH)
Subject:	RE: Rensselaer OU-2 – Water Encountered in Subsurface Structures and CAMP weekly Reporting
Date:	Wednesday, June 27, 2018 1:43:46 PM

Mike and Jeff:

1) I have received the encountered water question and the request is under review.

2) Send, electronically, the first week of Community Air Monitoring Plan results to john.strang@dec.ny.gov and steven.karpinski@health.ny.gov and kevin.farrar@dec.ny.gov.

Please contact me with any questions.

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Gardner, Mike [mailto:mike.gardner@aecom.com]

Sent: Wednesday, June 27, 2018 1:04 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: John Douglas Reid-Green (douglas.reid-green@basf.com) <douglas.reid-green@basf.com>

Subject: Rensselaer OU-2 – Water Encountered in Subsurface Structures

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John,

During the week of June 15th, BASF encountered 2 historic manhole structures and piping while pre-trenching to remove debris from the sheet pile deadman wall alignment (approximately 125' south of the northern boundary). Approximately 6' of water was observed in each of the manholes. A total of approximately 33,500 gallons of water was removed from the manholes and piping. Following removal there was no appreciable recharge into the historical drainage system.

The water was pumped directly into two 20,000 gallon frac tanks and is currently stored on site. There are no visible sheens or oils in the water. There is no odor coming from the water and PID head space readings over the water are non-detect. Portions of the structures and pipe along the sheet pile alignment were removed and will be disposed of off-site.

BASF requests NYSDEC approval to discharge this water to the ground surface (slowly so infiltration can occur) in accordance with the Section 2.8 of Appendix D to the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004) which states:

"All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge, and development fluids may be recharged back to the land surface or subsurface of the site in the event that prior approval is obtained from the NYSDEC Case Manager. If this approval is not obtained, fluids will be managed via off-site disposal."

Please do not hesitate to contact me, John Bleiler or Mr. Doug Reid-Green with any questions or concerns regarding this matter.

Michael Gardner, P.E.

Environment

D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Strang, John (DEC)
To:	Gardner, Mike
Cc:	Karpinski, Steven (HEALTH)
Subject:	RE: Hudson River OU-2 Sediment Remediation - Weekly Air Monitoring Summary
Date:	Friday, August 3, 2018 4:59:28 PM

Mike, thank you! It turns out with this submittal, the NYSDEC is current with all the CAMP reports for the project.

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Gardner, Mike [mailto:mike.gardner@aecom.com]

Sent: Friday, August 03, 2018 3:01 PM

To: Strang, John (DEC) <john.strang@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>

Cc: Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>; Karyllan Dodson Mack <karyllan.mack@basf.com>; John Douglas Reid-Green <douglas.reid-green@basf.com>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Denman, Jeff <jeff.denman@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>; Chin, Abby <Abby.Chin@aecom.com>; Ruiter, Aimee <aimee.ruiter@aecom.com>

Subject: RE: Hudson River OU-2 Sediment Remediation - Weekly Air Monitoring Summary

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

John,

The Weekly Ambient Air Monitoring Reports for week 6 (July 23 to July 27) is attached.

Please call me if you have any questions.

From: Gardner, Mike
Sent: Friday, July 27, 2018 2:10 PM
To: 'john.strang@dec.ny.gov'; 'steven.karpinski@health.ny.gov'; 'kevin.farrar@dec.ny.gov'
Cc: 'Mustico, Richard X (DEC)'; 'Karpinski, Steven (HEALTH)'; 'Farrar, Kevin (DEC)'; 'Karyllan Dodson Mack'; 'John Douglas Reid-Green'; 'Bower, Caryn I (DEC)'; 'Deming, Justin H (HEALTH)'; 'Anders, Krista M (HEALTH)'; Denman, Jeff; McCarthy, Ryan; Bleiler, John
Subject: RE: Hudson River OU-2 Sediment Remediation - Weekly Air Monitoring Summary

John,

The Weekly Ambient Air Monitoring Reports for week 5 (July 16 to July 20) is attached.

Please call me if you have any questions.

From: Gardner, Mike
Sent: Monday, July 16, 2018 10:31 AM
To: john.strang@dec.ny.gov; steven.karpinski@health.ny.gov; kevin.farrar@dec.ny.gov
Cc: Mustico, Richard X (DEC); Karpinski, Steven (HEALTH); Farrar, Kevin (DEC); Karyllan Dodson Mack; John Douglas Reid-Green; Bower, Caryn I (DEC); Deming, Justin H (HEALTH); Anders, Krista M (HEALTH); Denman, Jeff; McCarthy, Ryan; Bleiler, John
Subject: RE: Hudson River OU-2 Sediment Remediation - Weekly Air Monitoring Summary

John,

Weekly Ambient Air Monitoring Reports for weeks 3 and 4 are attached.

Please call me if you have any questions.

From: Gardner, Mike
Sent: Friday, July 06, 2018 11:42 AM
To: 'john.strang@dec.ny.gov'; 'steven.karpinski@health.ny.gov'; 'kevin.farrar@dec.ny.gov'
Cc: Mustico, Richard X (DEC); Karpinski, Steven (HEALTH); Farrar, Kevin (DEC); Karyllan Dodson Mack; John Douglas Reid-Green; Bower, Caryn I (DEC); Deming, Justin H (HEALTH); Anders, Krista M (HEALTH); Denman, Jeff; McCarthy, Ryan; Bleiler, John
Subject: Hudson River OU-2 Sediment Remediation - Weekly Air Monitoring Summary

John,

Attached are the Weekly Ambient Air Monitoring Reports for the first two weeks of intrusive upland site preparation activities being conducted as part of the Hudson River OU-2 Sediment Remediation. During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004). When in-water work begins in September of 2017 AECOM will perform the ambient air monitoring in accordance with the CAMP presented in the 90% Design for the Hudson River OU2 Sediment Remediation as approved by NYSDEC.

Please call me if you have any questions.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From:	Strang, John (DEC)
To:	Bleiler, John; Gardner, Mike
Subject:	FW: Baseline Water (Hudson River) analytical results for BASF SPDES Permit Equivalent
Date:	Monday, August 20, 2018 2:31:47 PM
Attachments:	Historic SW Tables.pdf data.hw442027.2007-11-19.BASF 2007 Baseline Water Analytical results.pdf

---

John and Mike your email is excellent re: metals in 2005. Do you have excel files on the 2007 data (see the attached data file) that I located for Pore Water (both metals and VOCs)?
Thanks!

John R. Strang, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Strang, John (DEC)
Sent: Friday, August 17, 2018 2:04 PM
To: Woyecha, Demissie (DEC) <demissie.woyecha@dec.ny.gov>
Cc: Canestrari, Donald E (DEC) <donald.canestrari@dec.ny.gov>; Mustico, Richard X (DEC) <richard.mustico@dec.ny.gov>; Farrar, Kevin (DEC) <kevin.farrar@dec.ny.gov>
Subject: FW: Baseline Water (Hudson River) analytical results for BASF SPDES Permit Equivalent
Demissie, I contacted BASF/AECOM and received the surface water (Hudson River) analytical data they collected. Attached is what they were able to provide: Results from 2005 (remedial Investigation) and 2007 (Feasibility Study).
I am hoping this is sufficient. Let me know if more extensive analytical data is needed. Thank you!

John R. Strang, PE
Division of Environmental Remediation
New York State Department of Environmental Conservation
1130 North Westcott Road, Schenectady, NY 12306
P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]
Sent: Friday, August 17, 2018 10:53 AM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: John Douglas Reid-Green <douglas.reid-green@basf.com>
Subject: SPDES Permit

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John
Pursuant to this morning's discussion, I have assembled the attached PDF to present the site investigation surface water data collected at the BASF NY site. The attached file includes both Upstream (background) and Near-Site data.
Thanks

John A. Bleiler
D 978.905.2124 M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive

Chelmsford, MA 01824
T 978.905.2100
aecom.com

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From:	Strang, John (DEC)
To:	Bleiler, John; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Karpinski, Steven (HEALTH); Bower, Caryn I (DEC)
Cc:	Deming, Justin H (HEALTH); Farrar, Kevin (DEC); Mustico, Richard X (DEC); Tromp, David (DEC); Armitage, John L (DEC); Denman, Jeff; McCarthy, Ryan; Gardner, Mike; wpl@land-remediation.com
Subject:	BASF Manu. Plant Site No. 442027, OU02 Hudson River Remediation Project - Surface Water Column Monitoring
Date:	Monday, October 29, 2018 2:56:51 PM
Attachments:	email.hw442027.2018-10-19.OU02 Bulkhead Water Quality chem memo.pdf

---

John,

The New York State Department of Environmental Conservation (Department) has reviewed the surface water chemistry monitoring results in the attached email. The surface water chemistry monitoring program includes analyzing for volatile organic compounds, hardness, total and dissolved metals and PCBs. Based on the chemistry results from the samples collected in the first 17 days of bulkhead installation, the Department concurs that the chemistry monitoring program may be reduced from daily sampling to collecting two samples per week while completing the installation of the bulkhead.

The Department also concurs with the following actions:

1) Daily turbidity monitoring is to continue as stated in the Surface Water Column Monitoring Plan (Attachment G in the 100% Final Remedial Design Specs and Drawings) throughout the work on the bulkhead installation, and
2) Daily chemistry monitoring will be re-initiated once the dredging of sediments with TSCA level PCBs commences.

Please contact me at (518) 357-2390 with any questions.

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From:	Strang, John (DEC)
To:	Bleiler, John; karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Karpinski, Steven (HEALTH); Bower, Caryn I (DEC)
Cc:	Deming, Justin H (HEALTH); Farrar, Kevin (DEC); Mustico, Richard X (DEC); Tromp, David (DEC); Armitage, John L (DEC); Denman, Jeff; McCarthy, Ryan; Gardner, Mike; wpl@land-remediation.com
Subject:	BASF Manu. Plant, Site No. 442027, OU02 Hudson River Remediation Project - TSS/Turbidity Relationships
Date:	Friday, October 26, 2018 3:55:59 PM
Attachments:	email.hw442027.2018-10-18.OU02 Turbidity-TSS 09-13 to 9-09-27 summary memo.pdf

John,

The New York State Department of Environmental Conservation (Department) has reviewed the attached memo which describes the Site (OU02 Hudson River Remediation Project) specific Total Suspended Solids (TSS)/turbidity relationships. The Department agrees the TSS/Turbidity relationship is strong and concurs with the proposed ratio for interpreting TSS from field measured turbidity, which is conservative.

The Department thereby concurs that the turbidity relationship of 1 mg/L TSS to 100 NYUs turbidity recommended in the Surface Water Remedial Action Monitoring Plan (Attachment G in the 100% Final Remedial Design Specs and Drawings) is appropriate for use during the remainder of the bulkhead installation, dredging, and backfill cover installation for the OU02 Hudson River Remediation Project.

Contact me, please, with any questions.

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Strang, John (DEC)
To: Gardner, Mike
Subject: RE: WWTP Water Chemistry Results - Request for Approval to Discharge
Date: Tuesday, January 15, 2019 12:26:58 PM

Thank you Mike.
John Strang
Region 4 DER
(518) 357-2390

From: Gardner, Mike [mailto:mike.gardner@aecom.com]
Sent: Tuesday, January 15, 2019 9:17 AM
To: Strang, John (DEC) <john.strang@dec.ny.gov>
Cc: karyllan.mack@basf.com; John Douglas Reid-Green <douglas.reid-green@basf.com>; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Vooris, Christine N (HEALTH) <Christine.Vooris@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>; doh.sm.BEEI <beei@health.ny.gov>; Will Lindheimer <wpl@land-remediation.com>; Ruiter, Aimee <aimee.ruiter@aecom.com>; Chin, Abby <Abby.Chin@aecom.com>; Bleiler, John <John.Bleiler@aecom.com>
Subject: RE: WWTP Water Chemistry Results - Request for Approval to Discharge

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John,
Effluent sampling results (through 12/27/18) for the BASF Rensselaer Hudson River OU2 Site's WWTP are attached.
Please call if you have any questions.

From: Gardner, Mike
Sent: Tuesday, January 08, 2019 9:58 AM
To: Strang, John (DEC)
Cc: karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Christine.Vooris@health.ny.gov; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); McCarthy, Ryan; Denman, Jeff; BEEI@health.ny.gov; Will Lindheimer; Ruiter, Aimee; Abby Chin; Bleiler, John
Subject: RE: WWTP Water Chemistry Results - Request for Approval to Discharge

Hi John,
Effluent sampling results (through 12/20/18) for the BASF Rensselaer Hudson River OU2 Site's WWTP are attached.
Please call if you have any questions.

From: Gardner, Mike
Sent: Thursday, December 27, 2018 11:06 AM
To: Bleiler, John; Strang, John (DEC)
Cc: karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; 'Christine.Vooris@health.ny.gov'; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); McCarthy, Ryan; Denman, Jeff; 'BEEI@health.ny.gov'; 'Will Lindheimer'; Ruiter, Aimee; Abby Chin
Subject: RE: WWTP Water Chemistry Results - Request for Approval to Discharge

Hi John,
Effluent sampling results (through 12/06/18) for the BASF Rensselaer Hudson River OU2 Site's WWTP are attached.
Please call if you have any questions.

Michael Gardner, P.E.
Environment
D: 978.905.2212 C: 617.794.8384
mike.gardner@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
Phone: 978.905.2100
Fax: 978.905.2101
www.aecom.com

From: Bleiler, John
Sent: Thursday, December 06, 2018 8:48 AM
To: Strang, John (DEC)
Cc: karyllan.mack@basf.com; John Douglas Reid-Green; Wayne St Clair; Hank Martin; Anders, Krista M (HEALTH); Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Gardner, Mike; McCarthy, Ryan; Denman, Jeff
Subject: WWTP Water Chemistry Results - Request for Approval to Discharge

Hi John:

Attached please find a table summarizing the water chemistry from the Water Treatment Plant at the BASF Rensselaer Hudson River OU2 Site. This initial batch of treated water is currently being stored in several frac tanks on the site, awaiting your approval to discharge to the river under the SPDES Permit Equivalence.

Our review of these data indicates that the plant is functioning as designed and that the water constituent concentrations are well below applicable thresholds, and therefore can be discharged into the river in accordance with the permit.

We look forward to your review and concurrence with our recommendation.
Please do not hesitate to contact me or Doug if any further questions arise.

John A. Bleiler
D 978.905.2124 M 978.621.7080
john.bleiler@aecom.com
AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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From:	Strang, John (DEC)
To:	Bleiler, John; John Douglas Reid-Green
Cc:	karyllan.mack@basf.com; Wayne St Clair; Hank Martin; Bower, Caryn I (DEC); Karpinski, Steven (HEALTH); Gardner, Mike; McCarthy, Ryan; Denman, Jeff; Deming, Justin H (HEALTH); Mustico, Richard X (DEC); Tromp, David (DEC); Armitage, John L (DEC); Farrar, Kevin (DEC)
Subject:	RE: Site No. 442027, BASF WWTP Water Chemistry Results - DEC Approval to Discharge
Date:	Thursday, December 6, 2018 12:16:23 PM
Attachments:	file.hw442027.2018-12-05.BASF OU02 WWTP Results of 2018-11-27 sample.pdf

John and Doug,

The New York State Department of Environmental Conservation (Department) has reviewed the treated water effluent results for the BASF Hudson River OU02 Sediment Remediation Project. A copy of the results is an attachment to this email.

The data indicates that the Wastewater Treatment Plant is functioning as designed and that the water constituent concentrations met the discharge limits in the SPDES Permit Equivalence permit.

The Department therefore approves the discharge of water treated by the WWTP in accordance with the permit.

Contact me with any questions. Thank you.

Sincerely, .

John R. Strang, PE

Division of Environmental Remediation

New York State Department of Environmental Conservation

1130 North Westcott Road, Schenectady, NY 12306

P: (518) 357-2390 [C: (518) 376-6320] john.strang@dec.ny.gov

From: Bleiler, John [mailto:John.Bleiler@aecom.com]

Sent: Thursday, December 06, 2018 8:48 AM

To: Strang, John (DEC) <john.strang@dec.ny.gov>

Cc: karyllan.mack@basf.com; John Douglas Reid-Green <douglas.reid-green@basf.com>; Wayne St Clair <wayne.stclair@basf.com>; Hank Martin <hmartin@elminc.com>; Anders, Krista M (HEALTH) <krista.anders@health.ny.gov>; Bower, Caryn I (DEC) <caryn.bower@dec.ny.gov>; Karpinski, Steven (HEALTH) <steven.karpinski@health.ny.gov>; Gardner, Mike <mike.gardner@aecom.com>; McCarthy, Ryan <Ryan.McCarthy@aecom.com>; Denman, Jeff <jeff.denman@aecom.com>

Subject: WWTP Water Chemistry Results - Request for Approval to Discharge

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

Hi John:

Attached please find a table summarizing the water chemistry from the Water Treatment Plant at the BASF Rensselaer Hudson River OU2 Site. This initial batch of treated water is currently being stored in several frac tanks on the site, awaiting your approval to discharge to the river under the SPDES Permit Equivalence.

Our review of these data indicates that the plant is functioning as designed and that the water constituent concentrations are well below applicable thresholds, and therefore can be discharged into the river in accordance with the permit.

We look forward to your review and concurrence with our recommendation.

Please do not hesitate to contact me or Doug if any further questions arise.

John A. Bleiler

D 978.905.2124 M 978.621.7080

john.bleiler@aecom.com

AECOM
250 Apollo Drive
Chelmsford, MA 01824
T 978.905.2100
aecom.com

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Appendix B – Remediation Related Permits

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

July 15, 2019

Mr. Charles Waltz, Sites Manager
BASF Corporation
100 Park Avenue
Florham Park, NJ 07932
Charles.waltz@basf.com

RE: Section 401 Water Quality Certification
DEC #4-3814-00006/00147
Hudson River OU2 Remedial Dredging Site
36 Riverside Ave.
City of Rensselaer, Rensselaer County

Mr. Waltz:

The permit that you applied for is enclosed. Please read it carefully and note the conditions that are included. It is valid for only those activities authorized and is **effective July 15, 2019 and will expire on March 18, 2022**. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and subject to appropriate enforcement action.

Please be advised that the Uniform Procedures Regulations (6 NYCRR Part 621) provide that an applicant may request a public hearing if a permit is denied or contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of permit issuance and must be addressed to the Regional Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

Also note that this permit does not eliminate the need to obtain any other federal, state or local permits or approvals that may be required for this project. If you need additional time to complete the project, you may request a permit extension. Please reference the above DEC number, include an explanation why additional time is required and the anticipated completion date.

Please feel free to contact me at (518) 357-2459 or by email at kate.kornak@dec.ny.gov should you have any questions regarding the extent of the work authorized, or your obligations under the permit.

Sincerely,

Kate Kornak

Kate Kornak
Deputy Regional Permit Administrator

cc (by email): AECOM
USACE (NAN-2018-00411-USH)
DEC Environmental Remediation
DEC Ecosystem Health
DEC Marine Resources

PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
BASF CORPORATION
100 PARK AVE
FLORHAM PARK, NJ 07932
(973) 245-6000

Facility:
BASF Corporation
36 RIVERSIDE AVE|Operable Unit 02
RENSSELAER, NY 12144

Facility Location: in RENSSELAER in RENSSELAER COUNTY
Facility Principal Reference Point: NYTM-E: 602.528 NYTM-N: 4720.396

Latitude: 42°37'45.1" Longitude: 73°44'58.6"

Authorized Activity:

Hudson River Operable Unit-02 Remedial Dredging project located at the former BASF Manufacturing Plant, Remediation Site No. 442027. The project entails remedial dredging of impacted sediments within the Hudson River, placement of an engineered cover system, and site restoration activities including habitat enhancement and vegetative restoration.

Permit Authorizations

Water Quality Certification - Under Section 401 - Clean Water Act
Permit ID 4-3814-00006/00147
New Permit Effective Date: 7/15/2019 Expiration Date: 3/18/2022

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: KATE KORNAK, Deputy Permit Administrator
Address: NYSDEC Region 4 Headquarters
1130 N Westcott Rd
Schenectady, NY 12306

Authorized Signature: K. Kornak 2019.07.15 16:45:26 -04'00' Date 7 / 15 / 2019

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: WATER QUALITY CERTIFICATION

1. **State Not Liable for Damage** The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

2. **State May Order Removal or Alteration of Work** If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

3. **State May Require Site Restoration** If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may lawfully require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

4. **Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by the applicant and/or applicant's agent AECOM in accordance with the revised Hudson River Operable Unit-2 Surface Water Remedial Action Monitoring Plan submitted to the Department July 9, 2019 and the Joint Application Form received June 21, 2019.

5. **Precautions Against Contamination of Waters** All necessary precautions shall be taken to

preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. **Water Quality Certification** The authorized project, as conditioned pursuant to the Certificate, complies with Section 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act, as amended and as implemented by the limitations, standards, and criteria of state statutory and regulatory requirements set forth in 6 NYCRR Section 608.9(a). The authorized project, as conditioned, will also comply with applicable New York State water quality standards, including but not limited to effluent limitations, best usages and thermal discharge criteria, as applicable, as set forth in 6 NYCRR Parts 701, 702, 703, and 704.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. **Facility Inspection by The Department** The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. **Relationship of this Permit to Other Department Orders and Determinations** Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. **Applications For Permit Renewals, Modifications or Transfers** The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 4 Headquarters
1130 N Westcott Rd
Schenectady, NY12306

4. **Submission of Renewal Application** The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Water Quality Certification.

5. **Permit Modifications, Suspensions and Revocations by the Department** The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. **Permit Transfer** Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification
The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit
The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-

way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.

DEPARTMENT OF THE ARMY
US Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

SEP 19 2018

Upstate New York Section

SUBJECT: Permit Application No. NAN-2018-00411-USH
by BASF Corporation
City of Rensselaer, Rensselaer County, New York

Charles Waltz, Sites Manager
BASF Corporation
100 Park Avenue
Florham Park, New Jersey 07932

Dear Mr. Waltz:

On March 6, 2018, the New York District of the U.S. Army Corps of Engineers received a request for Department of the Army authorization for the discharge of material below the mean high tide elevation of the Hudson River to facilitate remedial dredging and the placement of an engineered cover system. The proposed work would occur within the Hudson River, at 36 Riverside Avenue, in the City of Rensselaer, Rensselaer County, New York.

The submittals received by this office on March 6, 2018, May 18, 2018, and September 17, 2018, including the drawings entitled "Legend and General Notes", "Project Overview", "Cross Sections", "Sediment Management Details", and "Restoration Details", all prepared by AECOM, and dated February 13, 2018, "Existing Conditions", "Site Layout and Controls", "Dredge Limits and Controls", and "Dredge and Restoration Profiles", Sheet Numbers 2 through 4 of 4, all prepared by AECOM, dated May 15, 2018, and "Dredge and Restoration Profiles", Sheet Number 1 of 4, prepared by AECOM, dated September 14, 2018, and last revised on September 15, 2018, indicate that the total impacts to waters of the United States would involve mechanically dredging approximately 39,000 cubic yards of material from below the mean high tide elevation of the Hudson River, over a 4.8 acre area, with the dredged material being placed in precast concrete bin blocks for sampling, dewatering and loading for off-site disposal. Water that accumulates within the concrete bins will be conveyed via underground piping to the water treatment system, and will be segregated by Toxic Substances Control Act (TSCA) and non-TSCA waste designation. Dredged material will be properly disposed of at an off-site, permitted receiving facility. In addition, following dredging activities, cover material will be placed within the dredge void restoring the dredged area to pre-construction contours. Temporary in-water structures will be installed to help facilitate the project, including two fixed buoy-monitoring stations located approximately 300 feet upstream and 300 feet downstream of the marine construction operations, a 100-foot long sheet pile energy shield, and two 35-foot wide by 35-foot long sheet pile piers. All temporary in-water structures will be removed 30 days following the completion of all in-water work. All work is being conducted in

accordance with an Order of Consent (Index # 4-20160516-98, dated February 23, 2017) between the New York State Department of Environmental Conservation (NYSDEC) and BASF Corporation (the applicant).

Based on the information submitted to this office, and accomplishment of notification in accordance with the applicable federal requirements, our review of the project indicates that an individual permit is not required. It appears that the activities within the jurisdiction of this office could be accomplished under Department of the Army Nationwide General Permit Number 38. The nationwide permits are prescribed as a Reissuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860). The work may be performed without further authorization from this office provided the activity complies with the permit conditions listed in Section B, No. 38, Section C, any applicable New York District regional conditions, the special conditions below, and any applicable regional conditions added by the State of New York. The 2017 Nationwide Permits, including their final regional conditions, water quality certifications, and coastal zone concurrence statements are available at:

http://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/

Please review and familiarize yourself with all relevant terms and conditions of the nationwide permit prior to proceeding with your project and subsequently ensure you adhere to all conditions through the duration of the project. If you do not have internet access and require a specific paper copy of the referenced materials, please contact the phone number below to request they be mailed to you. Please be sure to have your permit application number readily available when you call.

Special Conditions

(A) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

(B) The permittee shall insure that no in-water work occur in the Hudson River between March 1 and August 31 of any calendar year.

(C) All dredging work will be performed utilizing a clamshell "environmental" bucket to prevent the fall-back of sediment and/or water.

(D) The permittee shall install a double row of permeable turbidity curtain around all dredge areas and continuous real-time monitoring shall be performed during construction activities.

(E) The permittee shall undertake all dredging activities in such a manner as to avoid causing large refuse piles, ridges across the bed of the waterway or deep holes, which have a tendency to cause injury to navigable channels or the banks of the waterway.

(F) The permittee shall, no less than 24 hours prior to the commencement of any in-water work, notify the United States Coast Guard office (USCG) of the commencement of the work and expected completion date, the hours of the day the work will be performed, the names of the vessels on-scene, the VHF radio channel(s) the vessels will monitor, and the project's 24/7 point(s) of contact. This information may be faxed to (718) 354-4190 or mailed to the following address:

USCG Commander
Activities New York (wob)
212 Coast Guard Drive
Staten Island, New York 10305
(718) 354-4012

(G) No less than 14 days prior to the commencement of any in-water work, the permittee shall inform local waterway users of the commencement of the work, using the "Local Notice to Mariners." Information required to be provided in the Local Notice to Mariners can be found at http://www.navcen.uscg.gov. This information may be faxed to (617) 223-8291 or e-mailed to LNM@usgs.mil.

(H) The permittee shall provide the National Oceanic and Atmospheric Administration National Ocean Service (NOAA-NOS) of the project's physical completion date and as-built specifications so that NOAA may initiate the appropriate navigation chart updates and corrections. This information must be submitted online at:

http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx

(I) The permittee shall verify, in writing, compliance with all required notices to USCG and NOAA-NOS as called for above, within five (5) calendar days of each notice. Verifications shall be delivered to the New York District at the following address:

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
ATTN: CENAN-OP-RU
Upstate New York Section
1 Buffington St., Bldg. 10, 3rd Fl. North
Watervliet, New York 12189-4000

(J) Outdoor lighting shall be located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway.

(K) The permittee shall perform hydrographic surveys of the federal navigation channel adjacent to the worksite, extending approximately 100 feet waterward of the mean low tide elevation of the river, before work commences and upon completion of work. The permittee shall compare the surveys to ensure that construction materials, including debris, do not enter the federal navigation channel. Any misplaced materials or debris entering the federal navigation channel shall be removed by the permittee. The surveys shall be submitted to the Regulatory Branch Upstate Regulatory Field Office within 30 days of the completion of the activity authorized by this permit verification.

(L) The permittee shall maintain a copy of this permit on all vessels engaged in dredging and transporting dredged materials.

(M) Within the Federal Navigation Channel, the permittee shall ensure that the post-construction grades are no higher in elevation than the pre-construction grades.

This determination covers only the work described in the submitted material. Any major changes in the project may require additional authorizations from the New York District.

Care should be taken so that construction materials, including debris, do not enter any waterway to become drift or pollution hazards. You are to contact the appropriate state and local government officials to ensure that the subject work is performed in compliance with their requirements.

This verification is valid until March 18, 2022, unless the nationwide permit is modified, reissued, or revoked. This verification will remain valid until March 18, 2022, if the activity complies with the terms of any subsequent modifications of the nationwide permit authorization. If the nationwide permits are suspended, revoked, or modified in such a way that the activity would no longer comply with the terms and conditions of a nationwide permit, and the proposed activity has commenced, or is under contract to commence, the permittee shall have 12 months from the date of such action to complete the activity.

This authorization is conditional on the applicant's receipt of the required water quality certificate or waiver from the New York State Department of Environmental Conservation (NYSDEC). No work may be accomplished until the required approval from NYSDEC has been obtained.

Within 30 days of the completion of the activity authorized by this permit and any mitigation required by this permit, you are to sign and submit the attached compliance certification form to this office.

In order for us to better serve you, please complete our Customer Service Survey located at:

http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

If any questions should arise concerning this matter, please contact Brad Sherwood, of my staff, at (518) 266-6355.

Sincerely,

Amy L. Gitchell
Chief, Upstate New York Section

Enclosures

cf: Kornak, K. - NYSDEC, Region 4, Schenectady
Strang, J. – NYSDEC, Region 4, Schenectady
Bleiler, J. - AECOM
City of Rensselaer
Petronis, W. – CENAN-OP-A

DEPARTMENT OF THE ARMY
US Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

CENAN-OP-RU

NATIONWIDE PERMIT COMPLIANCE CERTIFICATION AND REPORT FORM

Permittee: BASF Corporation Permit No. NAN-2018-00411-USH

Date Permit Issued: SEP 19 2018

Location: City of Rensselaer, Rensselaer County, New York

Within 30 days of the completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the address at the bottom of this form.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee Date

Printed Name: _____

Fold this form into thirds, with the bottom third facing outward. Tape it together and mail to the address below
or EMAIL TO: cenan.rfo.usace.army.mil

_____
_____
_____

Place Stamp Here

DEPARTMENT OF THE ARMY
US Army Corps of Engineers
ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Bldg. 10, 3rd Fl. North
Watervliet, New York 12189-4000

DEPARTMENT OF THE ARMY
US Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

JUN 0 3 2019

Upstate New York Section

SUBJECT: Permit Application No. NAN-2018-00411-M1
by BASF Corporation
City of Rensselaer, Rensselaer County, New York

Charles Waltz, Sites Manager
BASF Corporation
100 Park Avenue
Florham Park, New Jersey 07932

Dear Mr. Waltz:

By letter dated September 19, 2018, copy enclosed, the New York District Corps of Engineers verified the applicability of Nationwide General Permit Number 38, as prescribed as a Reissuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860), for a proposal to remedial dredge and the placement of an engineered cover system below the mean hide tide elevation (MHTE) of the Hudson River. This letter authorized the dredging of approximately 39,000 cubic yards of material from below the MHTE of the Hudson River, over a 4.8-acre area, and the placement of cover material within the dredge void to restore the area to per-construction contours. In addition, the installation of temporary structures to facilitate the dredging. The project is located at 36 Riverside Avenue, in the City of Rensselaer County, New York.

On May 7, 2019, this office received a request for a modification of Special Condition (B) of the above referenced Nationwide Permit No. 38 verification. The request was submitted by AECOM, as representatives for the applicant. The New York District has reviewed the modification request to extend the timeframe with regards to the initiation of in-water work for the project.

Based upon our evaluation of the submitted materials, we hereby approve your request to modify Special Condition (B) of the subject permit as follows:

(B) The permittee shall insure that no in-water work occur in the Hudson River between March 1 and July 14 of any calendar year.

All other permit conditions to which the authorized work was made subject shall remain in effect. This letter shall be added to all copies of the authorization, including those at the work site.

You are reminded that our letter dated September 19, 2018, indicated that the verification is valid until March 18, 2022, unless the nationwide permit is modified, reissued, or revoked. This verification will remain valid until March 18, 2022, if the

activity complies with the terms of any subsequent modifications of the nationwide permit authorization. If the nationwide permits are suspended, revoked, or modified in such a way that the activity would no longer comply with the terms and conditions of a nationwide permit, and the proposed activity has commenced, or is under contract to commence, the permittee shall have 12 months from the date of such action to complete the activity.

This authorization is conditional on the applicant's receipt of the required water quality certificate or waiver from the New York State Department of Environmental Conservation (NYSDEC). No work may be accomplished until the required approval from NYSDEC has been obtained.

In order for us to better serve you, please complete our Customer Service Survey located at:

http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

If you have any questions regarding this matter please feel free to contact Brad Sherwood, of my staff, at (518) 266-6355.

Sincerely,

Amy L. Gitchell
Chief, Upstate New York Section

Enclosures

cf: Kornak, K. - NYSDEC, Region 4, Schenectady
Strang, J. – NYSDEC, Region 4, Schenectady
City of Rensselaer
Bleiler, J. - AECOM
CENAN-OP-A

DEPARTMENT OF THE ARMY
US Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

SEP 19 2018

Upstate New York Section

SUBJECT: Permit Application No. NAN-2018-00411-USH
by BASF Corporation
City of Rensselaer, Rensselaer County, New York

Charles Waltz, Sites Manager
BASF Corporation
100 Park Avenue
Florham Park, New Jersey 07932

Dear Mr. Waltz:

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The submittals received by this office on March 6, 2018, May 18, 2018, and September 17, 2018, including the drawings entitled "Legend and General Notes", "Project Overview", "Cross Sections", "Sediment Management Details", and "Restoration Details", all prepared by AECOM, and dated February 13, 2018, "Existing Conditions", "Site Layout and Controls", "Dredge Limits and Controls", and "Dredge and Restoration Profiles", Sheet Numbers 2 through 4 of 4, all prepared by AECOM, dated May 15, 2018, and "Dredge and Restoration Profiles", Sheet Number 1 of 4, prepared by AECOM, dated September 14, 2018, and last revised on September 15, 2018, indicate that the total impacts to waters of the United States would involve mechanically dredging approximately 39,000 cubic yards of material from below the mean high tide elevation of the Hudson River, over a 4.8 acre area, with the dredged material being placed in precast concrete bin blocks for sampling, dewatering and loading for off-site disposal. Water that accumulates within the concrete bins will be conveyed via underground piping to the water treatment system, and will be segregated by Toxic Substances Control Act (TSCA) and non-TSCA waste designation. Dredged material will be properly disposed of at an off-site, permitted receiving facility. In addition, following dredging activities, cover material will be placed within the dredge void restoring the dredged area to pre-construction contours. Temporary in-water structures will be installed to help facilitate the project, including two fixed buoy-monitoring stations located approximately 300 feet upstream and 300 feet downstream of the marine construction operations, a 100-foot long sheet pile energy shield, and two 35-foot wide by 35-foot long sheet pile piers. All temporary in-water structures will be removed 30 days following the completion of all in-water work. All work is being conducted in

(E) The permittee shall undertake all dredging activities in such a manner as to avoid causing large refuse piles, ridges across the bed of the waterway or deep holes, which have a tendency to cause injury to navigable channels or the banks of the waterway.

(F) The permittee shall, no less than 24 hours prior to the commencement of any in-water work, notify the United States Coast Guard office (USCG) of the commencement of the work and expected completion date, the hours of the day the work will be performed, the names of the vessels on-scene, the VHF radio channel(s) the vessels will monitor, and the project's 24/7 point(s) of contact. This information may be faxed to (718) 354-4190 or mailed to the following address:

USCG Commander
Activities New York (wob)
212 Coast Guard Drive
Staten Island, New York 10305
(718) 354-4012

(G) No less than 14 days prior to the commencement of any in-water work, the permittee shall inform local waterway users of the commencement of the work, using the "Local Notice to Mariners." Information required to be provided in the Local Notice to Mariners can be found at http://www.navcen.uscg.gov. This information may be faxed to (617) 223-8291 or e-mailed to LNM@usgs.mil.

(H) The permittee shall provide the National Oceanic and Atmospheric Administration National Ocean Service (NOAA-NOS) of the project's physical completion date and as-built specifications so that NOAA may initiate the appropriate navigation chart updates and corrections. This information must be submitted online at:

http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx

(I) The permittee shall verify, in writing, compliance with all required notices to USCG and NOAA-NOS as called for above, within five (5) calendar days of each notice. Verifications shall be delivered to the New York District at the following address:

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
ATTN: CENAN-OP-RU
Upstate New York Section
1 Buffington St., Bldg. 10, 3rd Fl. North
Watervliet, New York 12189-4000

(J) Outdoor lighting shall be located or shielded so that it is not confused with any aids to navigation and does not interfere with navigation on the adjacent waterway.

http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

If any questions should arise concerning this matter, please contact Brad Sherwood, of my staff, at (518) 266-6355.

Sincerely,

for Amy L. Gitchell
Chief, Upstate New York Section

Enclosures

cf: Kornak, K. - NYSDEC, Region 4, Schenectady
Strang, J. – NYSDEC, Region 4, Schenectady
Bleiler, J. - AECOM
City of Rensselaer
Petronis, W. – CENAN-OP-A

NEW YORK STATE | Department of Environmental Conservation | Office of General Services | Department of State

US Army Corps of Engineers

JOINT APPLICATION FORM

For Permits for activities activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. **Applications To:**

>NYS Department of Environmental Conservation ☑ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

- ☐ Stream Disturbance
- ☑ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☑ 401 Water Quality Certification
- ☐ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Coastal Erosion Management
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ Incidental Take of Endangered / Threatened Species

>US Army Corps of Engineers ☑ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☑ Section 404 Clean Water Act ☑ Section 10 Rivers and Harbors Act

Is the project Federally funded? ☐ Yes ☑ No

If yes, name of Federal Agency:

General Permit Type(s), if known: Nationwide General Permit 38

Preconstruction Notification: ☑ Yes ☐ No

>NYS Office of General Services ☑ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

☑ State Owned Lands Under Water

☐ Utility Easement (pipelines, conduits, cables, etc.) ☐ Docks, Moorings or Platforms

>NYS Department of State ☐ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. **Name of Applicant**

BASF Corporation

Taxpayer ID (if applicant is NOT an individual)

DE 149145247

Mailing Address

Attn: Charles Waltz, Sites Manager
100 Park Avenue

Post Office / City: Florham Park

State: NJ

Zip: 07932

Telephone: 973-245-6000

Email: charles.waltz@basf.com

Applicant Must be (check all that apply): ☑ Owner ☐ Operator ☐ Lessee

3. **Name of Property Owner (if different than Applicant)**

Mailing Address

Post Office / City

State

Zip

Telephone

Email

For Agency Use Only	Agency Application Number:

4. **Name of Contact / Agent**

John Bleiler

Mailing Address: AECOM, 250 Apollo Drive | Post Office / City: Chelmsford | State: MA | Zip: 01824

Telephone: 978-905-2124 | Email: john.bleiler@aecom.com

5. **Project / Facility Name**: Hudson River OU-2 Remedial Activities BASF Rensselaer | Property Tax Map Section / Block / Lot Number: 154/5/2.3

Project Street Address, if applicable: 36 Riverside Avenue | Post Office / City: Rensselaer | State: NY | Zip: 12144

Provide directions and distances to roads, intersections, bridges and bodies of water

The site is located on the Hudson River approximately 148 River Miles (RM) north of the New York Harbor and 10 RM below the Federal Dam in Troy.

☐ Town ☐ Village ☑ City | County: Rensselaer | Stream/Waterbody Name: Hudson River

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 42 ° 37 ' 48.9 N " Longitude: 73 ° 45 ' 5.9 W "

6. **Project Description:** Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

This project is proposed to address VOC and metal impacted sediments within the Hudson River. The proposed work includes remedial dredging, placement of an engineered cover system, monitoring, and site restoration activities (including submerged aquatic vegetation restoration and habitat layer establishment). In addition, the proposed project includes restoration of submerged aquatic vegetation restoration and creation of a fringe wetland as part of an NRDA settlement.

b. Description of current site conditions:

The upland portion of the site is a portion of the remediated BASF OU-1 and consists of green space, historic building foundations, parking areas, a detention pond, and capped lagoons adjacent to the east bank of the Hudson River. The aquatic portion of the site includes approximately 1,300 linear feet of the Hudson River that extends approximately 100' to 300' into the river from shore. Approximate water depths range from 0 to 40'.

c. Proposed site changes:

The project will result in dredging, treatment, and disposal of contaminated river sediments. Following dredging activities, cover materials will be placed within the dredge void, creating habitat for benthic organisms, submerged aquatic vegetation, and a wetland community. The dredged area will be restored to near pre-construction contours. No loss of Waters of the United States will occur.

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

Cover materials shall meet requirements of 6 NYCRR Part 375-6.7(d).
Total dredged area cover placement: approximately 4.8 acres; cover material placement: approximately 39,000 cubic yards.
Temporary in-water structures: 100' long sheet pile energy shield, two 35' x 35' sheet pile piers, turbidity curtain anchors.
No permanent in-water structures will be installed.

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

Total dredge area: approximately 4.8 acres.
Total in-place dredge volume: 38,400 cubic yards.
Contaminated dredged materials will be treated/processed on-site and subsequently shipped to an off-site receiving facility for final disposal.

f. Is tree cutting or clearing proposed? ☑ Yes If Yes, explain below. ☐ No

Timing of the proposed cutting or clearing (month/year): July 2018

Number of trees to be cut: < 25 | Acreage of trees to be cleared: <1 acre

g. Work methods and type of equipment to be used:

Barge-mounted Link Belt 800 excavator; 55' of reach with 4 CY level cut dredge bucket for deep water dredging.
Barge-mounted Link Belt 350 long reach excavator; 60' of reach with bucket and cover for near shore dredging and backfill.
Land-based equipment including material handler, conveyor systems, air-handlers, water treatment plant.

h. Describe the planned sequence of activities:

Obtain permits; upland preparation work and mobilization; construct water treatment plant; conduct baseline water quality monitoring and bathymetric, habitat, debris surveys; install turbidity curtains; remove debris, and perform pre-dredging bathymetric surveys; dredging/cover placement and material transfer; onshore sediment handling and treatment; disposal of sediments; habitat restoration and enhancement; demobilize; perform long-term monitoring.

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

Implement site-specific Stormwater Pollution Prevention Plan. All project-generated water will be treated via an on-site water treatment plant and discharged into the Hudson River in accordance with a SPDES permit. A double row of permeable turbidity curtains will be installed around all dredge areas and continuous real-time water quality monitoring will be performed. A Dust and Odor Control Plan and a Community Air Monitoring Plan will be implemented to control and monitor air quality.

j. Erosion and silt control methods that will be used to prevent water quality impacts:

Implement site-specific Stormwater Pollution Prevention Plan, install and maintain onshore erosion control BMPs, utilize double row of permeable turbidity curtains around all dredge areas, and perform continuous real-time water quality monitoring.

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

The project is the selected remedy identified in the NYSDEC Record of Decision for BASF - Manufacturing Plant OU-2 issued in March 2016. The project will result in direct establishment of 0.6 acres of submerged aquatic vegetation and the creation of 5,000 sf of wetland areas as part of NRDA settlement.

l. Proposed use: ☑ Private ☐ Public ☐ Commercial

m. Proposed Start Date: July 2018 Estimated Completion Date: July 2020

n. Has work begun on project? ☐ Yes If Yes, explain below. ☑ No

o. Will project occupy Federal, State, or Municipal Land? ☑ Yes If Yes, explain below. ☐ No

Lands Under Water of the Hudson River

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

NYSDEC Water Quality Certification 4-3814-00006/00143
NYSDEC Excavation and Fill in Navigable Waters 4-3814-00006/00144
USACE Nationwide Permit 3 No. NAN-2017-00907-USH

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☐ Yes If Yes, list below. ☑ No

7. **Signatures.**

Applicant and Owner (If different) must sign the application.
Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant C R Waltz — Date 2/12/18

Applicant Must be (check all that apply): ☑ Owner ☐ Operator ☐ Lessee

Printed Name: CHARLES R. WALTZ — Title: SITES MANAGER

Signature of Owner (if different than Applicant) — Date

Printed Name — Title

Signature of Contact / Agent — Date

Printed Name — Title

For Agency Use Only **DETERMINATION OF NO PERMIT REQUIRED**

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name — Title

Signature — Date

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 4
1130 North Westcott Road, Schenectady, NY 12306-2014
P: (518) 357-2069 | F: (518) 357-2460
www.dec.ny.gov

September 22, 2017

Charles Waltz
BASF Corp.
100 Park Avenue
Florham Park, NJ 07932

RE: Bulkhead Repair - BASF
DEC #4-3814-00006/00143
36 Riverside Avenue
City of Rensselaer, Rensselaer County

Dear Mr. Bleiler:

The permit that you applied for is enclosed. Please read it carefully and note the conditions that are included. It is valid for only those activities authorized and is **effective September 22, 2017, and will expire on November 30, 2018**. Work beyond the scope of the permit and the approved project plans may be considered a violation of the law and subject to enforcement action.

Please be advised that the Uniform Procedures Regulations (6 NYCRR Part 621) provide that an applicant may request a public hearing if a permit is denied or contains conditions which are unacceptable to them. Any such request must be made in writing within 30 calendar days of the date of permit issuance and must be addressed to the Regional Permit Administrator at the letterhead address. A copy should also be sent to the Chief Administrative Law Judge at NYSDEC, 625 Broadway, 1st Floor, Albany, NY 12233-1550.

Also note that this permit does not eliminate the need to obtain any other federal, state or local permits or approvals that may be required for this project. If you need additional time to complete the project, you may request a permit extension. Please reference the above DEC number, include an explanation why additional time is required and the anticipated completion date.

Please feel free to contact me at (518) 357-2452 or by email at nancy.baker@dec.ny.gov should you have any questions regarding the extent of the work authorized, or your obligations under the permit.

Sincerely,

Nancy M Baker

Nancy M. Baker
Regional Permit Administrator

Enclosures: Permit
cc (by email): John Blieler, AECOM
Trevor Brady, Habitat
John Strang, Remediation
USACOE (NAN-2017-00907 USH)

PERMIT
Under the Environmental Conservation Law (ECL)

Permittee and Facility Information

Permit Issued To:
BASF CORPORATION
100 PARK AVE
FLORHAM PARK, NJ 07932
(914) 785-2729

Facility:
BASF CORP CHEMICALS DIV
36 RIVERSIDE AVE
RENSSELAER, NY 12144

Facility Location: in RENSSELAER in RENSSELAER COUNTY
Facility Principal Reference Point: NYTM-E: 602.528 NYTM-N: 4720.396
Latitude: 42°37'45.1" Longitude: 73°44'58.6"
Project Location: 36 Riverside Avenue, Rensselaer
Authorized Activity: As part of an ongoing remediation project, the applicant proposes to install approximately 520' of steel bulkhead to reinforce an existing wall along the Hudson River. The project is located at 36 Riverside Avenue, Rensslaer, NY.

Permit Authorizations

Water Quality Certification - Under Section 401 - Clean Water Act
Permit ID 4-3814-00006/00143
New Permit Effective Date: 9/22/2017 Expiration Date: 11/30/2018
Excavation & Fill in Navigable Waters - Under Article 15, Title 5
Permit ID 4-3814-00006/00144
New Permit Effective Date: 9/22/2017 Expiration Date: 11/30/2018

NYSDEC Approval

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

Permit Administrator: NANCY M BAKER, Regional Permit Administrator
Address: NYSDEC Region 4 Headquarters
1130 N Westcott Rd
Schenectady, NY 12306

Authorized Signature: Nancy M Baker Date 09/22/2017

Permit Components

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: WATER QUALITY CERTIFICATION; EXCAVATION & FILL IN NAVIGABLE WATERS

1. **Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by AECOM dated 6/20/17, and last revised on 8/31/17.

2. **No Interference With Navigation** There shall be no unreasonable interference with navigation by the work herein authorized.

3. **State May Order Removal or Alteration of Work** If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.

4. **State May Require Site Restoration** If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may lawfully require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.

5. **Precautions Against Contamination of Waters** All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.

6. **State Not Liable for Damage** The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.

7. **Turbidity Curtain Examination** Upon observation of a plume or sheen outside the confines of the silt curtain, DEC staff shall be notified and the silt curtain containment area shall be examined for breaches. Any identified breaches in the curtain shall be immediately repaired. The silt curtain should be outfitted with a sorbent boom to capture any sheens that may occur.

8. **Minimize Disturbance** Disturbance to the bed and banks of the stream shall be kept to the minimum necessary to complete the project. Any exposed soil shall be shaped, seeded and mulched upon completion of the project.

WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS

1. **Water Quality Certification** The authorized project, as conditioned pursuant to the Certificate, complies with Section 301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act, as amended and as implemented by the limitations, standards, and criteria of state statutory and regulatory requirements set forth in 6 NYCRR Section 608.9(a). The authorized project, as conditioned, will also comply with applicable New York State water quality standards, including but not limited to effluent limitations, best usages and thermal discharge criteria, as applicable, as set forth in 6 NYCRR Parts 701, 702, 703, and 704.

GENERAL CONDITIONS - Apply to ALL Authorized Permits:

1. **Facility Inspection by The Department** The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

2. **Relationship of this Permit to Other Department Orders and Determinations** Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

3. Applications For Permit Renewals, Modifications or Transfers The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator
NYSDEC Region 4 Headquarters
1130 N Westcott Rd
Schenectady, NY12306

4. Submission of Renewal Application The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Excavation & Fill in Navigable Waters, Water Quality Certification.

5. Permit Modifications, Suspensions and Revocations by the Department The Department reserves the right to exercise all available authority to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

a. materially false or inaccurate statements in the permit application or supporting papers;

b. failure by the permittee to comply with any terms or conditions of the permit;

c. exceeding the scope of the project as described in the permit application;

d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;

e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

6. Permit Transfer Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

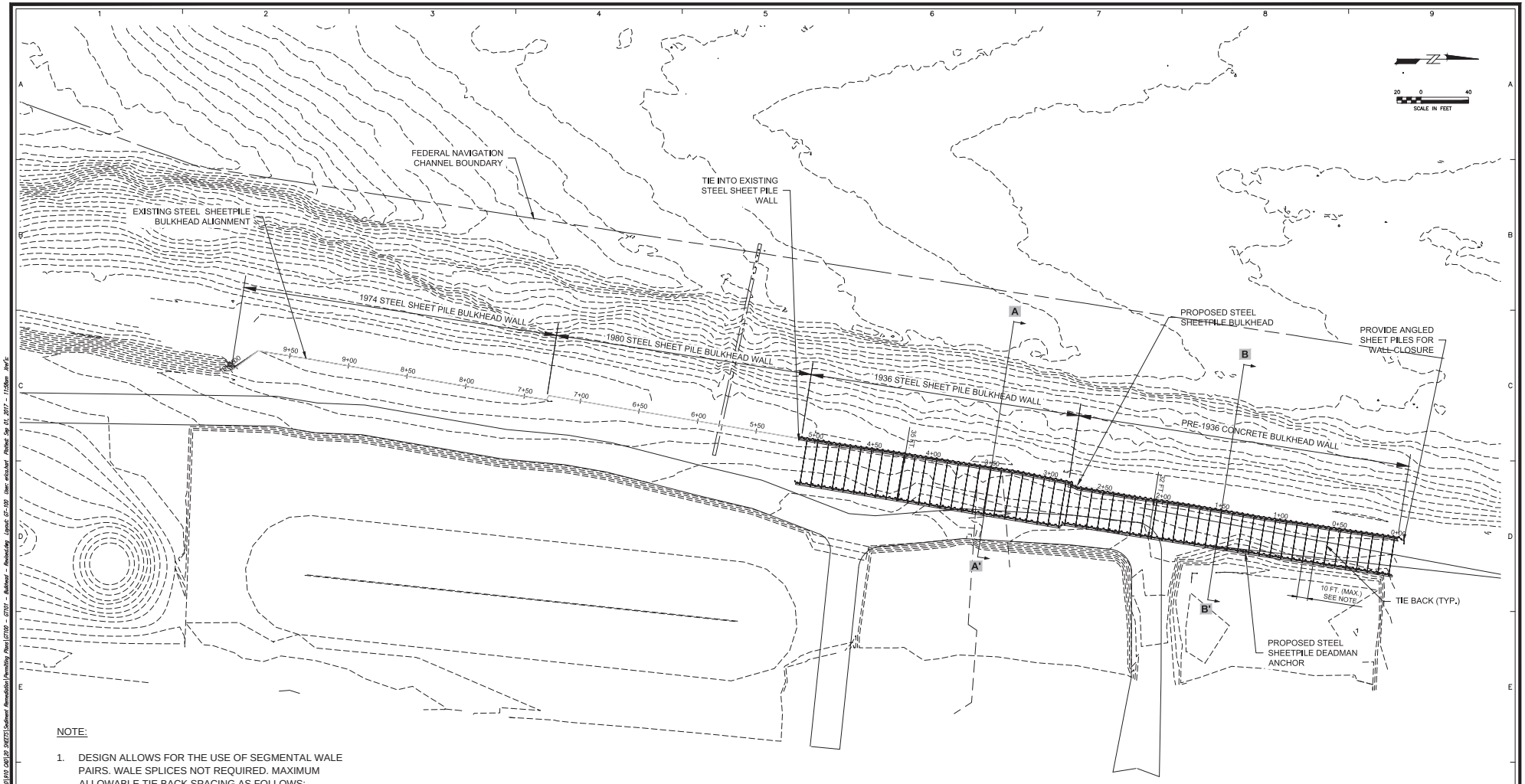
Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification
The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee’s undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in

compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

Item B: Permittee's Contractors to Comply with Permit
The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

Item C: Permittee Responsible for Obtaining Other Required Permits
The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.

Item D: No Right to Trespass or Interfere with Riparian Rights
This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



NOTE:

1. DESIGN ALLOWS FOR THE USE OF SEGMENTAL WALE PAIRS. WALE SPLICES NOT REQUIRED. MAXIMUM ALLOWABLE TIE BACK SPACING AS FOLLOWS:
   - 10 FT. (MAX.) INTERIOR TIE BACK SPACING (TYP.)
   - 5 FT. (MAX.) CANTILEVERED TIE BACK SPACING AT ENDS OF SEGMENTS (TYP.)

PRIVILEGED & CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

NO	DRWN	DATE	REVISION	CHKD	DATE	APPVD	DATE
7							
6							
5							
4							
3							
2							
1	AC	08/31/17	PERMITTING APPLICATION REVISIONS				
0	TDL	06/02/17	PERMITTING APPLICATION				

AECOM
AECOM
250 APOLLO DRIVE
CHELMSFORD, MA 01824
www.aecom.com

BASF CORPORATION
HUDSON RIVER OU-2
RENSSELAER, NEW YORK

PROJ. NUMBER: 60323713

DATE: 08/31/2017

BULKHEAD ANALYSIS AND DESIGN

HUDSON RIVER OU-2
BULKHEAD DESIGN

DRAWING NUMBER: GT-100

SHEET NUMBER: 1 OF 1

REVISION 1

File: P:\Jobs\Hudson\Sandbar\Project Files\60323713\60 Engineering\Design\Design_2016_2017\60 CAD\10 CAD\20 SHEETS\Sediment Remediation\Permitting Plans\GT100 – GT101 – Bulkhead – Revised.dwg Layout: GT-100 User: erica.hunt Plotted: Sep 01, 2017 – 11:58am

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers, ATTN: CENAN-OP-RU
Upstate Regulatory Field Office
1 Buffington St., Building 10, 3rd Fl. North
Watervliet, New York 12189-4000

NOV 0 1 2017

Upstate New York Section

SUBJECT: Permit Application No. NAN-2017-00907-USH
by BASF Corporation
City of Rensselaer, Rensselaer County, New York

Charles Waltz
BASF Corporation
100 Park Avenue
Florham Park, New Jersey 07932

Dear Mr. Waltz:

On July 13, 2017, the New York District of the U.S. Army Corps of Engineers received a request for Department of the Army authorization for the repair of an existing bulkhead. The proposed work would occur within and on lands adjacent to the Hudson River, at 36 Riverside Avenue, in the City of Rensselaer, Rensselaer County, New York.

The original submittal, and a subsequent submittal received by this office on September 6, 2017, including the drawing entitled "Bulkhead Analysis and Design", Drawing No. GT-100, prepared by AECOM, dated June 2, 2017, and last revised August 31, 2017, and "Bulkhead Analysis Cross Section, Conceptual Modifications", Drawing No. GT-101, prepared by AECOM, and dated June 2, 2017, constitutes a complete pre-construction notification for Nationwide Permit No. 3 as prescribed as a Reissuance of Nationwide Permits in the Federal Register dated January 6, 2017 (82 FR 1860). In accordance with General Condition Number 32 of the Nationwide Permits, since more than 45 days have passed since our receipt of the complete Nationwide Permit verification request without a response from this office, you may proceed with the proposed activities in waters of the United States as described in the above referenced submittals.

Please be advised that you are responsible for constructing the project as proposed, including: installing all sheet piling utilizing a vibratory hammer; the installation of a turbidity curtain around the work area, and maintaining it for the duration of the work; the removal of the temporary work barge upon completion of the work; and insuring that no substrate disturbing work occur in the Hudson River between March 1 and August 31 of any calendar year. In addition you are responsible for complying with all the terms and conditions of the Nationwide Permit Program, as well as any applicable New York District regional conditions, and any applicable water quality certifications, and coastal zone concurrence statements that are available at:

http://www.nan.usace.army.mil/Missions/Regulatory/Nationwide-Permits/

You are also reminded that a Department of the Army permit may be required for any additional work on this site. If you decide to implement any other projects on this site in the future, please submit a timely and completed application for our review. Impacts to waters of the United States for this project may be reviewed cumulatively with any future requests or any other applications you may submit for work in waters of the United States on this site.

Please note that this determination does not eliminate the need to obtain any other Federal, State or local authorization required by law for the proposed work, including any required permit or Water Quality Certification from the New York State Department of Environmental Conservation (NYSDEC).

In order for us to better serve you, please complete our Customer Service Survey located at:

http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

If any questions should arise concerning this matter, please contact Brad Sherwood of my staff at (518) 266-6355.

Sincerely,

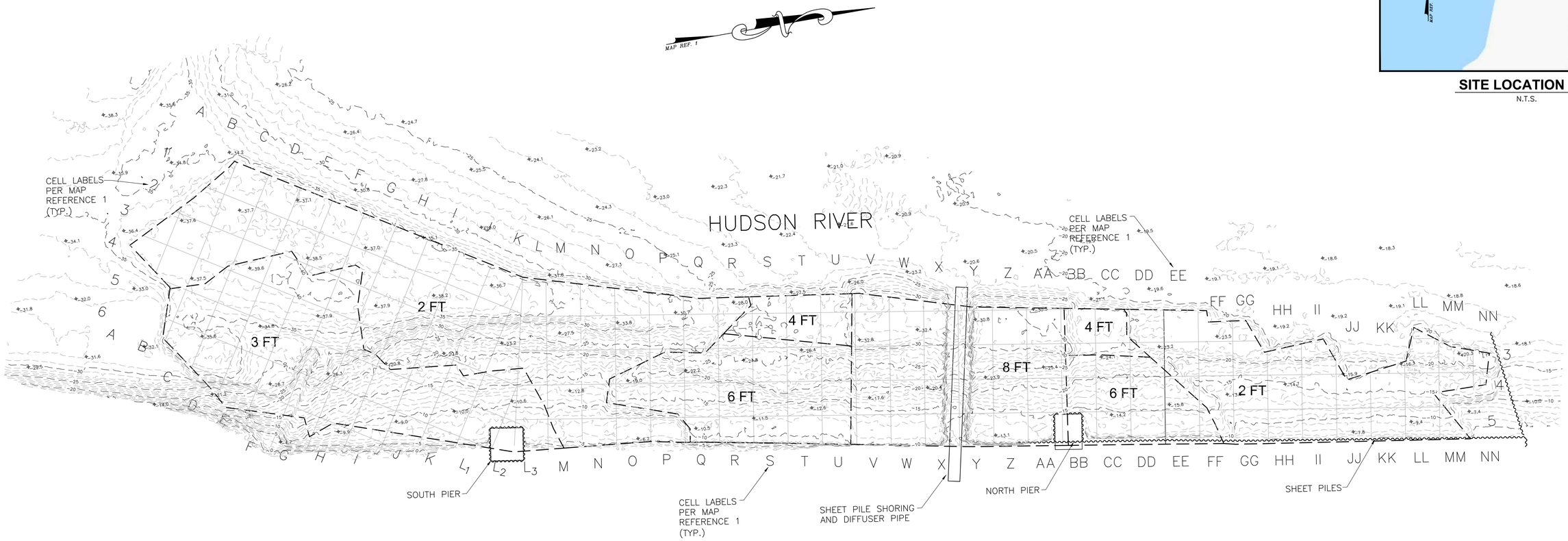
Amy L. Gitchell
Chief, Upstate New York Section

cc: Baker, N. - NYSDEC, Region 4, Schenectady (4-3814-00006/00143)
City of Rensselaer
Bleiler, J. - AECOM

Appendix C – As Built Drawings and Documentation



SITE LOCATION MAP
N.T.S.



0 50 100 Feet

NOTES:

1. BATHYMETRIC SURVEY PERFORMED ON OCTOBER 17, 23, 29, 31, & NOVEMBER 8, 2019.
2. BATHYMETRIC DATA SHOWN HEREON WAS OBTAINED BY LAND REMEDIATION INC, NMB LAND SURVEYING PERFORMED WEEKLY SITE VISITS/OBSERVATIONS TO ENSURE QUALITY AND CONSISTENCY IN PROVIDED DATA.
3. DUE TO THE DYNAMIC NATURE OF THE HUDSON RIVER, THE SURFACE SHOWN MAY CHANGE WITH TIME. PLEASE SEE NOTE 1 FOR THE DATE AND TIME THE SURVEY WAS PREFORMED.
4. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
5. UNDERGROUND UTILITY AND FEATURES SHOWN ARE BASED ON ABOVE GROUND EVIDENCE. OTHER UTILITIES AND FEATURES MAY EXIST
6. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NAD 83 PER MAP REFERENCE 1.
7. THE VERTICAL DATUM USED FOR THIS SURVEY IS NAVD 88 PER MAP REFERENCE 1.

MAP REFERENCES

1. MAP ENTITLED "HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION RENSSELAER, NY", DATED MARCH 12, 2018 AND PREPARED BY AECOM.

TOTAL EXCAVATED MATERIAL FROM JULY 12, 2019 TO THE DATE OF THIS SURVEY = 30,381 ± CUBIC YARDS

NMB
LAND SURVEYING
PLLC
20 TROY AVE, WYNANTSKILL NY, 12198
518-376-4630

REVISIONS			
NO.	DATE	DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S INKED SEAL AND SIGNATURE SHALL BE CONSIDERED UNAUTHORIZED AND NOT VALID COPIES. CERTIFICATES INDICATED ON MAP/LEG HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

FINAL BATHYMETRIC VOLUME SURVEY

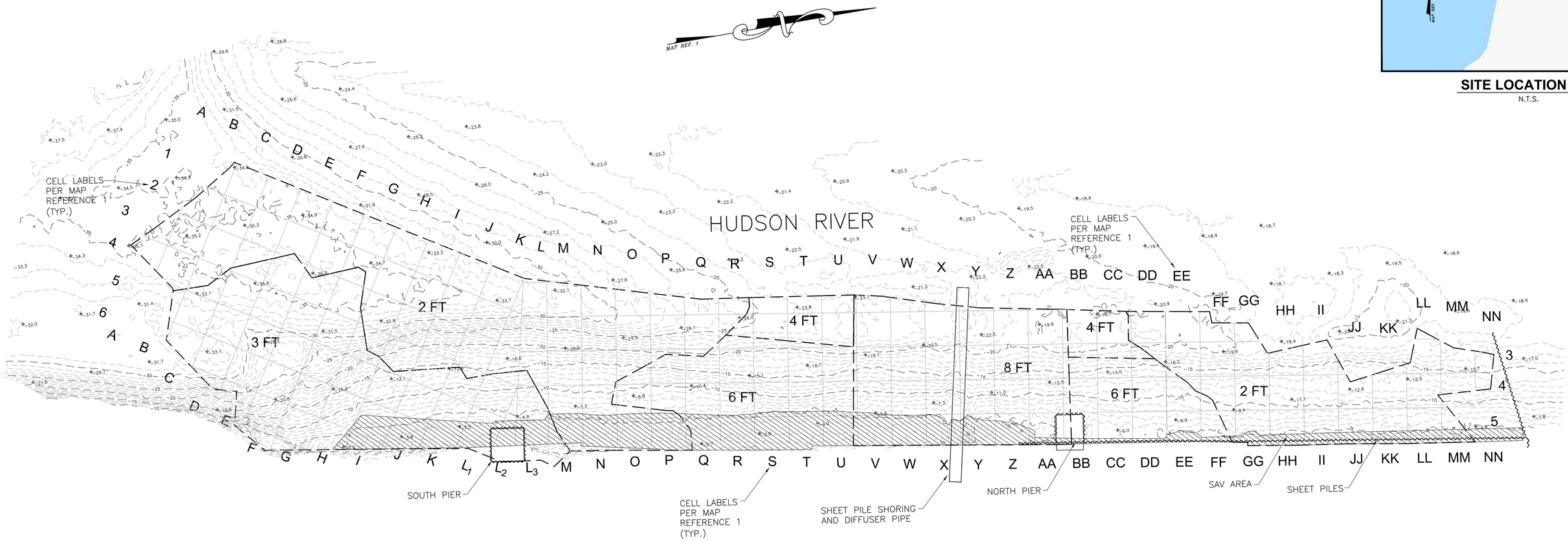
HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION

CITY OF RENSSELAER
COUNTY OF RENSSELAER — STATE OF NEW YORK

SURVEYED BY: LBI, INC.	CHECKED BY: NMB/AJK	DATE: NOVEMBER 8, 2019
DRAWN BY: NMB/AJK	JOB No. 2449	DWG No. BASF_FINAL_DREDGE
SCALE: 1"=50'	SHEET 1 OF 1	



SITE LOCATION MAP
N.T.S.



0 50 100 Feet

NOTES:

1. BATHYMETRIC SURVEY PERFORMED ON JANUARY 20, 2020 AT 7 AM.
2. BATHYMETRIC DATA SHOWN HEREON WAS OBTAINED BY LAND REMEDIATION INC, NMB LAND SURVEYING PERFORMED WEEKLY SITE VISITS/OBSERVATIONS TO ENSURE QUALITY AND CONSISTENCY IN PROVIDED DATA.
3. DUE TO THE DYNAMIC NATURE OF THE HUDSON RIVER, THE SURFACE SHOWN MAY CHANGE WITH TIME. PLEASE SEE NOTE 1 FOR THE DATE AND TIME THE SURVEY WAS PREFORMED.
4. SURVEY SUBJECT TO ANY SUBSURFACE CONDITIONS THAT MAY EXIST, IF ANY.
5. UNDERGROUND UTILITY AND FEATURES SHOWN ARE BASED ON ABOVE GROUND EVIDENCE. OTHER UTILITIES AND FEATURES MAY EXIST
6. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NAD 83 PER MAP REFERENCE 1.
7. THE VERTICAL DATUM USED FOR THIS SURVEY IS NAVD 88 PER MAP REFERENCE 1.

MAP REFERENCES

1. MAP ENTITLED "HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION RENSSELAER, NY", DATED MARCH 12, 2018 AND PREPARED BY AECOM.

NMB LAND SURVEYING PLLC
20 TROY AVE, WYNANTSKILL NY, 12198
518-376-4630

NO.	DATE	REVISIONS DESCRIPTION	BY

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY WAS PREPARED, AND ON THAT PARTY'S BEHALF TO THE TITLE COMPANY NAMED. SAID CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

PROTECTION STONE BATHYMETRIC VOLUME SURVEY

HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION

CITY OF RENSSELAER
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: LBI, INC.	CHECKED BY: NMB/AJK	DATE: JANUARY 21, 2020
DRAWN BY: NMB/AJK	JOB No. 2449	DWG No. 200120_BASF

SCALE: 1"=50' SHEET 1 OF 1

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 1/16/2019	☐ New Submittal ☑ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 29-rev PREVIOUS SUBMITTAL NO. AND DATE: 29 on 1/4/2019
Specification Section No.: 02 46 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Sheet Pile Drive Logs		1	02 46 00		none
2	Sheet Pile Asbuilts		1	02 46 00		none

Remarks:	**LAND REMEDIATION, INC.** I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Signature: Title: Project Director Date: January 16, 2019

Additional Notes:
none

BASF - Rensselaer, NY
Sheet Pile Driving Log

Sheet pile ID		Design Length (FT)	Actual Length (FT)	Width (FT)	Hammer Power (%)	Hammer (type / size / Model)	Installed Area (SF)	Top Elevation (AMSL)	Bottom Elevation (AMSL)	Initial of Sealant Inspector	Date of Installation	Start Time	End Time	Plumb at 1/2 Depth (in)	Plumb at full Depth (in)	Notes
SP	1	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/5/2018	1545	1600	WT	WT	Pulling Pile & direct drive on new wall.
SP	2	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/5/2018	1604	1609	WT	WT	
SP	3	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	0818 / 0824	0822 / 0826	WT	WT	
SP	4	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	0829 / 0836	0830 / 0838	WT	WT	
SP	5	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	0841 / 0847	0843 / 0849	WT	WT	Hit obstruction, digging at 0905 , removed concrete chunk
SP	6	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	0850 / 1021	0851 / 1024	WT	WT	
SP	7	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1028 / 1035	1030 / 1041	WT	WT	
SP	8	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1042 / 1049	1044 / 1051	WT	WT	
SP	9	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1053 / 1059	1055 / 1101	WT	WT	
SP	10	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1122 / 1130	1124 / 1132	WT	WT	
SP	11	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1133 / 1137	1134 / 1139	WT	WT	
SP	12	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1142 / 1150	1144 / 1152	WT	WT	
SP	13	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1418 / 1422	1420 / 1424	WT	WT	
SP	14	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1426 / 1430	1427 / 1432	WT	WT	
SP	15	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1434 / 1443	1436 / 1444	WT	WT	
SP	16	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/9/2018	1448 / 1548	1449 / 1549	WT	WT	
SP	17	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	0800 / 0806	0802 / 0808	WT	WT	
SP	18	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	0810 / 0815	0811 / 0816	WT	WT	
SP	19	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	0816 / 0820	0817 / 0828	WT	WT	
SP	20	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	0829 / 1206	0830 / 1208	WT	WT	weld back together / hit obstruction (HDPE)
SP	21	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	1300 / 1304	1302 / 1305	WT	WT	FWP
SP	22	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/10/2018	1315 / 1320	1316 / 1323	WT	WT	
SP	23	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1135 / 1145	1136 / 1149	WT	WT	weld
SP	24	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1152 / 1155	1153 / 1157	WT	WT	
SP	25	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1310 / 1313	1311 / 1314	WT	WT	
SP	26	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1316 / 1327	1317 / 1325	WT	WT	
SP	27	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1335 / 1345	1337 / 1346	WT	WT	
SP	28	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1350 / 1354	1351 / 1355	WT	WT	
SP	29	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1357 / 1426	1358 / 1428	WT	WT	
SP	30	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1430 / 1434	1432 / 1436	WT	WT	

na - not applicable
wt - within tolerance

BASF - Rensselaer, NY
Sheet Pile Driving Log

SP	31	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1438 / 1446	1439 / 1448	WT	WT	
SP	32	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1500 / 1503	1502 / 1505	WT	WT	
SP	33	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1509 / 1512	1510 / 1514	WT	WT	
SP	34	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1517 / 1519	1518 / 1522	WT	WT	(-1540 - 1715) - welding and preping to pull # 35. felt obstruction, roughly 8ft of pile installed.
SP	35	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1524 / 1530	1525 / 1535	WT	WT	
SP	36	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1540 / 1544	1541 / 1546	WT	WT	obstruction, pulled and dug out obstruction (found cable and pipes)
SP	*35	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1000	1010	WT	WT	
SP	*36	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1016	1018	WT	WT	
SP	37	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1029	1031	WT	WT	
SP	38	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1037	1039	WT	WT	
SP	39	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1046	1047	WT	WT	
SP	40	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1058	1101	WT	WT	
SP	41	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1107	1108	WT	WT	
SP	42	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1114	1116	WT	WT	
SP	43	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1130	1131	WT	WT	
SP	44	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1139	1140	WT	WT	
SP	45	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1150	1151	WT	WT	
SP	46	12	12.5	5.05	variable	Movax SP100	63.125	12.5	0	NA	7/11/2018	1156	1157	WT	WT	

SP	1	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/13/2018	1110	1115	WT	WT	
SP	2	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/14/2018	1015	1020	WT	WT	
SP	3	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/14/2018	1230	1235	WT	WT	
SP	4	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1330	1335	WT	WT	
SP	5	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1000	1005	WT	WT	
SP	6	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1025	1040	WT	WT	
SP	7	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1100	1110	WT	WT	
SP	8	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1125	1134	WT	WT	
SP	9	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/17/2018	1320	1325	WT	WT	
SP	10	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	900	910	WT	WT	
SP	11	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	950	955	WT	WT	
SP	12	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	1015	1020	WT	WT	

na - not applicable
wt - within tolerance

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Sheet Pile Driving Log

SP	13	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	1050	1105	WT	WT	
SP	14	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	1215	1222	WT	WT	
SP	15	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	1530	1540	WT	WT	
SP	16	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/19/2018	1547	1600	WT	WT	
SP	17	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	920	940	WT	WT	
SP	18	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1000	1010	WT	WT	
SP	19	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1040	1050	WT	WT	
SP	20	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1114	1118	WT	WT	
SP	21	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1140	1153	WT	WT	
SP	22	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1315	1320	WT	WT	
SP	23	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1340	1350	WT	WT	
SP	24	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1405	1420	WT	WT	
SP	25	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/20/2018	1440	1455	WT	WT	
SP	26	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	835	845	WT	WT	
SP	27	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	910	920	WT	WT	
SP	28	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	944	947	WT	WT	
SP	29	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	1410	1422	WT	WT	
SP	30	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	1450	1452	WT	WT	
SP	31	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	1520	1527	WT	WT	
SP	32	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	1542	1547	WT	WT	
SP	33	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/24/2018	1608	1612	WT	WT	
SP	34	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/25/2018	1400	1408	WT	WT	
SP	35	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/25/2018	1440	1446	WT	WT	
SP	36	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/25/2018	1530	1537	WT	WT	
SP	37	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/25/2018	1600	1635	WT	WT	hit obstruction by vault and blue crane
SP	38	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	835	840	WT	WT	
SP	39	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	850	900	WT	WT	
SP	40	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	915	920	WT	WT	
SP	41	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	1622	1625	WT	WT	
SP	42	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	1650	1708	WT	WT	
SP	43	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/26/2018	1715	1720	WT	WT	

na - not applicable
wt - within tolerance

BASF - Rensselaer, NY
Sheet Pile Driving Log

SP	44	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	830	840	WT	WT	
SP	45	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	855	905	WT	WT	
SP	46	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	920	925	WT	WT	
SP	47	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	930	935	WT	WT	
SP	48	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	945	950	WT	WT	
SP	49	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	1000	1010	WT	WT	
SP	50	50	50.1	4.59	variable	ICE 25 ZR	229.959	11	-39.1	NA	9/28/2018	1015	1020	WT	WT	
SP	1	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	820	830	WT	WT	
SP	2	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	845	850	WT	WT	
SP	3	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	925	930	WT	WT	
SP	4	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	949	955	WT	WT	
SP	5	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	1012	1016	WT	WT	
SP	6	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	1025	1030	WT	WT	
SP	7	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	1335	1344	WT	WT	
SP	8	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/15/2018	1400	1416	WT	WT	
SP	9	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	952	1001	WT	WT	
SP	10	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	1308	1315	WT	WT	
SP	11	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	340	1344	WT	WT	
SP	12	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	1355	1402	WT	WT	
SP	13	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	1420	1428	WT	WT	
SP	14	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	1530	1535	WT	WT	
SP	15	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/16/2018	1600	1609	WT	WT	
SP	16	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1000	1012	WT	WT	
SP	17	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1025	1032	WT	WT	
SP	18	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1050	1059	WT	WT	
SP	19	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1110	1121	WT	WT	
SP	20	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1135	1142	WT	WT	
SP	21	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	10/17/2018	1200	1205	WT	WT	
SP	22	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/16/2018	932	943	WT	WT	
SP	23	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/16/2018	1017	1023	WT	WT	

na - not applicable
wt - within tolerance

BASF - Rensselaer, NY
Sheet Pile Driving Log

SP	24	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/16/2018	1101	1112	WT	WT	
SP	25	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/16/2018	1137	1144	WT	WT	
SP	26	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/16/2018	1310	1317	WT	WT	
SP	27	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	945	953	WT	WT	
SP	28	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1002	1009	WT	WT	
SP	29	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1043	1054	WT	WT	
SP	30	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1106	1114	WT	WT	
SP	31	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1132	1139	WT	WT	
SP	32	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1302	1311	WT	WT	
SP	33	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1347	1355	WT	WT	
SP	34	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1409	1417	WT	WT	
SP	35	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/19/2018	1503	1512	WT	WT	
SP	36	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	846	851	WT	WT	
SP	37	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	912	917	WT	WT	
SP	38	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	931	940	WT	WT	
SP	39	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	951	1005	WT	WT	
SP	40	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1115	1126	WT	WT	
SP	41	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1150	1200	WT	WT	
SP	42	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1318	1330	WT	WT	
SP	43	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1435	1439	WT	WT	
SP	44	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1459	1506	WT	WT	
SP	45	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1520	1528	WT	WT	
SP	46	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1540	1554	WT	WT	
SP	47	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/20/2018	1642	1651	WT	WT	
SP	48	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/21/2018	901	915	WT	WT	
SP	49	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/21/2018	938	949	WT	WT	
SP	50	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/21/2018	1015	1022	WT	WT	
SP	51	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/21/2018	1500	1530	WT	WT	
SP	52	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	840	850	WT	WT	
SP	53	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	912	921	WT	WT	
SP	54	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1015	1031	WT	WT	

na - not applicable
wt - within tolerance

BASF - Rensselaer, NY
Sheet Pile Driving Log

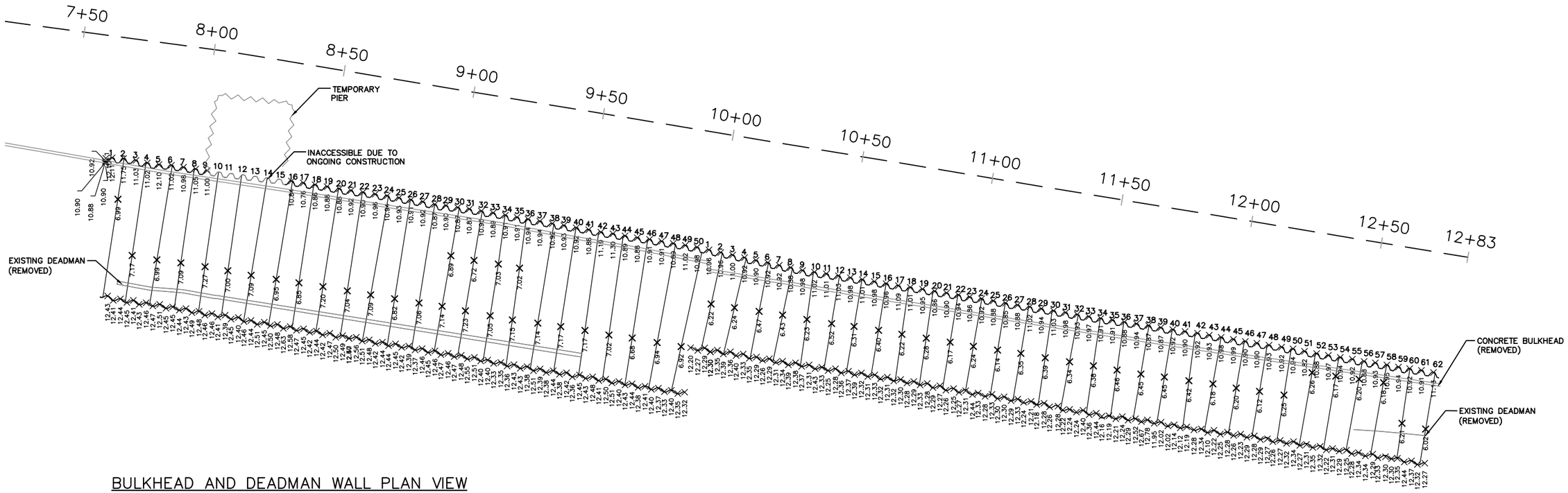
SP	55	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1047	1054	WT	WT	
SP	56	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1110	1130	WT	WT	
SP	57	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1146	1156	WT	WT	
SP	58	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1302	1310	WT	WT	
SP	59	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1420	1427	WT	WT	
SP	60	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1456	1505	WT	WT	
SP	61	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1523	1531	WT	WT	
SP	62	40	40	4.59	variable	ICE 25 ZR	183.6	11	-29	NA	11/26/2018	1545	1556	WT	WT	

Notes:

1 Piles were driven with Hammers listed above. Movax SP-100 High Frequency hammer was utilized to drive the deadman sheet pile wall. Hammer was attached to Link Belt 330 Excavator.
2 Bulkhead Piles were driven with ICE Hanging variable moment hammer. Model of hammer was a 25 ZR with a 300 HP power pack. Hammer was supported by a Link Belt 218 (110 tons) crawler crane.
3 Ground Elevation during pile installation varied. Ground Elevation for the bulkhead piles was the existing sediment elevation and shown on the asbuilt drawings.
4 Ground Elevation during pile installation varied. Ground Elevation for dead man piles was the excavated to aid in installation. Approximate elevation was 11'. Final Grade elevation of the ground over deadman piles is not constructed yet.
5 Piles were installed as close to the existing bulkhead as possible. Final location of the bulkhead and deadman piles are documented on the asbuilt survey.
6 The existing bulkhead (both steel & timbers) were determined that the toe was deflected outwards towards the river. The new bulkhead piles were adjusted to be just outboard of the existing toe of the old bulkhead and driven as close as possible to the old bulkhead as possible and still maintain a straight and plumb wall.
7 Final Tip and Toe elevations are depicted on the asbuilt profile drawing.
8 No pile cap or cushions were used during installation.

na - not applicable
wt - within tolerance

MAP REF. 1



BULKHEAD AND DEADMAN WALL PLAN VIEW
SCALE: 1" = 40'

0 40 80 Feet

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A DECEMBER, 2018 FIELD SURVEY.
2. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NAD 83 PER MAP REFERENCE 1.
3. THE VERTICAL DATUM USED FOR THIS SURVEY IS NAVD 88 PER MAP REFERENCE 1.

MAP REFERENCES

1. MAP ENTITLED "HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION RENSSELAER, NY", DATED MARCH 12, 2018 AND PREPARED BY AECOM.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

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LAND SURVEYING
PLLC
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518-376-4630

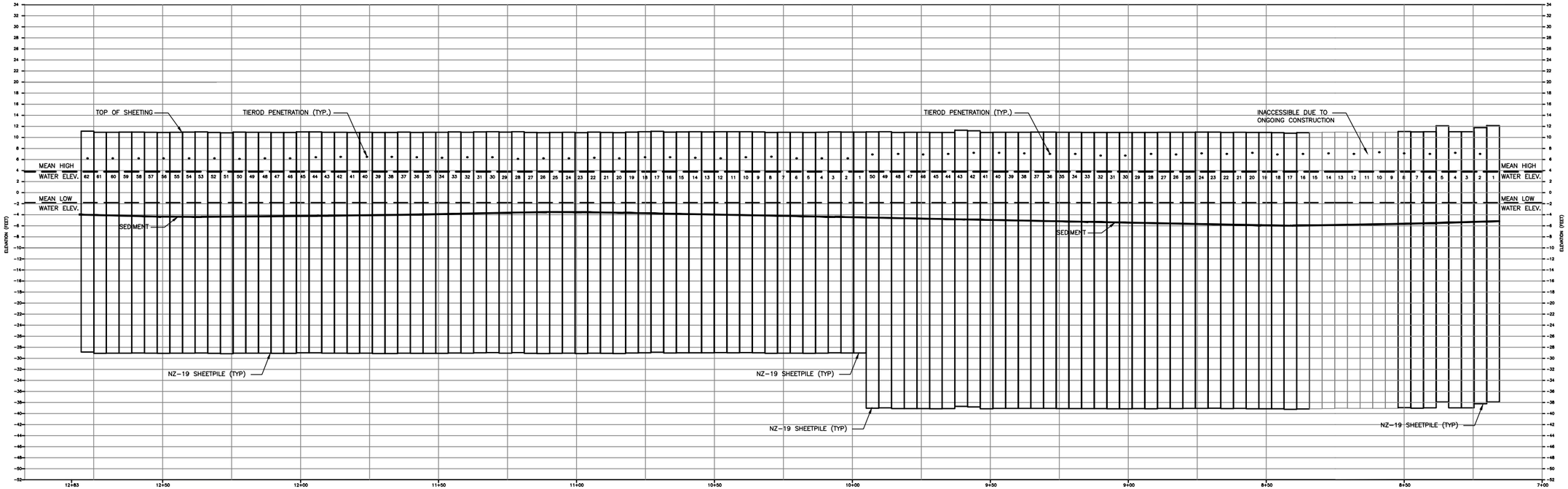
NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

BULKHEAD AND DEADMAN SURVEY

NZ-19 BULKHEAD SHEETPILE
NZ-14 DEADMAN SHEETPILE
HUDSON RIVER OU-2
SEDIMENT REMEDIATION
BASF CORPORATION

CITY OF RENSSELAER
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: NMB	CHECKED BY: NMB	DATE: 1/18/2019
DRAWN BY: AJK	JOB No. 2449	DWG No. SHEETING
SCALE: 1"=40'		1 OF 1



PROFILE OF INSTALLED BULKHEAD SHEETS

SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=5'

NOTES:

1. SURVEY SHOWN WAS PREPARED FROM A DECEMBER, 2018 FIELD SURVEY.
2. BATHYMETRIC DATA WAS OBTAINED AND PROVIDED BY H2H GEOSCIENCE PLLC MAY 22, 2018.
3. THE HORIZONTAL DATUM USED FOR THIS SURVEY IS NAD 83 PER MAP REFERENCE 1.
4. THE VERTICAL DATUM USED FOR THIS SURVEY IS NAVD 88 PER MAP REFERENCE 1.

MAP REFERENCES

1. MAP ENTITLED "HUDSON RIVER OU-2 SEDIMENT REMEDIATION BASF CORPORATION RENSSELAER, NY", DATED MARCH 12, 2018 AND PREPARED BY AECOM.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYOR'S EMBOSSED SEAL AND SIGNATURE IN RED SHALL NOT BE CONSIDERED TO BE VALID COPIES. CERTIFICATES INDICATED OR IMPLIED HEREON SHALL RUN ONLY TO THE PARTY FOR WHOM THE SURVEY IS PREPARED, AND ON THEIR BEHALF TO THE ADDITIONAL PARTIES LISTED HEREON. CERTIFICATES ARE NOT TRANSFERABLE TO ADDITIONAL PARTIES, OR SUBSEQUENT OWNERS, NOT LISTED HEREON.

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518-376-4630

NATHAN M. BURROWS L.S.
NEW YORK LIC. No. 50,724

SHEETING PROFILE

NZ-19 BULKHEAD SHEETPILE
HUDSON RIVER OU-2
SEDIMENT REMEDIATION
BASF CORPORATION

CITY OF RENSSELAER
COUNTY OF RENSSELAER STATE OF NEW YORK

SURVEYED BY: NMB	CHECKED BY: NMB	DATE: 1/15/2019
DRAWN BY: AJK	JOB No. 2449	DWG No. SHEETING PROFILE

SCALE: NOTED

Appendix D – Raw Analytical Lab Data

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

February 20, 2020

John Bleiler
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 200214034
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF-Hudson River
Rensselaer NY

Dear John Bleiler:

Adirondack Environmental Services, Inc received 6 samples on 2/14/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*20-Feb-20*
Project:	BASF-Hudson River		
Lab Order:	200214034		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TNW
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-001
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**400**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1221	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1232	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1242	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1248	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1254	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1260	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1262	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Aroclor 1268	**ND**	33		µg/Kg-dry	1	2/14/2020 5:43:58 PM
Surr: Decachlorobiphenyl	**70.0**	48.1-152		%REC	1	2/14/2020 5:43:58 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/18/2020 6:39:52 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/18/2020 6:39:52 PM
Surr: Acifluorfen	**118**	52.5-128		%REC	1	2/18/2020 6:39:52 PM
Surr: DCAA	**121**	56.2-139		%REC	1	2/18/2020 6:39:52 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 7:05:59 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:05:59 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:05:59 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:05:59 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:05:59 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 7:05:59 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 7:05:59 PM
Surr: Decachlorobiphenyl-TCLP	**70.0**	51.5-141		%REC	1	2/18/2020 7:05:59 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:39:27 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:20:25 PM
Barium-TCLP	**0.258**	0.100		mg/L	1	2/18/2020 7:20:25 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:20:25 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:20:25 PM
Lead-TCLP	**0.089**	0.050		mg/L	1	2/18/2020 7:20:25 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: TNW
Collection Date: 2/14/2020
Lab Sample ID: 200214034-001
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:20:25 PM
Silver-TCLP	**0.029**	0.100	J	mg/L	1	2/18/2020 7:20:25 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
Cresols, Total-TCLP	**ND**	200		µg/L	1	2/20/2020 12:09:00 PM
Hexachlorobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
Hexachlorobutadiene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
Hexachloroethane-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
Nitrobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:09:00 PM
Pentachlorophenol-TCLP	**ND**	250		µg/L	1	2/20/2020 12:09:00 PM
Pyridine-TCLP	**ND**	100		µg/L	1	2/20/2020 12:09:00 PM
Surr: 2,4,6-Tribromophenol	**68.2**	43.7-123		%REC	1	2/20/2020 12:09:00 PM
Surr: 2-Fluorobiphenyl	**51.1**	48.7-108		%REC	1	2/20/2020 12:09:00 PM
Surr: 2-Fluorophenol	**47.5**	23.5-101		%REC	1	2/20/2020 12:09:00 PM
Surr: 4-Terphenyl-d14	**58.0**	50.6-121		%REC	1	2/20/2020 12:09:00 PM
Surr: Nitrobenzene-d5	**47.7**	43.7-109		%REC	1	2/20/2020 12:09:00 PM
Surr: Phenol-d6	**57.8**	12.6-93.5		%REC	1	2/20/2020 12:09:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/18/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/19/2020 6:06:00 PM
Benzene-TCLP	**69**	100	J	µg/L	20	2/19/2020 6:06:00 PM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
Chlorobenzene-TCLP	**360**	100		µg/L	20	2/19/2020 6:06:00 PM
Chloroform-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:06:00 PM
Surr: 1,2-Dichloroethane-d4	**113**	84.3-123		%REC	20	2/19/2020 6:06:00 PM
Surr: 4-Bromofluorobenzene	**90.1**	80.6-121		%REC	20	2/19/2020 6:06:00 PM
Surr: Toluene-d8	**131**	83.6-113	S	%REC	20	2/19/2020 6:06:00 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TNW
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-001
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.0**	1.0		pH Units@72F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**0.8**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:44:47 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**12**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TNE
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-002
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**88**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1221	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1232	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1242	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1248	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1254	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1260	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1262	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Aroclor 1268	**ND**	33		µg/Kg-dry	1	2/14/2020 5:57:03 PM
Surr: Decachlorobiphenyl	**58.0**	48.1-152		%REC	1	2/14/2020 5:57:03 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:01:29 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:01:29 PM
Surr: Acifluorfen	**120**	52.5-128		%REC	1	2/18/2020 7:01:29 PM
Surr: DCAA	**120**	56.2-139		%REC	1	2/18/2020 7:01:29 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 7:24:37 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:24:37 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:24:37 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:24:37 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 7:24:37 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 7:24:37 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 7:24:37 PM
Surr: Decachlorobiphenyl-TCLP	**72.0**	51.5-141		%REC	1	2/18/2020 7:24:37 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:41:09 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:25:27 PM
Barium-TCLP	**0.558**	0.100		mg/L	1	2/18/2020 7:25:27 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:25:27 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:25:27 PM
Lead-TCLP	**0.100**	0.050		mg/L	1	2/18/2020 7:25:27 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: TNE
Collection Date: 2/14/2020
Lab Sample ID: 200214034-002
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**0.035**	0.050	J	mg/L	1	2/18/2020 7:25:27 PM
Silver-TCLP	**0.031**	0.100	J	mg/L	1	2/18/2020 7:25:27 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
Cresols, Total-TCLP	**ND**	200		µg/L	1	2/20/2020 12:34:00 PM
Hexachlorobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
Hexachlorobutadiene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
Hexachloroethane-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
Nitrobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 12:34:00 PM
Pentachlorophenol-TCLP	**ND**	250		µg/L	1	2/20/2020 12:34:00 PM
Pyridine-TCLP	**ND**	100		µg/L	1	2/20/2020 12:34:00 PM
Surr: 2,4,6-Tribromophenol	**41.3**	43.7-123	S	%REC	1	2/20/2020 12:34:00 PM
Surr: 2-Fluorobiphenyl	**38.2**	48.7-108	S	%REC	1	2/20/2020 12:34:00 PM
Surr: 2-Fluorophenol	**36.2**	23.5-101		%REC	1	2/20/2020 12:34:00 PM
Surr: 4-Terphenyl-d14	**43.1**	50.6-121	S	%REC	1	2/20/2020 12:34:00 PM
Surr: Nitrobenzene-d5	**40.0**	43.7-109	S	%REC	1	2/20/2020 12:34:00 PM
Surr: Phenol-d6	**43.9**	12.6-93.5		%REC	1	2/20/2020 12:34:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/18/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/19/2020 6:28:00 PM
Benzene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Chlorobenzene-TCLP	**320**	100		µg/L	20	2/19/2020 6:28:00 PM
Chloroform-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:28:00 PM
Surr: 1,2-Dichloroethane-d4	**114**	84.3-123		%REC	20	2/19/2020 6:28:00 PM
Surr: 4-Bromofluorobenzene	**104**	80.6-121		%REC	20	2/19/2020 6:28:00 PM
Surr: Toluene-d8	**90.7**	83.6-113		%REC	20	2/19/2020 6:28:00 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TNE
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-002
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.2**	1.0		pH Units@70F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**ND**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:49:56 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**12**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TSW
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-003
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**510**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1221	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1232	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1242	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1248	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1254	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1260	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1262	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Aroclor 1268	**ND**	33		µg/Kg-dry	1	2/14/2020 6:10:03 PM
Surr: Decachlorobiphenyl	**58.0**	48.1-152		%REC	1	2/14/2020 6:10:03 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:23:07 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:23:07 PM
Surr: Acifluorfen	**114**	52.5-128		%REC	1	2/18/2020 7:23:07 PM
Surr: DCAA	**122**	56.2-139		%REC	1	2/18/2020 7:23:07 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 5:51:43 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 5:51:43 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 5:51:43 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 5:51:43 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 5:51:43 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 5:51:43 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 5:51:43 PM
Surr: Decachlorobiphenyl-TCLP	**60.0**	51.5-141		%REC	1	2/18/2020 5:51:43 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:42:51 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:39:35 PM
Barium-TCLP	**0.257**	0.100		mg/L	1	2/18/2020 7:39:35 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:39:35 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:39:35 PM
Lead-TCLP	**0.113**	0.050		mg/L	1	2/18/2020 7:39:35 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: TSW
Collection Date: 2/14/2020
Lab Sample ID: 200214034-003
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:39:35 PM
Silver-TCLP	**0.027**	0.100	J	mg/L	1	2/18/2020 7:39:35 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
Cresols, Total-TCLP	**ND**	270		µg/L	1	2/20/2020 1:50:00 PM
Hexachlorobenzene-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
Hexachlorobutadiene-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
Hexachloroethane-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
Nitrobenzene-TCLP	**ND**	67		µg/L	1	2/20/2020 1:50:00 PM
Pentachlorophenol-TCLP	**ND**	330		µg/L	1	2/20/2020 1:50:00 PM
Pyridine-TCLP	**ND**	130		µg/L	1	2/20/2020 1:50:00 PM
Surr: 2,4,6-Tribromophenol	**64.0**	43.7-123		%REC	1	2/20/2020 1:50:00 PM
Surr: 2-Fluorobiphenyl	**40.6**	48.7-108	S	%REC	1	2/20/2020 1:50:00 PM
Surr: 2-Fluorophenol	**50.6**	23.5-101		%REC	1	2/20/2020 1:50:00 PM
Surr: 4-Terphenyl-d14	**50.1**	50.6-121	S	%REC	1	2/20/2020 1:50:00 PM
Surr: Nitrobenzene-d5	**54.4**	43.7-109		%REC	1	2/20/2020 1:50:00 PM
Surr: Phenol-d6	**57.9**	12.6-93.5		%REC	1	2/20/2020 1:50:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/18/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/19/2020 6:51:00 PM
Benzene-TCLP	**180**	100		µg/L	20	2/19/2020 6:51:00 PM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
Chlorobenzene-TCLP	**1100**	100	N+	µg/L	20	2/19/2020 6:51:00 PM
Chloroform-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/19/2020 6:51:00 PM
Surr: 1,2-Dichloroethane-d4	**89.5**	84.3-123		%REC	20	2/19/2020 6:51:00 PM
Surr: 4-Bromofluorobenzene	**81.7**	80.6-121		%REC	20	2/19/2020 6:51:00 PM
Surr: Toluene-d8	**127**	83.6-113	S	%REC	20	2/19/2020 6:51:00 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TSW
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-003
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.4**	1.0		pH Units@71F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**1.2**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:51:39 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**12**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TSE
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-004
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**300**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1221	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1232	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1242	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1248	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1254	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1260	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1262	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Aroclor 1268	**ND**	34		µg/Kg-dry	1	2/14/2020 6:23:05 PM
Surr: Decachlorobiphenyl	**84.0**	48.1-152		%REC	1	2/14/2020 6:23:05 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:44:39 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/18/2020 7:44:39 PM
Surr: Acifluorfen	**103**	52.5-128		%REC	1	2/18/2020 7:44:39 PM
Surr: DCAA	**121**	56.2-139		%REC	1	2/18/2020 7:44:39 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:10:18 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:10:18 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:10:18 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:10:18 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:10:18 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:10:18 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 6:10:18 PM
Surr: Decachlorobiphenyl-TCLP	**72.0**	51.5-141		%REC	1	2/18/2020 6:10:18 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:44:33 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:44:36 PM
Barium-TCLP	**0.192**	0.100		mg/L	1	2/18/2020 7:44:36 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:44:36 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:44:36 PM
Lead-TCLP	**0.097**	0.050		mg/L	1	2/18/2020 7:44:36 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: TSE
Collection Date: 2/14/2020
Lab Sample ID: 200214034-004
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:44:36 PM
Silver-TCLP	**0.032**	0.100	J	mg/L	1	2/18/2020 7:44:36 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
Cresols, Total-TCLP	**ND**	200		µg/L	1	2/20/2020 2:16:00 PM
Hexachlorobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
Hexachlorobutadiene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
Hexachloroethane-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
Nitrobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:16:00 PM
Pentachlorophenol-TCLP	**ND**	250		µg/L	1	2/20/2020 2:16:00 PM
Pyridine-TCLP	**ND**	100		µg/L	1	2/20/2020 2:16:00 PM
Surr: 2,4,6-Tribromophenol	**66.2**	43.7-123		%REC	1	2/20/2020 2:16:00 PM
Surr: 2-Fluorobiphenyl	**40.1**	48.7-108	S	%REC	1	2/20/2020 2:16:00 PM
Surr: 2-Fluorophenol	**45.5**	23.5-101		%REC	1	2/20/2020 2:16:00 PM
Surr: 4-Terphenyl-d14	**49.5**	50.6-121	S	%REC	1	2/20/2020 2:16:00 PM
Surr: Nitrobenzene-d5	**48.9**	43.7-109		%REC	1	2/20/2020 2:16:00 PM
Surr: Phenol-d6	**58.4**	12.6-93.5		%REC	1	2/20/2020 2:16:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/19/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/20/2020 11:06:00 AM
Benzene-TCLP	**52**	100	J	µg/L	20	2/20/2020 11:06:00 AM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
Chlorobenzene-TCLP	**460**	100		µg/L	20	2/20/2020 11:06:00 AM
Chloroform-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:06:00 AM
Surr: 1,2-Dichloroethane-d4	**99.7**	84.3-123		%REC	20	2/20/2020 11:06:00 AM
Surr: 4-Bromofluorobenzene	**77.9**	80.6-121	S	%REC	20	2/20/2020 11:06:00 AM
Surr: Toluene-d8	**116**	83.6-113	S	%REC	20	2/20/2020 11:06:00 AM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	TSE
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-004
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.5**	1.0		pH Units@70F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**1.8**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:53:22 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**12**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: PN
Collection Date: 2/14/2020
Lab Sample ID: 200214034-005
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**120**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1221	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1232	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1242	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1248	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1254	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1260	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1262	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Aroclor 1268	**ND**	33		µg/Kg-dry	1	2/14/2020 6:36:05 PM
Surr: Decachlorobiphenyl	**66.0**	48.1-152		%REC	1	2/14/2020 6:36:05 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/19/2020 4:20:07 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/19/2020 4:20:07 PM
Surr: Acifluorfen	**120**	52.5-128		%REC	1	2/19/2020 4:20:07 PM
Surr: DCAA	**118**	56.2-139		%REC	1	2/19/2020 4:20:07 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:28:51 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:28:51 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:28:51 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:28:51 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:28:51 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:28:51 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 6:28:51 PM
Surr: Decachlorobiphenyl-TCLP	**72.0**	51.5-141		%REC	1	2/18/2020 6:28:51 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:46:16 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:49:31 PM
Barium-TCLP	**0.204**	0.100		mg/L	1	2/18/2020 7:49:31 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:49:31 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:49:31 PM
Lead-TCLP	**0.089**	0.050		mg/L	1	2/18/2020 7:49:31 PM

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: PN
Collection Date: 2/14/2020
Lab Sample ID: 200214034-005
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**0.008**	0.050	J	mg/L	1	2/18/2020 7:49:31 PM
Silver-TCLP	**0.027**	0.100	J	mg/L	1	2/18/2020 7:49:31 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
Cresols, Total-TCLP	**ND**	200		µg/L	1	2/20/2020 2:41:00 PM
Hexachlorobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
Hexachlorobutadiene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
Hexachloroethane-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
Nitrobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 2:41:00 PM
Pentachlorophenol-TCLP	**ND**	250		µg/L	1	2/20/2020 2:41:00 PM
Pyridine-TCLP	**ND**	100		µg/L	1	2/20/2020 2:41:00 PM
Surr: 2,4,6-Tribromophenol	**63.3**	43.7-123		%REC	1	2/20/2020 2:41:00 PM
Surr: 2-Fluorobiphenyl	**45.0**	48.7-108	S	%REC	1	2/20/2020 2:41:00 PM
Surr: 2-Fluorophenol	**48.2**	23.5-101		%REC	1	2/20/2020 2:41:00 PM
Surr: 4-Terphenyl-d14	**52.5**	50.6-121		%REC	1	2/20/2020 2:41:00 PM
Surr: Nitrobenzene-d5	**48.9**	43.7-109		%REC	1	2/20/2020 2:41:00 PM
Surr: Phenol-d6	**60.5**	12.6-93.5		%REC	1	2/20/2020 2:41:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/19/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/20/2020 11:28:00 AM
Benzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Chlorobenzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Chloroform-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:28:00 AM
Surr: 1,2-Dichloroethane-d4	**101**	84.3-123		%REC	20	2/20/2020 11:28:00 AM
Surr: 4-Bromofluorobenzene	**80.2**	80.6-121	S	%REC	20	2/20/2020 11:28:00 AM
Surr: Toluene-d8	**103**	83.6-113		%REC	20	2/20/2020 11:28:00 AM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	PN
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-005
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.2**	1.0		pH Units@72F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**1.2**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:55:05 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**14**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: PS
Collection Date: 2/14/2020
Lab Sample ID: 200214034-006
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 2/14/2020)						
Aroclor 1016	**130**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1221	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1232	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1242	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1248	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1254	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1260	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1262	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Aroclor 1268	**ND**	34		µg/Kg-dry	1	2/14/2020 6:49:10 PM
Surr: Decachlorobiphenyl	**56.0**	48.1-152		%REC	1	2/14/2020 6:49:10 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	2/19/2020 2:32:11 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	2/19/2020 2:32:11 PM
Surr: Acifluorfen	**119**	52.5-128		%REC	1	2/19/2020 2:32:11 PM
Surr: DCAA	**119**	56.2-139		%REC	1	2/19/2020 2:32:11 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 2/18/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:47:24 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:47:24 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:47:24 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:47:24 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	2/18/2020 6:47:24 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	2/18/2020 6:47:24 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	2/18/2020 6:47:24 PM
Surr: Decachlorobiphenyl-TCLP	**82.0**	51.5-141		%REC	1	2/18/2020 6:47:24 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 2/18/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	2/18/2020 2:47:57 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:54:27 PM
Barium-TCLP	**0.217**	0.100		mg/L	1	2/18/2020 7:54:27 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:54:27 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	2/18/2020 7:54:27 PM
Lead-TCLP	**0.109**	0.050		mg/L	1	2/18/2020 7:54:27 PM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT: AECOM Environment
Work Order: **200214034**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: PS
Collection Date: 2/14/2020
Lab Sample ID: 200214034-006
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 2/14/2020)						
Selenium-TCLP	**0.003**	0.050	J	mg/L	1	2/18/2020 7:54:27 PM
Silver-TCLP	**0.027**	0.100	J	mg/L	1	2/18/2020 7:54:27 PM
TCLP SEMI-VOLATILES - EPA 8270D						Analyst: **MT**
(Prep: SW3535A - 2/19/2020)						
2,4,5-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
2,4,6-Trichlorophenol-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
2,4-Dinitrotoluene-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
Cresols, Total-TCLP	**ND**	200		µg/L	1	2/20/2020 3:06:00 PM
Hexachlorobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
Hexachlorobutadiene-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
Hexachloroethane-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
Nitrobenzene-TCLP	**ND**	50		µg/L	1	2/20/2020 3:06:00 PM
Pentachlorophenol-TCLP	**ND**	250		µg/L	1	2/20/2020 3:06:00 PM
Pyridine-TCLP	**ND**	100		µg/L	1	2/20/2020 3:06:00 PM
Surr: 2,4,6-Tribromophenol	**54.7**	43.7-123		%REC	1	2/20/2020 3:06:00 PM
Surr: 2-Fluorobiphenyl	**36.8**	48.7-108	S	%REC	1	2/20/2020 3:06:00 PM
Surr: 2-Fluorophenol	**45.8**	23.5-101		%REC	1	2/20/2020 3:06:00 PM
Surr: 4-Terphenyl-d14	**46.6**	50.6-121	S	%REC	1	2/20/2020 3:06:00 PM
Surr: Nitrobenzene-d5	**48.8**	43.7-109		%REC	1	2/20/2020 3:06:00 PM
Surr: Phenol-d6	**52.0**	12.6-93.5		%REC	1	2/20/2020 3:06:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 2/19/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
2-Butanone-TCLP	**ND**	200		µg/L	20	2/20/2020 11:50:00 AM
Benzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Chlorobenzene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Chloroform-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Trichloroethene-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	2/20/2020 11:50:00 AM
Surr: 1,2-Dichloroethane-d4	**97.5**	84.3-123		%REC	20	2/20/2020 11:50:00 AM
Surr: 4-Bromofluorobenzene	**155**	80.6-121	S	%REC	20	2/20/2020 11:50:00 AM
Surr: Toluene-d8	**97.5**	83.6-113		%REC	20	2/20/2020 11:50:00 AM

Adirondack Environmental Services, Inc

Date: *20-Feb-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	PS
Work Order:	**200214034**	**Collection Date:**	2/14/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200214034-006
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**9.0**	1.0		pH Units@71F	1	2/19/2020 12:25:00 PM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**2.3**	0.1		wt%	1	2/19/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	2/19/2020 12:25:00 PM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	2/19/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	2/20/2020 3:56:51 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 2/19/2020)						Analyst: **NK**
Reactive Sulfide	**14**	10		µg/g	1	2/20/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	2/20/2020

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78105

mblk

SeqNo: **2791997** PrepDate:**2/14/2020** TestNo: **SW8082A** RunNo: **180069**
Samp ID: **mb-78105** PrepRef:**(SW3545A)** Units: **µg/Kg** Analysis Date: **2/14/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	33									
Aroclor 1221	ND	33									
Aroclor 1232	ND	33									
Aroclor 1242	ND	33									
Aroclor 1248	ND	33									
Aroclor 1254	ND	33									
Aroclor 1260	ND	33									
Aroclor 1262	ND	33									
Aroclor 1268	ND	33									
Surr: Decachlorobiphenyl	30	0	50	0	60	48.1	152	0	0		

lcs

SeqNo: **2791998** PrepDate:**2/14/2020** TestNo: **SW8082A** RunNo: **180069**
Samp ID: **lcs-78105** PrepRef:**(SW3545A)** Units: **µg/Kg** Analysis Date: **2/14/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	485	33	500	0	97	54.3	127	0	0		
Aroclor 1260	456	33	500	0	91.2	57.1	138	0	0		
Surr: Decachlorobiphenyl	38	0	50	0	76	48.1	152	0	0		

MS

SeqNo: **2794131** PrepDate:**2/14/2020** TestNo: **SW8082A** RunNo: **180202**
Samp ID: **200214034-005 (PN)** PrepRef:**(SW3545A)** Units: **µg/Kg-dry** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	579.2	33	506.3	118.5	91	56.2	136	0	0		
Aroclor 1260	501.3	33	506.3	0	99	55	122	0	0		
Surr: Decachlorobiphenyl	32.41	0	50.63	0	64	48.1	152	0	0		

MSD

SeqNo: **2794132** PrepDate:**2/14/2020** TestNo: **SW8082A** RunNo: **180202**
Samp ID: **200214034-005 (PN)** PrepRef:**(SW3545A)** Units: **µg/Kg-dry** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	433.4	33	506.3	118.5	62.2	56.2	136	579.2	28.8	37.6	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78105

MSD	SeqNo: **2794132**	**PrepDate:2/14/2020**	TestNo: **SW8082A**	RunNo: **180202**
	Samp ID: **200214034-005 (PN)**	**PrepRef:(SW3545A)**	Units: **µg/Kg-dry**	Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1260	349.4	33	506.3	0	69	55	122	501.3	35.7	29.6	Z
Surr: Decachlorobiphenyl	24.3	0	50.63	0	48	48.1	152	0	0	0	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78122

mblk

SeqNo: **2792454** PrepDate:**2/18/2020** TestNo: **SW1311/7470** RunNo: **180111**
Samp ID: **MB-78122** PrepRef:**(SW7470A)** Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury-TCLP	ND	0.00200									

lcs

SeqNo: **2792455** PrepDate:**2/18/2020** TestNo: **SW1311/7470** RunNo: **180111**
Samp ID: **LCS-78122** PrepRef:**(SW7470A)** Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury-TCLP	0.0106	0.00200	0.01	0	106	86.2	120	0	0		

ms

SeqNo: **2792464** PrepDate:**2/18/2020** TestNo: **SW1311/7470** RunNo: **180111**
Samp ID: **200214034-006 (PS)** PrepRef:**(SW7470A)** Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury-TCLP	0.01058	0.00200	0.01	0	106	80	119	0	0		

dup

SeqNo: **2792463** PrepDate:**2/18/2020** TestNo: **SW1311/7470** RunNo: **180111**
Samp ID: **200214034-006** PrepRef: Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury-TCLP	-0.0002655	0.00200	0	0	0	0	0	0	0	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78124

mblk	SeqNo: **2794213**	PrepDate:2/18/2020	TestNo: **SW1311/8260**	RunNo: **180205**
	Samp ID: **mb-78124**	PrepRef:(SW1311)	Units: **µg/L**	Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene-TCLP	ND	100									
1,2-Dichloroethane-TCLP	ND	100									
1,4-Dichlorobenzene-TCLP	ND	100									
2-Butanone-TCLP	ND	200									
Benzene-TCLP	ND	100									
Carbon tetrachloride-TCLP	ND	100									
Chlorobenzene-TCLP	ND	100									
Chloroform-TCLP	ND	100									
Tetrachloroethene-TCLP	ND	100									
Trichloroethene-TCLP	ND	100									
Vinyl chloride-TCLP	ND	100									
Surr: 1,2-Dichloroethane-d4	1061	0	1000	0	106	84.3	123	0	0		
Surr: 4-Bromofluorobenzene	859	0	1000	0	85.9	80.6	121	0	0		
Surr: Toluene-d8	1249	0	1000	0	125	83.6	113	0	0		S

mblk	SeqNo: **2794565**	PrepDate:2/18/2020	TestNo: **SW1311/8260**	RunNo: **180228**
	Samp ID: **mb-78124**	PrepRef:(SW1311)	Units: **µg/L**	Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene-TCLP	ND	100									
1,2-Dichloroethane-TCLP	ND	100									
1,4-Dichlorobenzene-TCLP	ND	100									
2-Butanone-TCLP	ND	200									
Benzene-TCLP	ND	100									
Carbon tetrachloride-TCLP	ND	100									
Chlorobenzene-TCLP	ND	100									
Chloroform-TCLP	ND	100									
Tetrachloroethene-TCLP	ND	100									
Trichloroethene-TCLP	ND	100									
Vinyl chloride-TCLP	ND	100									
Surr: 1,2-Dichloroethane-d4	981.2	0	1000	0	98.1	84.3	123	0	0		
Surr: 4-Bromofluorobenzene	1249	0	1000	0	125	80.6	121	0	0		S
Surr: Toluene-d8	950.6	0	1000	0	95.1	83.6	113	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78152

mblk

SeqNo: **2792930** PrepDate:2/18/2020 TestNo: **SW1311/8321** RunNo: **180141**
Samp ID: **mb-78152** PrepRef:(SW3535A) Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-TP (Silvex)-TCLP	ND	0.10									
2,4-D-TCLP	ND	0.10									
Surr: Acifluorfen	0.5936	0.10	0.5	0	119	52.5	128	0	0		
Surr: DCAA	0.5974	0	0.5	0	119	56.2	139	0	0		

lcs

SeqNo: **2792931** PrepDate:2/18/2020 TestNo: **SW1311/8321** RunNo: **180141**
Samp ID: **lcs-78152** PrepRef:(SW3535A) Units: **mg/L** Analysis Date: **2/18/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-TP (Silvex)-TCLP	0.05877	0.10	0.05	0	118	57.6	128	0	0		J
2,4-D-TCLP	0.06454	0.10	0.05	0	129	52	138	0	0		J
Surr: Acifluorfen	0.6004	0.10	0.5	0	120	52.5	128	0	0		
Surr: DCAA	0.6256	0	0.5	0	125	56.2	139	0	0		

ms

SeqNo: **2794116** PrepDate:2/18/2020 TestNo: **SW1311/8321** RunNo: **180201**
Samp ID: **200214034-002a (TNE)** PrepRef:(SW3535A) Units: **mg/L** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-TP (Silvex)-TCLP	0.04089	0.10	0.05	0	81.8	53.1	121	0	0		J
2,4-D-TCLP	0.05308	0.10	0.05	0	106	57.3	136	0	0		J
Surr: Acifluorfen	0.5657	0.10	0.5	0	113	52.5	128	0	0		
Surr: DCAA	0.6045	0	0.5	0	121	56.2	139	0	0		

msd

SeqNo: **2794117** PrepDate:2/18/2020 TestNo: **SW1311/8321** RunNo: **180201**
Samp ID: **200214034-002a (TNE)** PrepRef:(SW3535A) Units: **mg/L** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-TP (Silvex)-TCLP	0.0508	0.10	0.05	0	102	53.1	121	0.04089	0	20.8	J
2,4-D-TCLP	0.05512	0.10	0.05	0	110	57.3	136	0.05308	0	20	J
Surr: Acifluorfen	0.5717	0.10	0.5	0	114	52.5	128	0	0	0	
Surr: DCAA	0.6107	0	0.5	0	122	56.2	139	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78156

mblk

SeqNo: **2794876** PrepDate:**2/19/2020** TestNo: **SW7.3.3.2** RunNo: **180248**
Samp ID: **MB-78156** PrepRef:**(E335.4)** Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	ND	1.00									

lcs

SeqNo: **2794877** PrepDate: TestNo: **SW7.3.3.2** RunNo: **180248**
Samp ID: **LCS-78156** PrepRef:**(E335.4)** Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	0.8644	1.00	1	0	86.4	66.5	126	0	0		J

dup

SeqNo: **2794887** PrepDate:**2/19/2020** TestNo: **SW7.3.3.2** RunNo: **180248**
Samp ID: **200218005-001** PrepRef: Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Cyanide	0.003961	1.00	0	0	0	0	0	0	0	20	

DUP

SeqNo: **2794772** PrepDate:**2/19/2020** TestNo: **SW7.3.4.2** RunNo: **180241**
Samp ID: **200218005-001a** PrepRef: Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	20	10.0	0	0	0	0	0	14	35.3	18.9	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78179

mblk	SeqNo: **2794616**	PrepDate:2/19/2020	TestNo: **SW1311/8270**	RunNo: **180235**
	Samp ID: **mb-78179**	PrepRef:(SW3535A)	Units: **µg/L**	Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol-TCLP	ND	50									
2,4,6-Trichlorophenol-TCLP	ND	50									
2,4-Dinitrotoluene-TCLP	ND	50									
Hexachlorobenzene-TCLP	ND	50									
Hexachlorobutadiene-TCLP	ND	50									
Hexachloroethane-TCLP	ND	50									
Nitrobenzene-TCLP	ND	50									
Pentachlorophenol-TCLP	ND	250									
Pyridine-TCLP	ND	100									
Cresols, Total-TCLP	ND	200									
Surr: 2,4,6-Tribromophenol	342.6	50	500	0	68.5	43.7	123	0	0		
Surr: 2-Fluorobiphenyl	115.1	50	250	0	46	48.7	108	0	0		S
Surr: 2-Fluorophenol	275.2	50	500	0	55	23.5	101	0	0		
Surr: 4-Terphenyl-d14	134.6	0	250	0	53.8	50.6	121	0	0		
Surr: Nitrobenzene-d5	129.5	0	250	0	51.8	43.7	109	0	0		
Surr: Phenol-d6	306.2	0	500	0	61.2	12.6	93.5	0	0		

mblk	SeqNo: **2794657**	PrepDate:2/19/2020	TestNo: **SW1311/8270**	RunNo: **180237**
	Samp ID: **mb-78179**	PrepRef:(SW3535A)	Units: **µg/L**	Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol-TCLP	ND	50									
2,4,6-Trichlorophenol-TCLP	ND	50									
2,4-Dinitrotoluene-TCLP	ND	50									
Hexachlorobenzene-TCLP	ND	50									
Hexachlorobutadiene-TCLP	ND	50									
Hexachloroethane-TCLP	ND	50									
Nitrobenzene-TCLP	ND	50									
Pentachlorophenol-TCLP	ND	250									
Pyridine-TCLP	ND	100									
Cresols, Total-TCLP	ND	200									
Surr: 2,4,6-Tribromophenol	253.3	50	500	0	50.7	43.7	123	0	0		
Surr: 2-Fluorobiphenyl	117.8	50	250	0	47.1	48.7	108	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78179

mblk

SeqNo: **2794657** PrepDate:2/19/2020 TestNo: **SW1311/8270** RunNo: **180237**
Samp ID: **mb-78179** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2-Fluorophenol	207.8	50	500	0	41.6	23.5	101	0	0		
Surr: 4-Terphenyl-d14	114.8	0	250	0	45.9	50.6	121	0	0		S
Surr: Nitrobenzene-d5	109.6	0	250	0	43.9	43.7	109	0	0		
Surr: Phenol-d6	187.8	0	500	0	37.6	12.6	93.5	0	0		

lcs

SeqNo: **2794617** PrepDate:2/19/2020 TestNo: **SW1311/8270** RunNo: **180235**
Samp ID: **lcs-78179** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol-TCLP	288.8	50	500	0	57.8	50.6	117	0	0		
2,4,6-Trichlorophenol-TCLP	305.8	50	500	0	61.2	53	121	0	0		
2,4-Dinitrotoluene-TCLP	253.8	50	500	0	50.8	50.1	121	0	0		
Hexachlorobenzene-TCLP	358.1	50	500	0	71.6	54.2	125	0	0		
Hexachlorobutadiene-TCLP	315.9	50	500	0	63.2	34.3	96	0	0		
Hexachloroethane-TCLP	334.9	50	500	0	67	33	97	0	0		
Nitrobenzene-TCLP	379.2	50	500	0	75.8	49	115	0	0		
Pentachlorophenol-TCLP	312	250	500	0	62.4	43.3	132	0	0		
Pyridine-TCLP	201.4	100	500	0	40.3	16.3	84	0	0		
Cresols, Total-TCLP	958.1	200	1500	0	63.9	44	121	0	0		
Surr: 2,4,6-Tribromophenol	327	50	500	0	65.4	43.7	123	0	0		
Surr: 2-Fluorobiphenyl	107.9	50	250	0	43.2	48.7	108	0	0		S
Surr: 2-Fluorophenol	210.6	50	500	0	42.1	23.5	101	0	0		
Surr: 4-Terphenyl-d14	128.8	0	250	0	51.5	50.6	121	0	0		
Surr: Nitrobenzene-d5	151.2	0	250	0	60.5	43.7	109	0	0		
Surr: Phenol-d6	256.1	0	500	0	51.2	12.6	93.5	0	0		

lcs

SeqNo: **2794658** PrepDate:2/19/2020 TestNo: **SW1311/8270** RunNo: **180237**
Samp ID: **lcs-78179** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol-TCLP	301.2	50	500	0	60.2	50.6	117	0	0		
2,4,6-Trichlorophenol-TCLP	283.5	50	500	0	56.7	53	121	0	0		
2,4-Dinitrotoluene-TCLP	246.3	50	500	0	49.3	50.1	121	0	0		S

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: 78179

lcs	SeqNo: **2794658**	**PrepDate:2/19/2020**	TestNo: **SW1311/8270**	RunNo: **180237**
	Samp ID: **lcs-78179**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorobenzene-TCLP	302.6	50	500	0	60.5	54.2	125	0	0		
Hexachlorobutadiene-TCLP	260.2	50	500	0	52	34.3	96	0	0		
Hexachloroethane-TCLP	242	50	500	0	48.4	33	97	0	0		
Nitrobenzene-TCLP	281	50	500	0	56.2	49	115	0	0		
Pentachlorophenol-TCLP	334.1	250	500	0	66.8	43.3	132	0	0		
Pyridine-TCLP	220.1	100	500	0	44	16.3	84	0	0		
Cresols, Total-TCLP	868	200	1500	0	57.9	44	121	0	0		
Surr: 2,4,6-Tribromophenol	287.1	50	500	0	57.4	43.7	123	0	0		
Surr: 2-Fluorobiphenyl	109.6	50	250	0	43.8	48.7	108	0	0		S
Surr: 2-Fluorophenol	192.6	50	500	0	38.5	23.5	101	0	0		
Surr: 4-Terphenyl-d14	121.4	0	250	0	48.6	50.6	121	0	0		S
Surr: Nitrobenzene-d5	102.4	0	250	0	41	43.7	109	0	0		S
Surr: Phenol-d6	174.7	0	500	0	34.9	12.6	93.5	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: R180173

LCS SeqNo: **2793576** TestNo: **SW9040B** RunNo: **180173**
Samp ID: **LCS-R180173** Units: Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Corrosivity	6.8	1.00	6.82	0	99.7	97.1	104	0	0		

LCS SeqNo: **2793583** TestNo: **SW9040B** RunNo: **180173**
Samp ID: **PH BUFFER 2** Units: Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Corrosivity	2.15	1.00	2	0	108	97.1	104	0	0		S

LCS SeqNo: **2793584** TestNo: **SW9040B** RunNo: **180173**
Samp ID: **PH BUFFER 12** Units: Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Corrosivity	12.25	1.00	12	0	102	97.1	104	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: R180174

LCS

SeqNo: **2793585** TestNo: **SW9045D** RunNo: **180174**
Samp ID: **LCS-R180174** Units: **pH Units@69F** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	6.8	1.00	6.82	0	99.7	95.8	104	0	0		

DUP

SeqNo: **2793595** TestNo: **SW9045D** RunNo: **180174**
Samp ID: **200218050-007** Units: **pH Units@70F** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	8.14	1.00	0	0	0	0	0	8.18	0.490	3.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: R180195

DUP

SeqNo: **2793960** TestNo: **D2216** RunNo: **180195**
Samp ID: **200218047-001** Units: **wt%** Analysis Date: **2/19/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	20.74	0.100	0	0	0	0	0	18.82	9.69	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 200214034
Project: BASF-Hudson River

ANALYTICAL QC SUMMARY REPORT

BatchID: R180241

MBLK

SeqNo: **2794777** TestNo: **SW7.3.4.2** RunNo: **180241**
Samp ID: **MB-R180241** Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	ND	10.0									

LCS

SeqNo: **2794778** TestNo: **SW7.3.4.2** RunNo: **180241**
Samp ID: **LCS-R180241** Units: **µg/g** Analysis Date: **2/20/2020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Reactive Sulfide	140	10.0	140	0	100	61	142	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, NY 12207
518-434-4546 / FAX: 518-434-0891

EXPERIENCE IS THE SOLUTION

CHAIN OF CUSTODY RECORD

AES Work Order#: 200214034

COC Reference:

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: BASF

Address: 36 Riverside Ave

Send Report to: John Bleiler

Project Name (Location): Rensselaer

Samplers Name: Tom Quackenbush

Client Phone #: 978 621 7086

Client PO #: 115954

Samplers Signature: Thomas Quackenbush

Client Email: John.bleiler@arcadis.com

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Preservative	Analysis
001	TNW	2/14/20	1000	AP	Asphalt		X	2		Ignitability, Reactivity, Corrosivity, Soil/Solid PCB in Soil, Soil/Solid TCLP metals, Soil/Solid TCLP Pest/Herb, Soil/Solid TCLP SVOC, Soil/Solid TCLP VOA
002	TNE	2/14/20	1000	AP	Asphalt		X	2		
003	TSW	2/14/20	1000	AP	Asphalt		X	2		
004	TSE	2/14/20	1000	AP	Asphalt		X	2		"
005	PN	2/14/20	1000	AP	Asphalt		X	2		"
006	PS	2/14/20	1000	AP	Asphalt		X	2		"
				AP						
				AP						
				AP						
				AP						
				AP						
				AP						
				AP						
				AP						
				AP						
				AP						

Shipment Arrived Via:
FedEx UPS Client (AES) Other:

Turnaround Time Requested:
1 Day 2 Day (3 Day) 5 Day Standard
NOTE: Samples received after 3:30pm are considered next business day.

Special Instructions/Remarks:
Waste Characterization analysis for all Samples Please

		Date	Time
Relinquished by: (Signature) Thomas Quackenbush	Received by: (Signature)	2/14/2020	1200
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by:	2/14/20	12:10pm

Sample Temperature
Ambient ~ (Chilled) ~ Chilling Begun
Notes: 5°C

Properly Preserved: (Y) / N

0=None
1=H_2SO_4 pH<2
2=HNO_3 pH<2
3=HCl pH<2
4=$Na_2S_2O_3$
5=NH_4Cl
6=Ascorbic Acid
7=FAS
8=ZnAc/NaOH pH>9
9=NaOH pH>10
10=Other__

Received Within Holding Times: (Y) / N
Notes:

Custody Seal Intact: Y / N

Bottles AES: (Y) / N

Demo
200214034

Adirondack Environmental Services, Inc

200214034

REPORTING INFORMATION: John Bleiler

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

200214034

Project BASF-Hudson River
ProjLocation: Rensselaer NY

TAT: **3**

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

DateDue: 2/20/2020

QClevel: STD

☐ Hard Copy

2/14/2020

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT
☑ **EDD** Portal Completed by_____

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**CORROSIVIT**	**E8082S**	**E8321T**	**IGNITABILITY**	**PH_SOIL**	**PMOIST**	**ACTIVE CYAN**
200214034-001	TNW	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-002	TNE	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-003	TSW	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-004	TSE	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-005	PN	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-006	PS	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____ 12/14/2020

Adirondack Environmental Services, Inc

200214034

REPORTING INFORMATION: John Bleiler

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

200214034

Project BASF-Hudson River
ProjLocation: Rensselaer NY

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

QClevel: STD

☐ Hard Copy

TAT: **3**

DateDue: 2/20/2020

2/14/2020

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**ACTIVE SULF**	**REACTIVITY**	**TCLP-Hg**	**TCLP-ICP(7)**	**TCLP-Pest**	**TCLP-SVOL**	**TCLP-VOL**
200214034-001	TNW	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-002	TNE	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-003	TSW	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-004	TSE	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-005	PN	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A
200214034-006	PS	Solid	2/14/2020	2/20/2020	A	A	A	A	A	A	A

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Client ID		P-1			P-2			P-3			P-4			T-1			T-10	
Lab Sample ID		L1931014-01			L1931014-02			L1931014-03			L1931014-04			L1931014-05			L1932153-0	
Sampling Date		7/15/2019			7/15/2019			7/15/2019			7/15/2019			7/15/2019			7/19/2019	
Matrix		SK			SK			SK			SK			SK			SK	
Analyte	Units	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q
SW8082A																		
AROCLOR-1016	ug/kg	< 33.0	U	2.94	< 33.2	U	2.94	< 31.7	U	2.82	< 33.1	U	2.94	< 33.0 < 33.0	U U	2.93 2.93	< 88.8	U
AROCLOR-1221	ug/kg	< 33.0	U	3.31	< 33.2	U	3.32	< 31.7	U	3.18	< 33.1	U	3.31	< 33.0 < 33.0	U U	3.31 3.31	< 88.8	U
AROCLOR-1232	ug/kg	< 33.0	U	7.01	< 33.2	U	7.03	< 31.7	U	6.72	< 33.1	U	7.01	< 33.0 < 33.0	U U	7.00 7.00	< 88.8	U
AROCLOR-1242	ug/kg	134		4.46	78.0		4.47	175		4.28	279		4.46	258 360	P P	4.45 4.45	240	
AROCLOR-1248	ug/kg	< 33.0	U	4.96	< 33.2	U	4.98	< 31.7	U	4.76	< 33.1	U	4.96	< 33.0 < 33.0	U U	4.96 4.96	< 88.8	U
AROCLOR-1254	ug/kg	< 33.0	U	3.62	< 33.2	U	3.63	< 31.7	U	3.47	< 33.1	U	3.62	< 33.0 < 33.0	U U	3.61 3.61	< 88.8	U
AROCLOR-1260	ug/kg	< 33.0	U	6.11	< 33.2	U	6.13	< 31.7	U	5.86	< 33.1	U	6.11	< 33.0 < 33.0	U U	6.10 6.10	< 88.8	U
AROCLOR-1262	ug/kg	< 33.0	U	4.20	< 33.2	U	4.21	< 31.7	U	4.03	< 33.1	U	4.20	< 33.0 < 33.0	U U	4.20 4.20	< 88.8	U
AROCLOR-1268	ug/kg	< 33.0	U	3.42	< 33.2	U	3.44	< 31.7	U	3.29	< 33.1	U	3.43	< 33.0 < 33.0	U U	3.42 3.42	< 88.8	U
Total PCBs	ug/kg	134		2.94	78.0		2.94	175		2.82	279		2.94	258 360		2.93 2.93	240	

Client ID			T-11			T-12			T-13			T-14			T-15			
Lab Sample ID	2		L1932625-01			L1932625-02			L1933225-01			L1933225-02			L1934814-01			L
Sampling Date			7/23/2019			7/23/2019			7/26/2019			7/26/2019			8/5/2019			
Matrix			SK			SK			SK			SK			SK			
Analyte	Units	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result
SW8082A																		
AROCLOR-1016	ug/kg	7.88	< 98.3	U	8.73	< 97.6	U	8.66	< 95.1	U	8.45	< 89.9	U	7.99	< 91.7	U	8.14	< 124
AROCLOR-1221	ug/kg	8.90	< 98.3	U	9.85	< 97.6	U	9.78	< 95.1	U	9.53	< 89.9	U	9.01	< 91.7	U	9.19	< 124
AROCLOR-1232	ug/kg	18.8	< 98.3	U	20.8	< 97.6	U	20.7	< 95.1	U	20.2	< 89.9	U	19.1	< 91.7	U	19.4	< 124
AROCLOR-1242	ug/kg	12.0	885	P	13.2	596		13.2	881		12.8	748		12.1	915		12.4	809
AROCLOR-1248	ug/kg	13.3	< 98.3	U	14.7	< 97.6	U	14.6	< 95.1	U	14.3	< 89.9	U	13.5	< 91.7	U	13.8	< 124
AROCLOR-1254	ug/kg	9.71	< 98.3	U	10.8	< 97.6	U	10.7	< 95.1	U	10.4	< 89.9	U	9.84	< 91.7	U	10.0	< 124
AROCLOR-1260	ug/kg	16.4	< 98.3	U	18.2	< 97.6	U	18.0	< 95.1	U	17.6	< 89.9	U	16.6	< 91.7	U	16.9	< 124
AROCLOR-1262	ug/kg	11.3	< 98.3	U	12.5	< 97.6	U	12.4	< 95.1	U	12.1	< 89.9	U	11.4	< 91.7	U	11.6	< 124
AROCLOR-1268	ug/kg	9.20	< 98.3	U	10.2	< 97.6	U	10.1	< 95.1	U	9.85	< 89.9	U	9.32	< 91.7	U	9.50	< 124
Total PCBs	ug/kg	7.88	885		8.73	596		8.66	881		8.45	748		7.99	915		8.14	809

Client ID		T-16		T-2			T-3			T-4			T-5			T-6		
Lab Sample ID		1933718-01		L1931014-06			L1931014-07			L1931014-08			L1931014-09			L1931014-10		
Sampling Date		7/30/2019		7/15/2019			7/15/2019			7/15/2019			7/15/2019			7/15/2019		
Matrix		SK		SK			SK			SK			SK			SK		
Analyte	Units	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
SW8082A																		
AROCLOR-1016	ug/kg	U	11.0	< 64.4	U	5.72	< 33.3	U	2.96	< 166	U	14.7	< 165	U	14.6	< 157	U	13.9
AROCLOR-1221	ug/kg	U	12.5	< 64.4	U	6.45	< 33.3	U	3.34	< 166	U	16.6	< 165	U	16.5	< 157	U	15.7
AROCLOR-1232	ug/kg	U	26.4	< 64.4	U	13.6	< 33.3	U	7.06	< 166	U	35.1	< 165	U	34.9	< 157	U	33.3
AROCLOR-1242	ug/kg	P	16.8	287		8.68	321	P	4.49	725		22.3	105	J	22.2	232		21.2
AROCLOR-1248	ug/kg	U	18.7	< 64.4	U	9.66	< 33.3	U	5.00	< 166	U	24.8	< 165	U	24.7	< 157	U	23.6
AROCLOR-1254	ug/kg	U	13.6	< 64.4	U	7.04	< 33.3	U	3.64	< 166	U	18.1	< 165	U	18.0	< 157	U	17.2
AROCLOR-1260	ug/kg	U	23.0	< 64.4	U	11.9	< 33.3	U	6.15	< 166	U	30.6	< 165	U	30.5	< 157	U	29.0
AROCLOR-1262	ug/kg	U	15.8	< 64.4	U	8.18	< 33.3	U	4.23	< 166	U	21.0	< 165	U	20.9	< 157	U	19.9
AROCLOR-1268	ug/kg	U	12.9	< 64.4	U	6.67	< 33.3	U	3.45	< 166	U	17.2	< 165	U	17.1	< 157	U	16.3
Total PCBs	ug/kg		11.0	287		5.72	321		2.96	725		14.7	105	J	14.6	232		13.9

Client ID		T-7			T-8			T-9		
Lab Sample ID		L1931014-11			L1931014-12			L1932153-01		
Sampling Date		7/15/2019			7/15/2019			7/19/2019		
Matrix		SK			SK			SK		
Analyte	Units	Result	Q	MDL	Result	Q	MDL	Result	Q	MDL
SW8082A										
AROCLOR-1016	ug/kg	< 163	U	14.5	< 161	U	14.3	< 87.4	U	7.76
AROCLOR-1221	ug/kg	< 163	U	16.4	< 161	U	16.1	< 87.4	U	8.76
AROCLOR-1232	ug/kg	< 163	U	34.6	< 161	U	34.1	< 87.4	U	18.5
AROCLOR-1242	ug/kg	116	J	22.0	270		21.7	385		11.8
AROCLOR-1248	ug/kg	< 163	U	24.5	< 161	U	24.1	< 87.4	U	13.1
AROCLOR-1254	ug/kg	< 163	U	17.9	< 161	U	17.6	< 87.4	U	9.56
AROCLOR-1260	ug/kg	< 163	U	30.2	< 161	U	29.8	< 87.4	U	16.2
AROCLOR-1262	ug/kg	< 163	U	20.7	< 161	U	20.4	< 87.4	U	11.1
AROCLOR-1268	ug/kg	< 163	U	16.9	< 161	U	16.7	< 87.4	U	9.05
Total PCBs	ug/kg	116	J	14.5	270		14.3	385		7.76

ANALYTICAL REPORT

Lab Number:	L1931014
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	BASF
Report Date:	07/17/19

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1931014-01	P-1	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 10:40	07/15/19
L1931014-02	P-2	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 10:48	07/15/19
L1931014-03	P-3	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 10:55	07/15/19
L1931014-04	P-4	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 11:05	07/15/19
L1931014-05	T-1	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 11:30	07/15/19
L1931014-06	T-2	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 11:35	07/15/19
L1931014-07	T-3	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 11:40	07/15/19
L1931014-08	T-4	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 11:50	07/15/19
L1931014-09	T-5	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 14:03	07/15/19
L1931014-10	T-6	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 13:58	07/15/19
L1931014-11	T-7	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 14:08	07/15/19
L1931014-12	T-8	SOIL	36 RIVERSIDE AVE., RENSSALAER, NY	07/15/19 14:17	07/15/19

Project Name:	BASF	**Lab Number:**	L1931014
Project Number:	BASF	**Report Date:**	07/17/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF **Lab Number:** L1931014
Project Number: BASF **Report Date:** 07/17/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1931014-05, -05RE and -07: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

L1931014-05: The surrogate recoveries were outside the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene (21%) and decachlorobiphenyl (23%,13%); however, re-extraction achieved similar results: 2,4,5,6-Tetrachloro-m-xylene (19%) and decachlorobiphenyl (27%,16%). The results of both extractions are reported.

L1931014-05RE: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious interferences.

L1931014-06: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1931014-07: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious interferences.

L1931014-07: The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (29%) and decachlorobiphenyl (22%) due to interference with the Internal Standard.

L1931014-08: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the target compounds present in the sample.

L1931014-09: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (22%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

L1931014-09, -10, -11 and -12: The sample has elevated detection limits due to the dilution required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 07/17/19

ORGANICS

PCBS

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-01
Client ID: P-1
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 10:40
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 13:51
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.0	2.94	1	A
Aroclor 1221	ND		ug/kg	33.0	3.31	1	A
Aroclor 1232	ND		ug/kg	33.0	7.01	1	A
Aroclor 1242	134		ug/kg	33.0	4.46	1	B
Aroclor 1248	ND		ug/kg	33.0	4.96	1	A
Aroclor 1254	ND		ug/kg	33.0	3.62	1	A
Aroclor 1260	ND		ug/kg	33.0	6.11	1	A
Aroclor 1262	ND		ug/kg	33.0	4.20	1	A
Aroclor 1268	ND		ug/kg	33.0	3.42	1	A
PCBs, Total	134		ug/kg	33.0	2.94	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	43		30-150	A
Decachlorobiphenyl	38		30-150	A
2,4,5,6-Tetrachloro-m-xylene	38		30-150	B
Decachlorobiphenyl	43		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-02
Client ID: P-2
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 10:48
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 14:03
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.2	2.94	1	A
Aroclor 1221	ND		ug/kg	33.2	3.32	1	A
Aroclor 1232	ND		ug/kg	33.2	7.03	1	A
Aroclor 1242	78.0		ug/kg	33.2	4.47	1	B
Aroclor 1248	ND		ug/kg	33.2	4.98	1	A
Aroclor 1254	ND		ug/kg	33.2	3.63	1	A
Aroclor 1260	ND		ug/kg	33.2	6.13	1	A
Aroclor 1262	ND		ug/kg	33.2	4.21	1	A
Aroclor 1268	ND		ug/kg	33.2	3.44	1	A
PCBs, Total	78.0		ug/kg	33.2	2.94	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	46		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-03
Client ID: P-3
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 10:55
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 14:15
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	31.7	2.82	1	A
Aroclor 1221	ND		ug/kg	31.7	3.18	1	A
Aroclor 1232	ND		ug/kg	31.7	6.72	1	A
Aroclor 1242	175		ug/kg	31.7	4.28	1	A
Aroclor 1248	ND		ug/kg	31.7	4.76	1	A
Aroclor 1254	ND		ug/kg	31.7	3.47	1	A
Aroclor 1260	ND		ug/kg	31.7	5.86	1	A
Aroclor 1262	ND		ug/kg	31.7	4.03	1	A
Aroclor 1268	ND		ug/kg	31.7	3.29	1	A
PCBs, Total	175		ug/kg	31.7	2.82	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	31		30-150	A
2,4,5,6-Tetrachloro-m-xylene	43		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-04
Client ID: P-4
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:05
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 14:28
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.1	2.94	1	A
Aroclor 1221	ND		ug/kg	33.1	3.31	1	A
Aroclor 1232	ND		ug/kg	33.1	7.01	1	A
Aroclor 1242	279		ug/kg	33.1	4.46	1	A
Aroclor 1248	ND		ug/kg	33.1	4.96	1	A
Aroclor 1254	ND		ug/kg	33.1	3.62	1	A
Aroclor 1260	ND		ug/kg	33.1	6.11	1	A
Aroclor 1262	ND		ug/kg	33.1	4.20	1	A
Aroclor 1268	ND		ug/kg	33.1	3.43	1	A
PCBs, Total	279		ug/kg	33.1	2.94	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	A
Decachlorobiphenyl	38		30-150	A
2,4,5,6-Tetrachloro-m-xylene	43		30-150	B
Decachlorobiphenyl	44		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-05
Client ID: T-1
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:30
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/16/19 18:48
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 02:38
Cleanup Method: EPA 3665A
Cleanup Date: 07/16/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/16/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.0	2.93	1	A
Aroclor 1221	ND		ug/kg	33.0	3.31	1	A
Aroclor 1232	ND		ug/kg	33.0	7.00	1	A
Aroclor 1242	258	P	ug/kg	33.0	4.45	1	A
Aroclor 1248	ND		ug/kg	33.0	4.96	1	A
Aroclor 1254	ND		ug/kg	33.0	3.61	1	A
Aroclor 1260	ND		ug/kg	33.0	6.10	1	A
Aroclor 1262	ND		ug/kg	33.0	4.20	1	A
Aroclor 1268	ND		ug/kg	33.0	3.42	1	A
PCBs, Total	258		ug/kg	33.0	2.93	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	**23**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**21**	Q	30-150	B
Decachlorobiphenyl	**13**	Q	30-150	B

Project Name: BASF **Lab Number:** L1931014

Project Number: BASF **Report Date:** 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-05 RE
Client ID: T-1
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:30
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 14:41
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.0	2.93	1	A
Aroclor 1221	ND		ug/kg	33.0	3.31	1	A
Aroclor 1232	ND		ug/kg	33.0	7.00	1	A
Aroclor 1242	360	P	ug/kg	33.0	4.45	1	A
Aroclor 1248	ND		ug/kg	33.0	4.96	1	A
Aroclor 1254	ND		ug/kg	33.0	3.61	1	A
Aroclor 1260	ND		ug/kg	33.0	6.10	1	A
Aroclor 1262	ND		ug/kg	33.0	4.20	1	A
Aroclor 1268	ND		ug/kg	33.0	3.42	1	A
PCBs, Total	360		ug/kg	33.0	2.93	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		30-150	A
Decachlorobiphenyl	**27**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**19**	Q	30-150	B
Decachlorobiphenyl	**16**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-06 D
Client ID: T-2
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:35
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 16:26
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	64.4	5.72	2	A
Aroclor 1221	ND		ug/kg	64.4	6.45	2	A
Aroclor 1232	ND		ug/kg	64.4	13.6	2	A
Aroclor 1242	287		ug/kg	64.4	8.68	2	A
Aroclor 1248	ND		ug/kg	64.4	9.66	2	A
Aroclor 1254	ND		ug/kg	64.4	7.04	2	A
Aroclor 1260	ND		ug/kg	64.4	11.9	2	A
Aroclor 1262	ND		ug/kg	64.4	8.18	2	A
Aroclor 1268	ND		ug/kg	64.4	6.67	2	A
PCBs, Total	287		ug/kg	64.4	5.72	2	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	44		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	37		30-150	B
Decachlorobiphenyl	32		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-07
Client ID: T-3
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:40
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 15:05
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.3	2.96	1	A
Aroclor 1221	ND		ug/kg	33.3	3.34	1	A
Aroclor 1232	ND		ug/kg	33.3	7.06	1	A
Aroclor 1242	321	P	ug/kg	33.3	4.49	1	A
Aroclor 1248	ND		ug/kg	33.3	5.00	1	A
Aroclor 1254	ND		ug/kg	33.3	3.64	1	A
Aroclor 1260	ND		ug/kg	33.3	6.15	1	A
Aroclor 1262	ND		ug/kg	33.3	4.23	1	A
Aroclor 1268	ND		ug/kg	33.3	3.45	1	A
PCBs, Total	321		ug/kg	33.3	2.96	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	30		30-150	A
2,4,5,6-Tetrachloro-m-xylene	**29**	Q	30-150	B
Decachlorobiphenyl	**22**	Q	30-150	B

Project Name: BASF **Lab Number:** L1931014

Project Number: BASF **Report Date:** 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-08 D
Client ID: T-4
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:50
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/16/19 17:04
Analyst: JM
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 02:38
Cleanup Method: EPA 3665A
Cleanup Date: 07/16/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/16/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	166	14.7	5	A
Aroclor 1221	ND		ug/kg	166	16.6	5	A
Aroclor 1232	ND		ug/kg	166	35.1	5	A
Aroclor 1242	725		ug/kg	166	22.3	5	B
Aroclor 1248	ND		ug/kg	166	24.8	5	A
Aroclor 1254	ND		ug/kg	166	18.1	5	A
Aroclor 1260	ND		ug/kg	166	30.6	5	A
Aroclor 1262	ND		ug/kg	166	21.0	5	A
Aroclor 1268	ND		ug/kg	166	17.2	5	A
PCBs, Total	725		ug/kg	166	14.7	5	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	120		30-150	A
Decachlorobiphenyl	30		30-150	A
2,4,5,6-Tetrachloro-m-xylene	42		30-150	B
Decachlorobiphenyl	39		30-150	B

Project Name: BASF **Lab Number:** L1931014

Project Number: BASF **Report Date:** 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-09 D
Client ID: T-5
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:03
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 16:44
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	165	14.6	5	A
Aroclor 1221	ND		ug/kg	165	16.5	5	A
Aroclor 1232	ND		ug/kg	165	34.9	5	A
Aroclor 1242	105	J	ug/kg	165	22.2	5	A
Aroclor 1248	ND		ug/kg	165	24.7	5	A
Aroclor 1254	ND		ug/kg	165	18.0	5	A
Aroclor 1260	ND		ug/kg	165	30.5	5	A
Aroclor 1262	ND		ug/kg	165	20.9	5	A
Aroclor 1268	ND		ug/kg	165	17.1	5	A
PCBs, Total	105	J	ug/kg	165	14.6	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	40		30-150	A
Decachlorobiphenyl	**22**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	40		30-150	B
Decachlorobiphenyl	36		30-150	B

Project Name: BASF **Lab Number:** L1931014

Project Number: BASF **Report Date:** 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-10 D
Client ID: T-6
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 13:58
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 16:57
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	157	13.9	5	A
Aroclor 1221	ND		ug/kg	157	15.7	5	A
Aroclor 1232	ND		ug/kg	157	33.3	5	A
Aroclor 1242	232		ug/kg	157	21.2	5	B
Aroclor 1248	ND		ug/kg	157	23.6	5	A
Aroclor 1254	ND		ug/kg	157	17.2	5	A
Aroclor 1260	ND		ug/kg	157	29.0	5	A
Aroclor 1262	ND		ug/kg	157	19.9	5	A
Aroclor 1268	ND		ug/kg	157	16.3	5	A
PCBs, Total	232		ug/kg	157	13.9	5	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	46		30-150	A
Decachlorobiphenyl	42		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	35		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-11 D
Client ID: T-7
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:08
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 17:09
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	163	14.5	5	A
Aroclor 1221	ND		ug/kg	163	16.4	5	A
Aroclor 1232	ND		ug/kg	163	34.6	5	A
Aroclor 1242	116	J	ug/kg	163	22.0	5	B
Aroclor 1248	ND		ug/kg	163	24.5	5	A
Aroclor 1254	ND		ug/kg	163	17.9	5	A
Aroclor 1260	ND		ug/kg	163	30.2	5	A
Aroclor 1262	ND		ug/kg	163	20.7	5	A
Aroclor 1268	ND		ug/kg	163	16.9	5	A
PCBs, Total	116	J	ug/kg	163	14.5	5	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	A
Decachlorobiphenyl	32		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	34		30-150	B

Project Name: BASF **Lab Number:** L1931014

Project Number: BASF **Report Date:** 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-12 D
Client ID: T-8
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:17
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/17/19 17:21
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	161	14.3	5	A
Aroclor 1221	ND		ug/kg	161	16.1	5	A
Aroclor 1232	ND		ug/kg	161	34.1	5	A
Aroclor 1242	270		ug/kg	161	21.7	5	B
Aroclor 1248	ND		ug/kg	161	24.1	5	A
Aroclor 1254	ND		ug/kg	161	17.6	5	A
Aroclor 1260	ND		ug/kg	161	29.8	5	A
Aroclor 1262	ND		ug/kg	161	20.4	5	A
Aroclor 1268	ND		ug/kg	161	16.7	5	A
PCBs, Total	270		ug/kg	161	14.3	5	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	31		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	36		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/16/19 14:58
Analyst: JM

Extraction Method: EPA 3546
Extraction Date: 07/16/19 02:38
Cleanup Method: EPA 3665A
Cleanup Date: 07/16/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/16/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 05,08 Batch: WG1260234-1						
Aroclor 1016	ND		ug/kg	33.0	2.93	A
Aroclor 1221	ND		ug/kg	33.0	3.30	A
Aroclor 1232	ND		ug/kg	33.0	6.99	A
Aroclor 1242	ND		ug/kg	33.0	4.44	A
Aroclor 1248	ND		ug/kg	33.0	4.95	A
Aroclor 1254	ND		ug/kg	33.0	3.61	A
Aroclor 1260	ND		ug/kg	33.0	6.09	A
Aroclor 1262	ND		ug/kg	33.0	4.19	A
Aroclor 1268	ND		ug/kg	33.0	3.42	A
PCBs, Total	ND		ug/kg	33.0	2.93	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	71		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/17/19 13:14
Analyst: WR

Extraction Method: EPA 3546
Extraction Date: 07/16/19 20:57
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/17/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-07,09-12 Batch: WG1260659-1						
Aroclor 1016	ND		ug/kg	33.2	2.95	A
Aroclor 1221	ND		ug/kg	33.2	3.33	A
Aroclor 1232	ND		ug/kg	33.2	7.04	A
Aroclor 1242	ND		ug/kg	33.2	4.48	A
Aroclor 1248	ND		ug/kg	33.2	4.98	A
Aroclor 1254	ND		ug/kg	33.2	3.63	A
Aroclor 1260	ND		ug/kg	33.2	6.14	A
Aroclor 1262	ND		ug/kg	33.2	4.22	A
Aroclor 1268	ND		ug/kg	33.2	3.44	A
PCBs, Total	ND		ug/kg	33.2	2.95	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	75		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1931014

Report Date: 07/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 05,08 Batch: WG1260234-2 WG1260234-3									
Aroclor 1016	103		107		40-140	4		50	A
Aroclor 1260	100		100		40-140	0		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		89		30-150	A
Decachlorobiphenyl	70		75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		84		30-150	B
Decachlorobiphenyl	77		82		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1931014

Report Date: 07/17/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-07,09-12 Batch: WG1260659-2 WG1260659-3									
Aroclor 1016	75		67		40-140	11		50	A
Aroclor 1260	73		65		40-140	12		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		58		30-150	A
Decachlorobiphenyl	70		64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		57		30-150	B
Decachlorobiphenyl	81		74		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-01
Client ID: P-1
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Sample Depth:
Matrix: Soil

Date Collected: 07/15/19 10:40
Date Received: 07/15/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.9		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-02
Client ID: P-2
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 10:48
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.9		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-03
Client ID: P-3
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 10:55
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.7		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-04
Client ID: P-4
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:05
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.6		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-05
Client ID: T-1
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Sample Depth:
Matrix: Soil

Date Collected: 07/15/19 11:30
Date Received: 07/15/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.9		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-06
Client ID: T-2
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:35
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-07
Client ID: T-3
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:40
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.9		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-08
Client ID: T-4
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 11:50
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.7		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-09
Client ID: T-5
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:03
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.9		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-10
Client ID: T-6
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 13:58
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-11
Client ID: T-7
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:08
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

SAMPLE RESULTS

Lab ID: L1931014-12
Client ID: T-8
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/15/19 14:17
Date Received: 07/15/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/16/19 02:00	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-12 QC Batch ID: WG1260231-1 QC Sample: L1930937-04 Client ID: DUP Sample						
Solids, Total	85.0	83.8	%	1		20

Project Name: BASF
Project Number: BASF

Lab Number: L1931014
Report Date: 07/17/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1931014-01A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-02A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-03A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-04A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-05A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-06A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-07A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-08A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-09A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-10A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-11A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)
L1931014-12A	Glass 120ml/4oz unpreserved	A	NA		3.8	Y	Present/Intact		TS(7),NYTCL-8082(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1931014
Project Number:	BASF	**Report Date:**	07/17/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1931014
Project Number:	BASF	**Report Date:**	07/17/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1931014
Project Number:	BASF	**Report Date:**	07/17/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 2

Date Rec'd in Lab: 7/16/19

ALPHA Job #: L1931014

Client Information

Client: AECOM
Address: 36 Riverside Ave.
Rensselaer, NY
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information

Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer NY
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Email result to project manager

Please specify Metals or TAL.

ANALYSIS

8081-TCLP

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	8081-TCLP	Total Bottle
31014-01	P-1	07/15/19	10:40	Soil	JS	✓	
02	P-2	07/15/19	10:48	Soil	JS	✓	
03	P-3	07/15/19	10:55	Soil	JS	✓	
04	P-4	07/15/19	11:05	Soil	JS	✓	
05	T-1	07/15/19	11:30	Soil	JS	✓	
06	T-2	07/15/19	11:35	Soil	JS	✓	
07	T-3	07/15/19	11:40	Soil	JS	✓	
08	T-4	07/15/19	11:50	Soil	JS	✓	
09	T-5	07/15/19	1403	Soil	JS	✓	
10	T-6	07/15/19	1358	Soil	JS	✓	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
James Sirvent	7/15/19 1547	Ben Wagner AAL	7/15/19 1547
Ben Wagner	7/15/19 1620		7/16/19 0900

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Rush!

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of

Date Rec'd in Lab: 7/16/19

ALPHA Job #: L1931014

Client Information
Client: AECOM
Address: 36 Riverside Ave. Rensselaer, NY
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer NY
Project #
(Use Project name as Project #) ☑
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Email results to Project manger

Please specify Metals or TAL.

ANALYSIS
NYTCL-8082

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments	Total Bottle
31016-11	T-7	07/15/19	1408	Soil	JS		
12	T-8	07/15/19	1417	Soil	JS		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
James Sirvent	07/15/19 1549	Ben Hagar AAL	07/15/19 1548
Ben Hagar	7/17/19 820		7/16/19 0600

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Rush!

ANALYTICAL REPORT

Lab Number:	L1931313
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	07/18/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1931313
Report Date: 07/18/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1931313-01	WS-800-1	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 08:48	07/16/19
L1931313-02	WS-800-2	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 08:52	07/16/19
L1931313-03	WS-800-3	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 08:56	07/16/19
L1931313-04	WS-600-1	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 11:13	07/16/19
L1931313-05	WS-600-2	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 11:16	07/16/19
L1931313-06	WS-600-3	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 11:10	07/16/19
L1931313-07	BLANK	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY	07/16/19 00:00	07/16/19

Project Name:	BASF	**Lab Number:**	L1931313
Project Number:	Not Specified	**Report Date:**	07/18/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: Not Specified

Lab Number: L1931313
Report Date: 07/18/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1931313-04: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria on both columns; however, the sample could not be re-extracted and re-analyzed due to lack of additional sample. Since the IS response was above method criteria, all associated compounds are considered to have a potentially low bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Amita Naik

Title: Technical Director/Representative Date: 07/18/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-01
Client ID: WS-800-1
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 08:48
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 05:35
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-02
Client ID: WS-800-2
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 08:52
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 05:47
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-03
Client ID: WS-800-3
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 08:56
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 05:59
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-04
Client ID: WS-600-1
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 11:13
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 06:11
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	33		30-150	A
Decachlorobiphenyl	35		30-150	A
2,4,5,6-Tetrachloro-m-xylene	33		30-150	B
Decachlorobiphenyl	35		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-05
Client ID: WS-600-2
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 11:16
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 16:05
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	39		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-06
Client ID: WS-600-3
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 11:10
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 06:23
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	74		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

SAMPLE RESULTS

Lab ID: L1931313-07
Client ID: BLANK
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/16/19 00:00
Date Received: 07/16/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 07/18/19 06:35
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1931313
Report Date: 07/18/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/18/19 04:58
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/17/19 04:00
Cleanup Method: EPA 3665A
Cleanup Date: 07/17/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/18/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-07 Batch: WG1260768-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	85		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1931313

Report Date: 07/18/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-07 Batch: WG1260768-2 WG1260768-3									
Aroclor 1016	69		68		40-140	1		50	A
Aroclor 1260	64		62		40-140	3		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		65		30-150	A
Decachlorobiphenyl	71		66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		64		30-150	B
Decachlorobiphenyl	78		67		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1931313
Report Date: 07/18/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1931313-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)
L1931313-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1931313
Project Number:	Not Specified	**Report Date:**	07/18/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1931313
Project Number:	Not Specified	**Report Date:**	07/18/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: BASF
Project Number: Not Specified
Lab Number: L1931313
Report Date: 07/18/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1

Date Rec'd in Lab: 7/17/19

ALPHA Job #: L1931313

Client Information
Client: AECOM
Address: 250 Apollo dr.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 River Side Ave Rensselaer NY
Project #
(Use Project name as Project #)
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Email results to project manager

Please specify Metals or TAL.

ANALYSIS
NYTCL-8082 - 3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8082 - 3540C	Sample Specific Comments
31313 - 01	WS-800-1	07-16-19	0848	wipe	JS	X	
-02	WS-800-2		0852	wipe	JS	X	
-03	WS-800-3		0856	wipe	JS	X	
-04	WS-600-1		1115	wipe	JS	X	
-05	WS-600-2		1116	wipe	JS	X	
-06	WS-600-3		1116	wipe	JS	X	
-07	Blank		—		JS	X	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
James Bleiler	07-16-19 / 1949	H. Hicks 7-16-19	19:49
H. Hicks	7-16-19 20:15		7/17/19 00:50

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1932153
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	07/24/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1932153-01	T-9	SOLID	36 RIVERSIDE AVE., RENSSELAER, NY	07/19/19 09:40	07/19/19
L1932153-02	T-10	SOLID	36 RIVERSIDE AVE., RENSSELAER, NY	07/19/19 09:30	07/19/19

Project Name:	BASF	**Lab Number:**	L1932153
Project Number:	Not Specified	**Report Date:**	07/24/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 07/24/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified
Lab Number: L1932153
Report Date: 07/24/19

SAMPLE RESULTS

Lab ID: L1932153-01
Client ID: T-9
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/19/19 09:40
Date Received: 07/19/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/24/19 01:37
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3540C
Extraction Date: 07/22/19 23:40
Cleanup Method: EPA 3665A
Cleanup Date: 07/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	87.4	7.76	1	A
Aroclor 1221	ND		ug/kg	87.4	8.76	1	A
Aroclor 1232	ND		ug/kg	87.4	18.5	1	A
Aroclor 1242	385		ug/kg	87.4	11.8	1	A
Aroclor 1248	ND		ug/kg	87.4	13.1	1	A
Aroclor 1254	ND		ug/kg	87.4	9.56	1	A
Aroclor 1260	ND		ug/kg	87.4	16.2	1	A
Aroclor 1262	ND		ug/kg	87.4	11.1	1	A
Aroclor 1268	ND		ug/kg	87.4	9.05	1	A
PCBs, Total	385		ug/kg	87.4	7.76	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	40		30-150	B
Decachlorobiphenyl	45		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1932153
Report Date: 07/24/19

SAMPLE RESULTS

Lab ID: L1932153-02
Client ID: T-10
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/19/19 09:30
Date Received: 07/19/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/24/19 04:14
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3540C
Extraction Date: 07/22/19 23:40
Cleanup Method: EPA 3665A
Cleanup Date: 07/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	88.8	7.88	1	A
Aroclor 1221	ND		ug/kg	88.8	8.90	1	A
Aroclor 1232	ND		ug/kg	88.8	18.8	1	A
Aroclor 1242	240		ug/kg	88.8	12.0	1	A
Aroclor 1248	ND		ug/kg	88.8	13.3	1	A
Aroclor 1254	ND		ug/kg	88.8	9.71	1	A
Aroclor 1260	ND		ug/kg	88.8	16.4	1	A
Aroclor 1262	ND		ug/kg	88.8	11.3	1	A
Aroclor 1268	ND		ug/kg	88.8	9.20	1	A
PCBs, Total	240		ug/kg	88.8	7.88	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	45		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/24/19 01:00
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/22/19 23:40
Cleanup Method: EPA 3665A
Cleanup Date: 07/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1263048-1						
Aroclor 1016	ND		ug/kg	85.0	7.55	A
Aroclor 1221	ND		ug/kg	85.0	8.52	A
Aroclor 1232	ND		ug/kg	85.0	18.0	A
Aroclor 1242	ND		ug/kg	85.0	11.5	A
Aroclor 1248	ND		ug/kg	85.0	12.8	A
Aroclor 1254	ND		ug/kg	85.0	9.30	A
Aroclor 1260	ND		ug/kg	85.0	15.7	A
Aroclor 1262	ND		ug/kg	85.0	10.8	A
Aroclor 1268	ND		ug/kg	85.0	8.81	A
PCBs, Total	ND		ug/kg	85.0	7.55	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	79		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1932153

Report Date: 07/24/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1263048-2 WG1263048-3									
Aroclor 1016	68		70		40-140	3		50	A
Aroclor 1260	62		66		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		72		30-150	A
Decachlorobiphenyl	71		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		71		30-150	B
Decachlorobiphenyl	78		78		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

SAMPLE RESULTS

Lab ID: L1932153-01
Client ID: T-9
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/19/19 09:40
Date Received: 07/19/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.5		%	0.100	NA	1	-	07/20/19 05:14	121,2540G	YA

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

SAMPLE RESULTS

Lab ID: L1932153-02
Client ID: T-10
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/19/19 09:30
Date Received: 07/19/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.5		%	0.100	NA	1	-	07/20/19 05:14	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1262313-1 QC Sample: L1932194-01 Client ID: DUP Sample						
Solids, Total	64.4	66.2	%	3		20

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932153
Report Date: 07/24/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1932153-01A	Glass 120ml/4oz unpreserved	A	NA		4.3	Y	Absent		TS(7),NYTCL-8082-CNCRT(14)
L1932153-02A	Glass 120ml/4oz unpreserved	A	NA		4.3	Y	Absent		TS(7),NYTCL-8082-CNCRT(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1932153
Project Number:	Not Specified	**Report Date:**	07/24/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1932153
Project Number:	Not Specified	**Report Date:**	07/24/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: BASF
Project Number: Not Specified
Lab Number: L1932153
Report Date: 07/24/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page: 1 of 1 (TQ)

Date Rec'd in Lab: 7/20/19

ALPHA Job #: L1932153

Client Information

Client: AECOM
Address: 36 Riverside Ave.
Rensselaer NY 12144
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information

Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer NY
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☑ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

NYTCL-8082

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Sample Specific Comments

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8082	Total Bottle
32153 - 01	T-9	7/19/19	0940	Soil	TQ	✓	
-02	T-10	7/19/19	0930	Soil	TQ	✓	

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Quackenbush	7/19/19	Jim Cox AHL	7/19/19 16:15
Jim Cox	7/19/19		7/20/19 00:20

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1932625
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	07/27/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932625
Report Date: 07/27/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1932625-01	T-11	SOLID	36 RIVERSIDE AVE., RENSSELAER, NY	07/23/19 16:55	07/23/19
L1932625-02	T-12	SOLID	36 RIVERSIDE AVE., RENSSELAER, NY	07/23/19 16:45	07/23/19

Project Name:	BASF	**Lab Number:**	L1932625
Project Number:	Not Specified	**Report Date:**	07/27/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BASF	**Lab Number:**	L1932625
Project Number:	Not Specified	**Report Date:**	07/27/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

The PCB analysis was performed at the client's request.

PCBs

L1932625-01: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Lisa Westerlind

Title: Technical Director/Representative Date: 07/27/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified
Lab Number: L1932625
Report Date: 07/27/19

SAMPLE RESULTS

Lab ID: L1932625-01
Client ID: T-11
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/23/19 16:55
Date Received: 07/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/27/19 13:32
Analyst: WR
Percent Solids: 96%

Extraction Method: EPA 3540C
Extraction Date: 07/25/19 20:25
Cleanup Method: EPA 3665A
Cleanup Date: 07/26/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/27/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	98.3	8.73	1	A
Aroclor 1221	ND		ug/kg	98.3	9.85	1	A
Aroclor 1232	ND		ug/kg	98.3	20.8	1	A
Aroclor 1242	885	P	ug/kg	98.3	13.2	1	A
Aroclor 1248	ND		ug/kg	98.3	14.7	1	A
Aroclor 1254	ND		ug/kg	98.3	10.8	1	A
Aroclor 1260	ND		ug/kg	98.3	18.2	1	A
Aroclor 1262	ND		ug/kg	98.3	12.5	1	A
Aroclor 1268	ND		ug/kg	98.3	10.2	1	A
PCBs, Total	885		ug/kg	98.3	8.73	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	42		30-150	B
Decachlorobiphenyl	34		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1932625
Report Date: 07/27/19

SAMPLE RESULTS

Lab ID: L1932625-02
Client ID: T-12
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/23/19 16:45
Date Received: 07/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/27/19 13:45
Analyst: WR
Percent Solids: 100%

Extraction Method: EPA 3540C
Extraction Date: 07/25/19 20:25
Cleanup Method: EPA 3665A
Cleanup Date: 07/26/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/27/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	97.6	8.66	1	A
Aroclor 1221	ND		ug/kg	97.6	9.78	1	A
Aroclor 1232	ND		ug/kg	97.6	20.7	1	A
Aroclor 1242	596		ug/kg	97.6	13.2	1	A
Aroclor 1248	ND		ug/kg	97.6	14.6	1	A
Aroclor 1254	ND		ug/kg	97.6	10.7	1	A
Aroclor 1260	ND		ug/kg	97.6	18.0	1	A
Aroclor 1262	ND		ug/kg	97.6	12.4	1	A
Aroclor 1268	ND		ug/kg	97.6	10.1	1	A
PCBs, Total	596		ug/kg	97.6	8.66	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	46		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	48		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932625
Report Date: 07/27/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/27/19 12:55
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 07/25/19 20:25
Cleanup Method: EPA 3665A
Cleanup Date: 07/26/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/27/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1264673-1						
Aroclor 1016	ND		ug/kg	95.8	8.50	A
Aroclor 1221	ND		ug/kg	95.8	9.60	A
Aroclor 1232	ND		ug/kg	95.8	20.3	A
Aroclor 1242	ND		ug/kg	95.8	12.9	A
Aroclor 1248	ND		ug/kg	95.8	14.4	A
Aroclor 1254	ND		ug/kg	95.8	10.5	A
Aroclor 1260	ND		ug/kg	95.8	17.7	A
Aroclor 1262	ND		ug/kg	95.8	12.2	A
Aroclor 1268	ND		ug/kg	95.8	9.92	A
PCBs, Total	ND		ug/kg	95.8	8.50	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	75		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1932625

Report Date: 07/27/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1264673-2 WG1264673-3									
Aroclor 1016	79		77		40-140	3		50	A
Aroclor 1260	81		76		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		82		30-150	A
Decachlorobiphenyl	89		89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		71		30-150	B
Decachlorobiphenyl	79		79		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932625
Report Date: 07/27/19

SAMPLE RESULTS

Lab ID: L1932625-01
Client ID: T-11
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/23/19 16:55
Date Received: 07/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.0		%	0.100	NA	1	-	07/25/19 12:39	121,2540G	RI

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932625
Report Date: 07/27/19

SAMPLE RESULTS

Lab ID: L1932625-02
Client ID: T-12
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY

Date Collected: 07/23/19 16:45
Date Received: 07/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.7		%	0.100	NA	1	-	07/25/19 12:39	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1932625

Report Date: 07/27/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1264457-1 QC Sample: L1932625-01 Client ID: T-11						
Solids, Total	96.0	95.7	%	0		20

Project Name: BASF
Project Number: Not Specified

Lab Number: L1932625
Report Date: 07/27/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1932625-01A	Glass 120ml/4oz unpreserved	A	NA		2.9	Y	Absent		TS(7),NYTCL-8082-CNCRT(14)
L1932625-02A	Glass 120ml/4oz unpreserved	A	NA		2.9	Y	Absent		TS(7),NYTCL-8082-CNCRT(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1932625
Project Number:	Not Specified	**Report Date:**	07/27/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1932625
Project Number:	Not Specified	**Report Date:**	07/27/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1932625
Project Number:	Not Specified	**Report Date:**	07/27/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 7/24/19

ALPHA Job #: L1932625

Client Information
Client: AECOM
Address: 250 Apollo Dr
Chelmsford MA
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer NY
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Email results to James.Sirvent@aecom.com too

Please specify Metals or TAL.

ANALYSIS
NYTCL-8081

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
32625-01	T-11	07/23/19	1655	Soil	JS	
-02	T-12	07/23/19	1645	soil	JS	

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
James Sirvent	7/23/19 1935	Received Hicks	7-23-19 19:35
H. Hicks	7-23-19 2050		7/24/19 00:35

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1933225
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	07/31/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1933225-01	T-13	SOLID	36 RIVERSIDE AVE., RENSSALAER, NY	07/26/19 09:20	07/26/19
L1933225-02	T-14	SOLID	36 RIVERSIDE AVE., RENSSALAER, NY	07/26/19 09:05	07/26/19

Project Name:	BASF	**Lab Number:**	L1933225
Project Number:	Not Specified	**Report Date:**	07/31/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BASF	**Lab Number:**	L1933225
Project Number:	Not Specified	**Report Date:**	07/31/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 07/31/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

SAMPLE RESULTS

Lab ID: L1933225-01
Client ID: T-13
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/26/19 09:20
Date Received: 07/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/31/19 17:52
Analyst: AWS
Percent Solids: 99%

Extraction Method: EPA 3540C
Extraction Date: 07/26/19 23:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/28/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/28/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	95.1	8.45	1	A
Aroclor 1221	ND		ug/kg	95.1	9.53	1	A
Aroclor 1232	ND		ug/kg	95.1	20.2	1	A
Aroclor 1242	881		ug/kg	95.1	12.8	1	A
Aroclor 1248	ND		ug/kg	95.1	14.3	1	A
Aroclor 1254	ND		ug/kg	95.1	10.4	1	A
Aroclor 1260	ND		ug/kg	95.1	17.6	1	A
Aroclor 1262	ND		ug/kg	95.1	12.1	1	A
Aroclor 1268	ND		ug/kg	95.1	9.85	1	A
PCBs, Total	881		ug/kg	95.1	8.45	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	59		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

SAMPLE RESULTS

Lab ID: L1933225-02
Client ID: T-14
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/26/19 09:05
Date Received: 07/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 07/31/19 18:04
Analyst: AWS
Percent Solids: 100%

Extraction Method: EPA 3540C
Extraction Date: 07/26/19 23:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/28/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/28/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	89.9	7.99	1	A
Aroclor 1221	ND		ug/kg	89.9	9.01	1	A
Aroclor 1232	ND		ug/kg	89.9	19.1	1	A
Aroclor 1242	748		ug/kg	89.9	12.1	1	A
Aroclor 1248	ND		ug/kg	89.9	13.5	1	A
Aroclor 1254	ND		ug/kg	89.9	9.84	1	A
Aroclor 1260	ND		ug/kg	89.9	16.6	1	A
Aroclor 1262	ND		ug/kg	89.9	11.4	1	A
Aroclor 1268	ND		ug/kg	89.9	9.32	1	A
PCBs, Total	748		ug/kg	89.9	7.99	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	44		30-150	B
Decachlorobiphenyl	54		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/31/19 14:57
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 07/26/19 23:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/28/19
Cleanup Method: EPA 3660B
Cleanup Date: 07/28/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1265238-1						
Aroclor 1016	ND		ug/kg	89.4	7.94	A
Aroclor 1221	ND		ug/kg	89.4	8.96	A
Aroclor 1232	ND		ug/kg	89.4	19.0	A
Aroclor 1242	ND		ug/kg	89.4	12.0	A
Aroclor 1248	ND		ug/kg	89.4	13.4	A
Aroclor 1254	ND		ug/kg	89.4	9.78	A
Aroclor 1260	ND		ug/kg	89.4	16.5	A
Aroclor 1262	ND		ug/kg	89.4	11.4	A
Aroclor 1268	ND		ug/kg	89.4	9.27	A
PCBs, Total	ND		ug/kg	89.4	7.94	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	80		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1265238-2 WG1265238-3									
Aroclor 1016	83		87		40-140	5		50	A
Aroclor 1260	76		82		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		72		30-150	A
Decachlorobiphenyl	69		70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		70		30-150	B
Decachlorobiphenyl	74		75		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

SAMPLE RESULTS

Lab ID: L1933225-01
Client ID: T-13
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Sample Depth:
Matrix: Solid

Date Collected: 07/26/19 09:20
Date Received: 07/26/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.0		%	0.100	NA	1	-	07/27/19 07:50	121,2540G	RI

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

SAMPLE RESULTS

Lab ID: L1933225-02
Client ID: T-14
Sample Location: 36 RIVERSIDE AVE., RENSSALAER, NY

Date Collected: 07/26/19 09:05
Date Received: 07/26/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.8		%	0.100	NA	1	-	07/27/19 07:50	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1933225

Report Date: 07/31/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1265310-1 QC Sample: L1932567-06 Client ID: DUP Sample						
Solids, Total	40.0	39.0	%	3		20

Project Name: BASF
Project Number: Not Specified

Lab Number: L1933225
Report Date: 07/31/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1933225-01A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TS(7),NYTCL-8082-3540C(14)
L1933225-02A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TS(7),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1933225
Project Number:	Not Specified	**Report Date:**	07/31/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1933225
Project Number:	Not Specified	**Report Date:**	07/31/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1933225
Project Number:	Not Specified	**Report Date:**	07/31/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 7/26/19

ALPHA Job #: L1933225

Client Information
Client: AECOM
Address: 250 Apollo Dr Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer NY
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 1

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Also email results to James.Sirvent@aecom.com

Please specify Metals or TAL.

ANALYSIS
NYTCL-8082

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total Bottle	Sample Specific Comments
33225-01	T-13	07/26/19	~~0920~~ 0905	Asphalt	JS	X	
02	T-14	07/26/19	0905	Asphalt	JS	X	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
James Sirvent	07/26/19 1230		7/26/19 12:10
	7/26/19 12:27	A. Hicks	7-26-19 12:27
A. Hicks	7-26-19, 17:30		7/26/19 17:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Nints — Dell — Nints

ANALYTICAL REPORT

Lab Number:	L1933718
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF RENSSELAER
Project Number:	Not Specified
Report Date:	08/08/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1933718
Report Date: 08/08/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1933718-01	T-16	SOLID	36 RIVERSIDE AVE., RENSSELAER, NY 12144	07/30/19 09:45	07/30/19

Project Name:	BASF RENSSELAER	**Lab Number:**	L1933718
Project Number:	Not Specified	**Report Date:**	08/08/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF RENSSELAER **Lab Number:** L1933718
Project Number: Not Specified **Report Date:** 08/08/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1933718-01: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious interferences.

L1933718-01: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 08/08/19

ORGANICS

PCBS

Project Name: BASF RENSSELAER
Project Number: Not Specified
Lab Number: L1933718
Report Date: 08/08/19

SAMPLE RESULTS

Lab ID: L1933718-01
Client ID: T-16
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 07/30/19 09:45
Date Received: 07/30/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 08/08/19 03:24
Analyst: WR
Percent Solids: 79%

Extraction Method: EPA 3540C
Extraction Date: 08/05/19 22:10
Cleanup Method: EPA 3665A
Cleanup Date: 08/06/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/06/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	124	11.0	1	A
Aroclor 1221	ND		ug/kg	124	12.5	1	A
Aroclor 1232	ND		ug/kg	124	26.4	1	A
Aroclor 1242	809	P	ug/kg	124	16.8	1	A
Aroclor 1248	ND		ug/kg	124	18.7	1	A
Aroclor 1254	ND		ug/kg	124	13.6	1	A
Aroclor 1260	ND		ug/kg	124	23.0	1	A
Aroclor 1262	ND		ug/kg	124	15.8	1	A
Aroclor 1268	ND		ug/kg	124	12.9	1	A
PCBs, Total	809		ug/kg	124	11.0	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	45		30-150	A
2,4,5,6-Tetrachloro-m-xylene	33		30-150	B
Decachlorobiphenyl	30		30-150	B

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1933718
Report Date: 08/08/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 08/08/19 02:17
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 08/05/19 22:10
Cleanup Method: EPA 3665A
Cleanup Date: 08/06/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/06/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1268839-1						
Aroclor 1016	ND		ug/kg	87.6	7.78	A
Aroclor 1221	ND		ug/kg	87.6	8.77	A
Aroclor 1232	ND		ug/kg	87.6	18.6	A
Aroclor 1242	ND		ug/kg	87.6	11.8	A
Aroclor 1248	ND		ug/kg	87.6	13.1	A
Aroclor 1254	ND		ug/kg	87.6	9.58	A
Aroclor 1260	ND		ug/kg	87.6	16.2	A
Aroclor 1262	ND		ug/kg	87.6	11.1	A
Aroclor 1268	ND		ug/kg	87.6	9.07	A
PCBs, Total	ND		ug/kg	87.6	7.78	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	83		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF RENSSELAER

Project Number: Not Specified

Lab Number: L1933718

Report Date: 08/08/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1268839-2 WG1268839-3									
Aroclor 1016	105		103		40-140	2		50	A
Aroclor 1260	91		93		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		101		30-150	A
Decachlorobiphenyl	81		81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		100		30-150	B
Decachlorobiphenyl	92		91		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1933718
Report Date: 08/08/19

SAMPLE RESULTS

Lab ID: L1933718-01
Client ID: T-16
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 07/30/19 09:45
Date Received: 07/30/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.9		%	0.100	NA	1	-	07/31/19 02:17	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF RENSSELAER

Project Number: Not Specified

Lab Number: L1933718

Report Date: 08/08/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1266578-1 QC Sample: L1933680-05 Client ID: DUP Sample						
Solids, Total	91.4	90.6	%	1		20

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1933718
Report Date: 08/08/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1933718-01A	Glass 120ml/4oz unpreserved	A	NA		3.3	Y	Absent		TS(7),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF RENSSELAER	**Lab Number:**	L1933718
Project Number:	Not Specified	**Report Date:**	08/08/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF RENSSELAER	**Lab Number:**	L1933718
Project Number:	Not Specified	**Report Date:**	08/08/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name: BASF RENSSELAER
Project Number: Not Specified
Lab Number: L1933718
Report Date: 08/08/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AECOM

CHAIN OF CUSTODY RECORD L1933718

Page 1 of 1

Client/Project Name: AECOM / BASF Rensselaer	Project Location: 36 Riverside Ave. Rensselaer NY 12144
Project Number:	Field Logbook No.:
Sampler (Print Name)/(Affiliation): James Sirvent / AECOM	Chain of Custody Tape Nos.:
Signature: James Sirvent	Send Results/Report to: John.Bleiler@aecom.com; James.Sirvent@aecom.com — TAT: Rush!

Analysis Requested: NYTCL-8082

Container Type: P – Plastic; A – Amber Glass; G – Clear Glass; V – VOA Vial; O – Other; E – Encore

Preservation: 1 – HCl, 4°; 2 – H2SO4, 4°; 3 – HNO3, 4°; 4 – NaOH, 4°; 5 – NaOH/ZnAc, 4; 6 – Na2S2O3, 4°; 7 – 4°

Matrix Codes: DW – Drinking Water; WW – Wastewater; GW – Groundwater; SW – Surface Water; ST – Storm Water; W – Water; S – Soil; SL – Sludge; SD – Sediment; SO – Solid; A – Air; L – Liquid; P – Product

Field Sample No./Identification	Date	Time	COMP	GRAB	Sample Container (Size/Mat'l)	Matrix	Preserv.	Field Filtered	Lab I.D.	Remarks
T-16	07/30/19	0945		✓		Asphalt	NA	NO		

Relinquished by: (Print Name)/(Affiliation) James Sirvent / AECOM Signature: James Sirvent	Date: 7/30/19 Time:	Received by: (Print Name)/(Affiliation) Signature:	Date: 7/30/19 Time: 13:10	Analytical Laboratory (Destination):
Relinquished by: (Print Name)/(Affiliation) Signature:	Date: 7/30/19 Time: 13:40	Received by: (Print Name)/(Affiliation) Ryan Morrissey Signature:	Date: 7/31/19 Time: 00:40	
Relinquished by: (Print Name)/(Affiliation) Signature:	Date: Time:	Received by: (Print Name)/(Affiliation) Signature:	Date: Time:	Sample Shipped Via: UPS FedEx Courier Other — Temp blank: Yes No

ANALYTICAL REPORT

Lab Number:	L1934814
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF RENSSELAER
Project Number:	Not Specified
Report Date:	08/08/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1934814
Report Date: 08/08/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1934814-01	T-15	SOLID	36 RIVERSIDE AVE. RENSSELAER NY 12144	08/05/19 11:45	08/05/19

Project Name:	BASF RENSSELAER	**Lab Number:**	L1934814
Project Number:	Not Specified	**Report Date:**	08/08/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BASF RENSSELAER	**Lab Number:**	L1934814
Project Number:	Not Specified	**Report Date:**	08/08/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1934814-01: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (28%), but within the overall method allowances. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/08/19

ORGANICS

PCBS

Project Name: BASF RENSSELAER
Project Number: Not Specified
Lab Number: L1934814
Report Date: 08/08/19

SAMPLE RESULTS

Lab ID: L1934814-01
Client ID: T-15
Sample Location: 36 RIVERSIDE AVE. RENSSELAER NY 12144

Date Collected: 08/05/19 11:45
Date Received: 08/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Solid
Analytical Method: 1,8082A
Analytical Date: 08/08/19 03:38
Analyst: WR
Percent Solids: 99%

Extraction Method: EPA 3540C
Extraction Date: 08/06/19 09:30
Cleanup Method: EPA 3665A
Cleanup Date: 08/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	91.7	8.14	1	A
Aroclor 1221	ND		ug/kg	91.7	9.19	1	A
Aroclor 1232	ND		ug/kg	91.7	19.4	1	A
Aroclor 1242	915		ug/kg	91.7	12.4	1	A
Aroclor 1248	ND		ug/kg	91.7	13.8	1	A
Aroclor 1254	ND		ug/kg	91.7	10.0	1	A
Aroclor 1260	ND		ug/kg	91.7	16.9	1	A
Aroclor 1262	ND		ug/kg	91.7	11.6	1	A
Aroclor 1268	ND		ug/kg	91.7	9.50	1	A
PCBs, Total	915		ug/kg	91.7	8.14	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	33		30-150	A
2,4,5,6-Tetrachloro-m-xylene	39		30-150	B
Decachlorobiphenyl	**28**	Q	30-150	B

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1934814
Report Date: 08/08/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 08/08/19 02:17
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 08/05/19 22:10
Cleanup Method: EPA 3665A
Cleanup Date: 08/06/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/06/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1268839-1						
Aroclor 1016	ND		ug/kg	87.6	7.78	A
Aroclor 1221	ND		ug/kg	87.6	8.77	A
Aroclor 1232	ND		ug/kg	87.6	18.6	A
Aroclor 1242	ND		ug/kg	87.6	11.8	A
Aroclor 1248	ND		ug/kg	87.6	13.1	A
Aroclor 1254	ND		ug/kg	87.6	9.58	A
Aroclor 1260	ND		ug/kg	87.6	16.2	A
Aroclor 1262	ND		ug/kg	87.6	11.1	A
Aroclor 1268	ND		ug/kg	87.6	9.07	A
PCBs, Total	ND		ug/kg	87.6	7.78	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	83		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF RENSSELAER

Project Number: Not Specified

Lab Number: L1934814

Report Date: 08/08/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1268839-2 WG1268839-3									
Aroclor 1016	105		103		40-140	2		50	A
Aroclor 1260	91		93		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	102		101		30-150	A
Decachlorobiphenyl	81		81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	103		100		30-150	B
Decachlorobiphenyl	92		91		30-150	B

INORGANICS
&
MISCELLANEOUS

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1934814
Report Date: 08/08/19

SAMPLE RESULTS

Lab ID: L1934814-01
Client ID: T-15
Sample Location: 36 RIVERSIDE AVE. RENSSELAER NY 12144

Sample Depth:
Matrix: Solid

Date Collected: 08/05/19 11:45
Date Received: 08/05/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	99.3		%	0.100	NA	1	-	08/06/19 02:50	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF RENSSELAER

Project Number: Not Specified

Lab Number: L1934814

Report Date: 08/08/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1268903-1 QC Sample: L1934818-01 Client ID: DUP Sample						
Solids, Total	88.4	88.2	%	0		20

Project Name: BASF RENSSELAER
Project Number: Not Specified

Lab Number: L1934814
Report Date: 08/08/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934814-01A	Glass 120ml/4oz unpreserved	A	NA		4.6	Y	Absent		TS(7),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF RENSSELAER	**Lab Number:**	L1934814
Project Number:	Not Specified	**Report Date:**	08/08/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF RENSSELAER	**Lab Number:**	L1934814
Project Number:	Not Specified	**Report Date:**	08/08/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF RENSSELAER	**Lab Number:**	L1934814
Project Number:	Not Specified	**Report Date:**	08/08/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AECOM

CHAIN OF CUSTODY RECORD

L1934814

Page 1 of 1

Client/Project Name: AECOM / BASF Rensselaer

Project Location: 36 Riverside Ave. Rensselaer NY 12144

Project Number:

Field Logbook No.:

Sampler (Print Name)/(Affiliation): James Sirvent / AECOM

Chain of Custody Tape Nos.:

Signature: James Sirvent

Send Results/Report to: John.Bleier@aecom.com

TAT: Rush!

Analysis Requested

NYTCL-8082

Container Type	Preservation
P – Plastic	1 – HCl, 4°
A – Amber Glass	2 – H2SO4, 4°
G – Clear Glass	3 – HNO3, 4°
V – VOA Vial	4 – NaOH, 4°
O – Other	5 – NaOH/ZnAc, 4°
E – Encore	6 – Na2S2O3, 4°
	7 – 4°

Matrix Codes:

DW – Drinking Water	S – Soil
WW – Wastewater	SL – Sludge
GW – Groundwater	SD – Sediment
SW – Surface Water	SO – Solid
ST – Storm Water	A – Air
W – Water	L – Liquid
	P – Product

Field Sample No./Identification	Date	Time	COMP	GRAB	Sample Container (Size/Mat'l)	Matrix	Preserv.	Field Filtered	NYTCL-8082	Lab I.D.	Remarks
T-15	8/5/19	1145		✓		Asphalt	NA	NO	X		

Relinquished by: (Print Name)/(Affiliation)	Date/Time	Received by: (Print Name)/(Affiliation)	Date/Time
James Sirvent / AECOM Signature: James Sirvent	Date: 8/5/19 Time:	Jimmy Cooley AAL Signature: Jimmy Cooley	Date: 8/5/19 Time: 17:12
Jimmy Cooley AAL Signature: Jimmy Cooley	Date: 8/5/19 Time: 17:20	Ryan Morrissey AAL Signature:	Date: 8/6/19 Time: 01:00
Relinquished by: (Print Name)/(Affiliation) Signature:	Date: Time:	Received by: (Print Name)/(Affiliation) Signature:	Date: Time:

Analytical Laboratory (Destination):

Sample Shipped Via: UPS FedEx (Courier) Other

Temp blank: Yes No

White: Original (to Lab) Yellow: Lab Pink: Sampler

Serial No. № 5773

ANALYTICAL REPORT

Lab Number:	L1943659
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	09/25/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1943659-01	WTWSSW092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-02	WTWNSW092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-03	WTENSW092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-04	WTESSW092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-05	WTFLS092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-06	WTFLN092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-07	WTENDN092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-08	WTENDS092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-09	WTDUP1092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19
L1943659-10	WTFB1092019	WIPE	36 RIVERSIDE AVE., RENSSELAER, NY 12144	09/20/19 13:15	09/20/19

Project Name:	BASF	**Lab Number:**	L1943659
Project Number:	Not Specified	**Report Date:**	09/25/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 09/25/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-01
Client ID: WTWSSW092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 12:05
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.094	J	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.094	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-02
Client ID: WTWNSW092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 12:18
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.183	J	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.183	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-03
Client ID: WTENSW092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 12:29
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	54		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-04
Client ID: WTESSW092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 12:41
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-05
Client ID: WTFLS092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 12:53
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.596		ug Abs	0.500	0.067	1	B
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	0.100	J	ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.696	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-06
Client ID: WTFLN092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 13:05
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.883		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	0.170	JP	ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	1.05	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: BASF **Lab Number:** L1943659

Project Number: Not Specified **Report Date:** 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-07
Client ID: WTENDN092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 13:17
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-08
Client ID: WTENDS092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 13:29
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	59		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-09
Client ID: WTDUP1092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 13:41
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943659
Report Date: 09/25/19

SAMPLE RESULTS

Lab ID: L1943659-10
Client ID: WTFB1092019
Sample Location: 36 RIVERSIDE AVE., RENSSELAER, NY 12144

Date Collected: 09/20/19 13:15
Date Received: 09/20/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/23/19 13:53
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/23/19 14:05
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 09/22/19 10:05
Cleanup Method: EPA 3665A
Cleanup Date: 09/23/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/23/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-10 Batch: WG1287126-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	63		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1943659

Report Date: 09/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-10 Batch: WG1287126-2 WG1287126-3									
Aroclor 1016	79		77		40-140	2		50	A
Aroclor 1260	75		71		40-140	4		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		60		30-150	A
Decachlorobiphenyl	59		58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		60		30-150	B
Decachlorobiphenyl	60		60		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943659
Report Date: 09/25/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1943659-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)
L1943659-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.2	Y	Absent		NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1943659
Project Number:	Not Specified	**Report Date:**	09/25/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1943659
Project Number:	Not Specified	**Report Date:**	09/25/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1943659
Project Number:	Not Specified	**Report Date:**	09/25/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 9/21/19

ALPHA Job #: L1943659

Client Information
Client: AECOM
Address: 250 APOLLO DR.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 RIVERSIDE AVE RENSSELAER, NY 12144
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

INCLUDE EMAIL TO kit.williams@aecom.com

Please specify Metals or TAL.

ANALYSIS

NYTCL 8082 - 3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL 8082 - 3540C	Sample Specific Comments
43659-01	WTWSSW092019	9.20.19	1315	wipe	GD	X	
-02	WTWNSW092019	9.20.19	1315	wipe	GD	X	
-03	WTENSW092019	9.20.19	1315	wipe	GD	X	
-04	WTESSW092019	9.20.19	1315	wipe	GD	X	
-05	WTFLS092019	9.20.19	1315	wipe	GD	X	
-06	WTFLN092019	9.20.19	1315	WIPE	GD	X	
-07	WTENDN092019	9.20.19	1315	wipe	GD	X	
-08	WTENDS092019	9.20.19	1315	wipe	GD	X	
-09	WTDUP2092019	9.20.19	1315	WIPE	GD	X	
-10	WTFB2092019	9.20.19	1315	WIPE	GD	X	

Container Type: A
Preservative: O

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	9.20.19 1600		9/20/19 1625
	9/20/19 1945		9/21/19 0018

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1943875
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	09/26/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1943875-01	CTNSW092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-02	CTSSW092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-03	CTEENDWALL092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-04	CTWENDWALL092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-05	CTFLOOR092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-06	CTDUP1092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19
L1943875-07	CTFB1092319	WIPE	36 RIVERSIDE AVE. RENSSELAER, NY 12144	09/23/19 11:45	09/23/19

Project Name:	BASF	**Lab Number:**	L1943875
Project Number:	Not Specified	**Report Date:**	09/26/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BASF	**Lab Number:**	L1943875
Project Number:	Not Specified	**Report Date:**	09/26/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1943875-02: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (28%), but within the overall method allowances. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 09/26/19

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-01
Client ID: CTNSW092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 06:38
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	46		30-150	A
Decachlorobiphenyl	37		30-150	A
2,4,5,6-Tetrachloro-m-xylene	45		30-150	B
Decachlorobiphenyl	45		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-02
Client ID: CTSSW092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 06:50
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	35		30-150	A
Decachlorobiphenyl	**28**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	34		30-150	B
Decachlorobiphenyl	31		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-03
Client ID: CTEENDWALL092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 07:02
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	42		30-150	A
Decachlorobiphenyl	37		30-150	A
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	42		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943875
Report Date: 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-04
Client ID: CTWENDWALL092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 07:14
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	50		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	49		30-150	B
Decachlorobiphenyl	45		30-150	B

Project Name: BASF **Lab Number:** L1943875

Project Number: Not Specified **Report Date:** 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-05
Client ID: CTFLOOR092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 07:26
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	41		30-150	A
Decachlorobiphenyl	37		30-150	A
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	40		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1943875
Report Date: 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-06
Client ID: CTDUP1092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 07:39
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	46		30-150	A
Decachlorobiphenyl	40		30-150	A
2,4,5,6-Tetrachloro-m-xylene	44		30-150	B
Decachlorobiphenyl	42		30-150	B

Project Name: BASF **Lab Number:** L1943875

Project Number: Not Specified **Report Date:** 09/26/19

SAMPLE RESULTS

Lab ID: L1943875-07
Client ID: CTFB1092319
Sample Location: 36 RIVERSIDE AVE. RENSSELAER, NY 12144

Date Collected: 09/23/19 11:45
Date Received: 09/23/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 09/25/19 07:51
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 09/24/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 09/25/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/25/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	45		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/24/19 15:45
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 09/23/19 09:30
Cleanup Method: EPA 3665A
Cleanup Date: 09/24/19
Cleanup Method: EPA 3660B
Cleanup Date: 09/24/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-07 Batch: WG1287316-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	58		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1943875

Report Date: 09/26/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-07 Batch: WG1287316-2 WG1287316-3									
Aroclor 1016	80		86		40-140	7		50	A
Aroclor 1260	73		79		40-140	8		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		74		30-150	A
Decachlorobiphenyl	61		66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		74		30-150	B
Decachlorobiphenyl	63		72		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1943875
Report Date: 09/26/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1943875-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)
L1943875-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.2	Y	Absent		NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1943875
Project Number:	Not Specified	**Report Date:**	09/26/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1943875
Project Number:	Not Specified	**Report Date:**	09/26/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1943875
Project Number:	Not Specified	**Report Date:**	09/26/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 9/24/19

ALPHA Job #: L1943875

Client Information
Client: AECOM
Address: 250 Apollo Dr.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer, NY 12144
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ ~~Same as Client Info~~
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Include email to Kit.Williams@AECOM.com

Please specify Metals or TAL.

ANALYSIS
NYTCL 8082-35+4D C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
43875 -01	CTNSW092319	9.23.19	1145	WIPE	DH	
-02	CTSSW092319	9.23.19	1145	WIPE	DH	
-03	CTEENDWALL092319	9.23.19	1145	WIPE	DH	
-04	CTWENDWALL092319	9.23.19	1145	WIPE	DH	
-05	CTFloor092319	9.23.19	1145	WIPE	DH	
-06	CTDUP1092319	9.23.19	1145	WIPE	DH	
-07	CTFB1092319	9.23.19	1145	WIPE	DH	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A							
Preservative	O							

Relinquished By:	Date/Time	Received By:	Date/Time
	9.23.19 1600		9/23/19 17:5
	9/23/19 2235		9/24/19 01:20

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1950955
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	10/31/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L1950955
Report Date: 10/31/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1950955-01	FT01SENDWALL102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-02	FT01NENDWALL102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-03	FT01EWALLSOUTH102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-04	FT01EWALLNORTH102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-05	FT01WWALLSOUTH102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-06	FT01WWALLNORTH102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-07	FT01SOUTHFLOOR102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-08	FT01NORTHFLOOR102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-09	FT01DUP001102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19
L1950955-10	FT01FB001102919	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	10/29/19 12:10	10/29/19

Project Name:	BASF	**Lab Number:**	L1950955
Project Number:	Not Specified	**Report Date:**	10/31/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	BASF	**Lab Number:**	L1950955
Project Number:	Not Specified	**Report Date:**	10/31/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L1950955-04: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 10/31/19

ORGANICS

PCBS

Project Name: BASF **Lab Number:** L1950955

Project Number: Not Specified **Report Date:** 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-01
Client ID: FT01SENDWALL102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 10:05
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BASF **Lab Number:** L1950955

Project Number: Not Specified **Report Date:** 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-02
Client ID: FT01NENDWALL102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 10:17
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.754		ug Abs	0.500	0.067	1	B
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.754		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	63		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1950955
Report Date: 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-03
Client ID: FT01EWALLSOUTH102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 10:29
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	55		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1950955
Report Date: 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-04
Client ID: FT01EWALLNORTH102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144
Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 10:41
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.354	JP	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.354	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	47		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: BASF **Lab Number:** L1950955

Project Number: Not Specified **Report Date:** 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-05
Client ID: FT01WWALLSOUTH102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 10:53
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: BASF **Lab Number:** L1950955

Project Number: Not Specified **Report Date:** 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-06
Client ID: FT01WWALLNORTH102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 11:05
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	63		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1950955
Report Date: 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-07
Client ID: FT01SOUTHFLOOR102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 11:17
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.446	J	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.446	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L1950955
Report Date: 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-08
Client ID: FT01NORTHFLOOR102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 11:29
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.653		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.653		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	92		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1950955
Report Date: 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-09
Client ID: FT01DUP001102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 11:41
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.194	J	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.194	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	48		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: BASF **Lab Number:** L1950955

Project Number: Not Specified **Report Date:** 10/31/19

SAMPLE RESULTS

Lab ID: L1950955-10
Client ID: FT01FB001102919
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 10/29/19 12:10
Date Received: 10/29/19
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 10/31/19 11:53
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 10/30/19 06:54
Cleanup Method: EPA 3665A
Cleanup Date: 10/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1950955
Report Date: 10/31/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/30/19 11:07
Analyst: WR

Extraction Method: EPA 3540C
Extraction Date: 10/29/19 09:35
Cleanup Method: EPA 3665A
Cleanup Date: 10/30/19
Cleanup Method: EPA 3660B
Cleanup Date: 10/30/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-10 Batch: WG1301821-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	87		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L1950955

Report Date: 10/31/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-10 Batch: WG1301821-2 WG1301821-3									
Aroclor 1016	74		83		40-140	11		50	A
Aroclor 1260	70		77		40-140	10		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		77		30-150	A
Decachlorobiphenyl	73		80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		80		30-150	B
Decachlorobiphenyl	85		94		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L1950955
Report Date: 10/31/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1950955-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)
L1950955-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		5.5	Y	Absent		NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1950955
Project Number:	Not Specified	**Report Date:**	10/31/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1950955
Project Number:	Not Specified	**Report Date:**	10/31/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1950955
Project Number:	Not Specified	**Report Date:**	10/31/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 10/30/19

ALPHA Job #: L1950955

Client Information
Client: AECOM
Address: 250 Apollo Dr, Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave Rensselaer, NY 12144
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler (AECOM)
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☑ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS
NYTCL 8082, 3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total Bottle	Sample Specific Comments
50955 -01	FTOISENDWALL 102919	10.29.19	1210	WIPE	GO	X	
-02	FTOINENDWALL 102919	10.29.19	1210	WIPE	GO	X	
-03	FTOIEWALLSouth 102919	10.29.19	1210	WIPE	GO	X	
-04	FTOIEWALLNorth 102919	10.29.19	1210	WIPE	GO	X	
-05	FTOIWWallSouth 102919	10.29.19	1210	WIPE	GO	X	
-06	FTOIWWALLNorth 102919	10.29.19	1210	WIPE	GO	X	
-07	FTOISouthFloor 102919	10.29.19	1210	WIPE	GO	X	
-08	FTOINorthFloor 102919	10.29.19	1210	WIPE	GO	X	
-09	FTOIDUP001102919	10.29.19	1210	WIPE	GO	X	
-10	FTOIFB001102919	10.29.19	1210	WIPE	GO	X	

Container Type: A
Preservative: C

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Jeff Davenport	10.29.19	Richard O'Konsky	10/29/19 14:10
Richard O'Konsky	10-29-19 14:41		10/30/19 01:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2001096
Client:	AECOM 250 Apollo Drive Chelmsford, MA 7080
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	Not Specified
Report Date:	01/14/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2001096-01	TFT01NENDWALL010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-02	TFT01WWALLNORTH010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-03	TFT01WWALMID010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-04	TFT01WWALLSOUTH010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-05	TFT01SENDWALL010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-06	TFT01EWALLSOUTH010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-07	TFT01EWALLMID010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-08	TFT01EWALLNORTH010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-09	TFT01SOUTHFLOOR010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-10	TFT01MIDFLOOR010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-11	TFT01NORTHFLOOR010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-12	TFT01DUP001010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20
L2001096-13	TFT01FIELDBLANK010920	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY	01/09/20 13:40	01/09/20

Project Name:	BASF	**Lab Number:**	L2001096
Project Number:	Not Specified	**Report Date:**	01/14/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF **Lab Number:** L2001096
Project Number: Not Specified **Report Date:** 01/14/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 01/14/20

ORGANICS

PCBS

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-01
Client ID: TFT01NENDWALL010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 12:42
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	2.74		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	1.06		ug Abs	0.500	0.055	1	B
Aroclor 1260	0.478	J	ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	4.28	J	ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-02
Client ID: TFT01WWALLNORTH010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 12:54
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	2.81		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	1.10		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.524		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	4.43		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-03
Client ID: TFT01WWALMID010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 13:06
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	2.35		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	0.928		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.722		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	4.00		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	68		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-04
Client ID: TFT01WWALLSOUTH010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 13:18
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.524		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.550		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	1.07		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	39		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	34		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-05
Client ID: TFT01SENDWALL010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 13:30
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.844		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.442	J	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	1.29	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-06
Client ID: TFT01EWALLSOUTH010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 13:42
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.993		ug Abs	0.500	0.067	1	B
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.780		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	1.77		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	109		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-07
Client ID: TFT01EWALLMID010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 13:54
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.458	J	ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.443	J	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.901	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-08
Client ID: TFT01EWALLNORTH010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 14:05
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	1.93		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.972		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	2.90		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	78		30-150	B

Project Name: BASF **Lab Number:** L2001096

Project Number: Not Specified **Report Date:** 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-09
Client ID: TFT01SOUTHFLOOR010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 14:17
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	1.41		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	1.41		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-10
Client ID: TFT01MIDFLOOR010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 14:29
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.776		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.776		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-11
Client ID: TFT01NORTHFLOOR010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 14:41
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	0.824		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.150	J	ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	0.974	J	ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: BASF
Project Number: Not Specified
Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-12
Client ID: TFT01DUP001010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 14:53
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	3.11		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	1.15		ug Abs	0.500	0.055	1	A
Aroclor 1260	0.577		ug Abs	0.500	0.092	1	B
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	4.84		ug Abs	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	73		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

SAMPLE RESULTS

Lab ID: L2001096-13
Client ID: TFT01FIELDBLANK010920
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY

Date Collected: 01/09/20 13:40
Date Received: 01/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 01/11/20 15:05
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug Abs	0.500	0.044	1	A
Aroclor 1221	ND		ug Abs	0.500	0.050	1	A
Aroclor 1232	ND		ug Abs	0.500	0.106	1	A
Aroclor 1242	ND		ug Abs	0.500	0.067	1	A
Aroclor 1248	ND		ug Abs	0.500	0.075	1	A
Aroclor 1254	ND		ug Abs	0.500	0.055	1	A
Aroclor 1260	ND		ug Abs	0.500	0.092	1	A
Aroclor 1262	ND		ug Abs	0.500	0.064	1	A
Aroclor 1268	ND		ug Abs	0.500	0.052	1	A
PCBs, Total	ND		ug Abs	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	72		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 01/11/20 15:17
Analyst: AWS

Extraction Method: EPA 3540C
Extraction Date: 01/10/20 07:25
Cleanup Method: EPA 3665A
Cleanup Date: 01/11/20
Cleanup Method: EPA 3660B
Cleanup Date: 01/11/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-13 Batch: WG1328693-1						
Aroclor 1016	ND		ug Abs	0.500	0.044	A
Aroclor 1221	ND		ug Abs	0.500	0.050	A
Aroclor 1232	ND		ug Abs	0.500	0.106	A
Aroclor 1242	ND		ug Abs	0.500	0.067	A
Aroclor 1248	ND		ug Abs	0.500	0.075	A
Aroclor 1254	ND		ug Abs	0.500	0.055	A
Aroclor 1260	ND		ug Abs	0.500	0.092	A
Aroclor 1262	ND		ug Abs	0.500	0.064	A
Aroclor 1268	ND		ug Abs	0.500	0.052	A
PCBs, Total	ND		ug Abs	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	76		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: Not Specified

Lab Number: L2001096

Report Date: 01/14/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-13 Batch: WG1328693-2 WG1328693-3									
Aroclor 1016	79		82		40-140	3		50	A
Aroclor 1260	78		83		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		76		30-150	A
Decachlorobiphenyl	76		81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		74		30-150	B
Decachlorobiphenyl	72		77		30-150	B

Project Name: BASF
Project Number: Not Specified

Lab Number: L2001096
Report Date: 01/14/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2001096-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-11A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-12A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)
L2001096-13A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.4	Y	Absent		NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L2001096
Project Number:	Not Specified	**Report Date:**	01/14/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2001096
Project Number:	Not Specified	**Report Date:**	01/14/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2001096
Project Number:	Not Specified	**Report Date:**	01/14/20

Data Qualifiers

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 1/10/20

ALPHA Job #: L2001096

Client Information
Client: AECOM
Address: 250 Apollo Dr.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer, NY 12144
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler (AECOM)
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL 8082-3540C	Total Bottle	Sample Specific Comments
010960 - 01	TFT01 NENDWALL 010920	1/9/20	1340	wipe	PG	✓		
-02	TFT01 WWALL NORTH 010920	1/9/20	1340	wipe	PG	✓		
-03	TFT01 WWALL MID 010920	1/9/20	1340	wipe	PG	✓		
-04	TFT01 WWALL SOUTH 010920	1/9/20	1340	wipe	PG	✓		
-05	TFT01 SENDWALL 010920	1/9/20	1340	wipe	PG	✓		
-06	TFT01 EWALLSOUTH 010920	1/9/20	1340	wipe	PG	✓		
-07	TFT01 EWALL MID 010920	1/9/20	1340	wipe	PG	✓		
-08	TFT01 EWALL NORTH 010920	1/9/20	1340	wipe	PG	✓		
-09	TFT01 SOUTH FLOOR 010920	1/9/20	1340	wipe	PG	✓		
-10	TFT01 MID FLOOR 010920	1/9/20	1340	wipe	PG	✓		

Container Type	A									
Preservative	O									

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	1/9/20		1/9/20 1600
	1/9/20 1608		1/10/20 0079

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 1/10/20

ALPHA Job #: L2001096

Client Information

Client: AECOM
Address: 250 Apollo Dr.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information

Project Name: BASF
Project Location: 36 Riverside Ave. Rensselaer, NY 12144
Project #
(Use Project name as Project #) ☐
Project Manager: John Bleiler (AECOM)
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

NY TCL 8082-3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NY TCL 8082-3540C	Sample Specific Comments
61096-11	TFT01 NORTH FLOOR 010920	1/9/20	1340	wipe	PG	✓	
-12	TFT01 DUP001 010920	1/9/20	1340	wipe	PG	✓	
-13	TFT01 FIELD BLANK 010920	1/9/20	1340	wipe	PG	✓	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A									
Preservative	O									

Relinquished By:	Date/Time	Received By:	Date/Time
	1/9/20		1/9/20 1600
	1/9/20 1600		1/10/20 0010

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2006202
Client:	AECOM 250 Apollo Drive Chelmsford, MA 7080
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	60323713
Report Date:	02/14/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: 60323713

Lab Number: L2006202
Report Date: 02/14/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2006202-01	WN-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-02	WS-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-03	WE-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-04	WW-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-05	FN-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-06	FS-200211	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20
L2006202-07	FB	WIPE	36 RIVERSIDE AVE	02/11/20 09:30	02/11/20

Project Name:	BASF	**Lab Number:**	L2006202
Project Number:	60323713	**Report Date:**	02/14/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: 60323713

Lab Number: L2006202
Report Date: 02/14/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2006202-01 through -07: At the client's request, the PCBs analysis was performed.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 02/14/20

ORGANICS

PCBS

Project Name: BASF
Project Number: 60323713

Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-01
Client ID: WN-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:00
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.61		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.61		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-02
Client ID: WS-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:07
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.81		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.81		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-03
Client ID: WE-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:13
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	2.00		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	2.00		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	49		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-04
Client ID: WW-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:20
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.956		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.956		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	52		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-05
Client ID: FN-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:27
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.58		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.58		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	48		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-06
Client ID: FS-200211
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:34
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.41		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.41		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2006202
Report Date: 02/14/20

SAMPLE RESULTS

Lab ID: L2006202-07
Client ID: FB
Sample Location: 36 RIVERSIDE AVE

Date Collected: 02/11/20 09:30
Date Received: 02/11/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:41
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2006202
Report Date: 02/14/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/13/20 12:47
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/12/20 07:20
Cleanup Method: EPA 3665A
Cleanup Date: 02/13/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-07 Batch: WG1339823-1						
Aroclor 1016	ND		ug/100cm2	0.500	0.044	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	55		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: 60323713

Lab Number: L2006202

Report Date: 02/14/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-07 Batch: WG1339823-2 WG1339823-3									
Aroclor 1016	75		69		40-140	7		50	A
Aroclor 1260	64		58		40-140	10		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		57		30-150	A
Decachlorobiphenyl	69		62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		63		30-150	B
Decachlorobiphenyl	59		51		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2006202
Report Date: 02/14/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2006202-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2006202-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.8	Y	Absent		NYTCL-8082-3540C_CM2(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L2006202
Project Number:	60323713	**Report Date:**	02/14/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2006202
Project Number:	60323713	**Report Date:**	02/14/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2006202
Project Number:	60323713	**Report Date:**	02/14/20

Data Qualifiers

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2006202
Project Number:	60323713	**Report Date:**	02/14/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 02/12/20

ALPHA Job #: L2006202

Client Information
Client: AECOM
Address: 250 Apollo Dr
Chelmsford MA
Phone: 978-905-2124
Fax:
Email: John.Bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave
Project #: 60323713
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 3

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS
NYCL 8082-35400

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments	Total Bottle
06202-01	WN-200211	2/11/20	0930	wipe	TQ	North wall	1
-02	WS-200211	2/11/20	0930	wipe	TQ	South wall	1
-03	WE-200211	2/11/20	0930	wipe	TQ	East wall	1
-04	WW-200211	2/11/20	0930	wipe	TQ	West wall	1
-05	FN-200211	2/11/20	0930	wipe	TQ	North Floor	1
-06	FS-200211	2/11/20	0930	wipe	TQ	South Floor	1
-07	FB	2/11/20	0930	wipe	TQ	Field blank	1

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A								
Preservative	O								

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Gutkowski	2/11/20 1700	Robert Haire AAL	2-11-20 17:12
Robert Haire	2-11-20 17:12		2/12/20 0850

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2008232
Client:	AECOM 250 Apollo Drive Chelmsford, MA 7080
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	60323713
Report Date:	02/28/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: 60323713

Lab Number: L2008232
Report Date: 02/28/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2008232-01	TWW200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:25	02/25/20
L2008232-02	TWN200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:30	02/25/20
L2008232-03	TWE200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:35	02/25/20
L2008232-04	TWS200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:40	02/25/20
L2008232-05	TFW200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:45	02/25/20
L2008232-06	TFE200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:50	02/25/20
L2008232-07	FB200225	WIPE	36 RIVERSIDE AVE, RENSSELAER, NY 12144	02/25/20 09:30	02/25/20

Project Name:	BASF	**Lab Number:**	L2008232
Project Number:	60323713	**Report Date:**	02/28/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: 60323713

Lab Number: L2008232
Report Date: 02/28/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

PCBs

L2008232-05: Due to a laboratory error, the PCB results cannot be reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 02/28/20

ORGANICS

PCBS

Project Name: BASF
Project Number: 60323713
Lab Number: L2008232
Report Date: 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-01
Client ID: TWW200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:25
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 12:58
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.61		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.61		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	59		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2008232
Report Date: 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-02
Client ID: TWN200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:30
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 13:04
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.558		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.558		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2008232
Report Date: 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-03
Client ID: TWE200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:35
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 13:11
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.858		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.858		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF **Lab Number:** L2008232

Project Number: 60323713 **Report Date:** 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-04
Client ID: TWS200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:40
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 13:18
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.65		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.65		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2008232
Report Date: 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-06
Client ID: TFE200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:50
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 13:32
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.192	J	ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.192	J	ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2008232
Report Date: 02/28/20

SAMPLE RESULTS

Lab ID: L2008232-07
Client ID: FB200225
Sample Location: 36 RIVERSIDE AVE, RENSSELAER, NY 12144

Date Collected: 02/25/20 09:30
Date Received: 02/25/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 02/27/20 13:39
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2008232
Report Date: 02/28/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/27/20 12:37
Analyst: AD

Extraction Method: EPA 3540C
Extraction Date: 02/26/20 08:55
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04,06-07 Batch: WG1344496-1						
Aroclor 1016	ND		ug/100cm2	0.500	0.044	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	67		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: 60323713

Lab Number: L2008232

Report Date: 02/28/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04,06-07 Batch: WG1344496-2 WG1344496-3									
Aroclor 1016	89		93		40-140	5		50	A
Aroclor 1260	85		86		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		78		30-150	A
Decachlorobiphenyl	66		68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		78		30-150	B
Decachlorobiphenyl	62		64		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2008232
Report Date: 02/28/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2008232-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2008232-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2008232-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2008232-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2008232-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		CANCELLED()
L2008232-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2008232-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		2.7	Y	Absent		NYTCL-8082-3540C_CM2(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L2008232
Project Number:	60323713	**Report Date:**	02/28/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2008232
Project Number:	60323713	**Report Date:**	02/28/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2008232
Project Number:	60323713	**Report Date:**	02/28/20

Data Qualifiers

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2008232
Project Number:	60323713	**Report Date:**	02/28/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 2/26/20

ALPHA Job #: L2008232

Client Information
Client: AECOM
Address: 250 Apollo Dr.
Chelmsford, MA
Phone: 978-905-2124
Fax:
Email: john.bleiler@AECOM.com

Project Information
Project Name: BASF
Project Location: 36 Riverside Ave Rensselear, NY 12144
Project #: 60323713
(Use Project name as Project #)
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard
Rush (only if pre approved) ✓
Due Date:
# of Days: 3

Deliverables
ASP-A
ASP-B
EQuIS (1 File)
EQuIS (4 File)
Other

Billing Information
Same as Client Info
PO #

Regulatory Requirement
NY TOGS
NY Part 375
AWQ Standards
NY CP-51
NY Restricted Use
Other
NY Unrestricted Use
NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ
NY
Other:

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

Include email to Kit.Williams@AECOM.com

Please specify Metals or TAL.

ANALYSIS

NYTCL 8082-3540

Sample Filtration
Done
Lab to do
Preservation
Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL 8082-3540	Sample Specific Comments	Total Bottle
08232 -01	TWW200225	2/25/20	0925	Wipe	RS	X	West Wall	1
-02	TWN200225	2/25/20	0930	Wipe	RS	X	North Wall	1
-03	TWE200225	2/25/20	0935	Wipe	RS	X	East Wall	1
-04	TWS200225	2/25/20	0940	Wipe	RS	X	South Wall	1
-05	TFW200225	2/25/20	0945	Wipe	RS	X	West Floor	1
-06	TFE200225	2/25/20	0950	Wipe	RS	X	East Floor	1
-07	FB200225	2/25/20	0930	Wipe	RS	X	Field Blank	1

Container Type: A
Preservative: O

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Renata Spinosa	2/25/20 1150		2/25/20 11:50
	2/25/20 12:12		2/26/20 08:20

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2013683
Client:	AECOM 250 Apollo Drive Chelmsford, MA 7080
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	60323713
Report Date:	03/31/20

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Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2013683-01	P1-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-02	P2-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-03	P3-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-04	P4-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-05	P5-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-06	P6-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-07	P7-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-08	P8-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-09	P9-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-10	P10-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-11	P11-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-12	P12-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-13	L1-200327	WIPE	RENSSELAER	03/27/20 10:50	03/27/20
L2013683-14	L2-200327	WIPE	RENSSELAER	03/27/20 10:50	03/27/20
L2013683-15	T1-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-16	T2-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-17	T3-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-18	T4-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-19	T5-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-20	T6-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20
L2013683-21	PFB-200327	WIPE	RENSSELAER	03/27/20 10:30	03/27/20
L2013683-22	TFB-200327	WIPE	RENSSELAER	03/27/20 09:35	03/27/20

Project Name:	BASF	**Lab Number:**	L2013683
Project Number:	60323713	**Report Date:**	03/31/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 03/31/20

ORGANICS

PCBS

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-01
Client ID: P1-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 18:39
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	2.60		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	2.60		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	62		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-02
Client ID: P2-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 18:46
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	64		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-03
Client ID: P3-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 18:53
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.22		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.22		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	65		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-04
Client ID: P4-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 18:59
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.52		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.52		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-05
Client ID: P5-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 19:06
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-06
Client ID: P6-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 19:13
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.00		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.00		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-07
Client ID: P7-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:21
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.22		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.22		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-08
Client ID: P8-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:28
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.712		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.712		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-09
Client ID: P9-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:35
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.672		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.672		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	58		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-10
Client ID: P10-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:42
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.586		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.586		ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	54		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-11
Client ID: P11-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:49
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.768		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.768		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-12
Client ID: P12-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:56
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	1.55		ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	1.55		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	85		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-13
Client ID: L1-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:50
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 21:02
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-14
Client ID: L2-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:50
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 21:09
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	59		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-15
Client ID: T1-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 19:52
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	85		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-16
Client ID: T2-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:03
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-17
Client ID: T3-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:15
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.175	J	ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.175	J	ug/100cm2	0.500	0.044	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	76		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-18
Client ID: T4-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:27
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		30-150	B
Decachlorobiphenyl	79		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-19
Client ID: T5-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:39
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	88		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-20
Client ID: T6-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 20:51
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	0.344	J	ug/100cm2	0.500	0.067	1	B
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	0.344	J	ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-21
Client ID: PFB-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 10:30
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 22:25
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	65		30-150	B

Project Name: BASF
Project Number: 60323713
Lab Number: L2013683
Report Date: 03/31/20

SAMPLE RESULTS

Lab ID: L2013683-22
Client ID: TFB-200327
Sample Location: RENSSELAER

Date Collected: 03/27/20 09:35
Date Received: 03/27/20
Field Prep: Not Specified

Sample Depth:
Matrix: Wipe
Analytical Method: 1,8082A
Analytical Date: 03/29/20 22:37
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/100cm2	0.500	0.044	1	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	1	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	1	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	1	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	1	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	1	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	1	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	1	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	1	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	83		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 03/29/20 19:20
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 02:03
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-14 Batch: WG1356036-1						
Aroclor 1016	ND		ug/100cm2	0.500	0.044	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 03/29/20 21:03
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 03/28/20 05:00
Cleanup Method: EPA 3665A
Cleanup Date: 03/29/20
Cleanup Method: EPA 3660B
Cleanup Date: 03/29/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 15-22 Batch: WG1356047-1						
Aroclor 1016	ND		ug/100cm2	0.500	0.044	A
Aroclor 1221	ND		ug/100cm2	0.500	0.050	A
Aroclor 1232	ND		ug/100cm2	0.500	0.106	A
Aroclor 1242	ND		ug/100cm2	0.500	0.067	A
Aroclor 1248	ND		ug/100cm2	0.500	0.075	A
Aroclor 1254	ND		ug/100cm2	0.500	0.055	A
Aroclor 1260	ND		ug/100cm2	0.500	0.092	A
Aroclor 1262	ND		ug/100cm2	0.500	0.064	A
Aroclor 1268	ND		ug/100cm2	0.500	0.052	A
PCBs, Total	ND		ug/100cm2	0.500	0.044	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	91		30-150	B
Decachlorobiphenyl	77		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: 60323713

Lab Number: L2013683

Report Date: 03/31/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-14 Batch: WG1356036-2 WG1356036-3									
Aroclor 1016	54		84		40-140	43		50	A
Aroclor 1260	52		78		40-140	41		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		84		30-150	A
Decachlorobiphenyl	47		77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		84		30-150	B
Decachlorobiphenyl	44		75		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: 60323713

Lab Number: L2013683

Report Date: 03/31/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 15-22 Batch: WG1356047-2 WG1356047-3									
Aroclor 1016	79		89		40-140	11		50	A
Aroclor 1260	74		82		40-140	11		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		95		30-150	A
Decachlorobiphenyl	82		90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		94		30-150	B
Decachlorobiphenyl	74		80		30-150	B

Project Name: BASF
Project Number: 60323713

Lab Number: L2013683
Report Date: 03/31/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2013683-01A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-02A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-03A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-04A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-05A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-06A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-07A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-08A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-09A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-10A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-11A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-12A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-13A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-14A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-15A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-16A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-17A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-18A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-19A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-20A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-21A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)
L2013683-22A	Glass 120ml/4oz w/1:4 Acetone:Hexane	A	NA		4.6	Y	Absent		NYTCL-8082-3540C_CM2(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L2013683
Project Number:	60323713	**Report Date:**	03/31/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L2013683
Project Number:	60323713	**Report Date:**	03/31/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

Project Name:	BASF	**Lab Number:**	L2013683
Project Number:	60323713	**Report Date:**	03/31/20

Data Qualifiers

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

BASF

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 3

Date Rec'd in Lab: 3/28/20

ALPHA Job #: L2013683

Client Information
Client: BASF
Address: 36 Riverside Ave
Rensselaer NY 12144
Phone: 978 905 2100
Fax:
Email: John.Bleier@aecom.com

Project Information
Project Name: BASF
Project Location: Rensselaer
Project # 60323713
(Use Project name as Project #) ☐
Project Manager: John Bleier
ALPHAQuote #:

Turn-Around Time
Standard ☐
Rush (only if pre approved) ☑
Due Date:
# of Days: 3

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☑ EQuIS (4 Files)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☑ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

ANALYSIS
NYSTL-SOC2-35VOC

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYSTL-SOC2-35VOC	Sample Specific Comments	Total Bottle
13683-01	P1-200327	3/27/20	1030	WIPE	TQ	X	Piping	1
02	P2-200327		1030		TQ	X		1
03	P3-200327		1030		TQ	X		1
04	P4-200327		1030		TQ	X		1
05	P5-200327		1030		TQ	X		1
06	P6-200327		1030		TQ	X		1
07	P7-200327		1030		TQ	X		1
08	P8-200327		1030		TQ	X		1
09	P9-200327		1030		TQ	X		1
10	P10-200327		1030		TQ	X		1

Container Type: A
Preservative: D

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Bankenbach	3/27/20 1420	John Cotter AAC	3/27/20 1420
John Cotter	3/27/20 1425		3/28/20 0040

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

BASF

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 3

Date Rec'd in Lab: 3/28/20

ALPHA Job #: L2013683

Client Information
Client:
Address: Same as Page 1
Phone:
Fax:
Email:

Project Information
Project Name:
Project Location:
Project #
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

NYTCL-8082-3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8082-3540C	Sample Specific Comments	Total Bottle
13683-11	P11-200327	3/27/20	1030	W.AQ	TQ	X		1
-12	P12-200327		1030			X		1
-13	L1-200327		1050			X	Liner	1
-14	L2-200327		1050			X		1
-15	T1-200327		0935			X	Carbon tanks	1
-16	T2-200327		0935			X		1
-17	T3-200327		0935			X		1
-18	T4-200327		0935			X		1
-19	T5-200327		0935			X		1
-20	T6-200327		0935			X		1

Container Type: A
Preservative: O

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Rutherford	3/27/20 1420	Jim Conley	3/27/20 1420
Jim Conley	3/27/20 1425		3/28/20 0815

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

BASF

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 3 of 3

Date Rec'd in Lab: 3/28/20

ALPHA Job #: L2013683

Client Information
Client:
Address: Same as Page 1
Phone:
Fax:
Email:

Project Information
Project Name:
Project Location:
Project #
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

NYTCL-8082-3540C

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NYTCL-8082-3540C	Sample Specific Comments	Total Bottle
13683-21	PFB-200327	3/27/20	1030	WAQ	TQ	X	Field blank	1
-22	TFB-200327	3/27/20	0935	WAQ	TQ	X	Field blank	1

Container Type: A
Preservative: O

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Kirkpatrick	3/27/20 1420		3/27/20 1420
	3/27/20 1428		3/28/20 00:10

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: July 24, 2018 11:37

Project: Rensselaer

Account #: 04285
Group Number: 1965554
SDG: RNS01
PO Number: BASFRNNY.P093
State of Sample Origin: NY

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

Electronic Copy To	AECOM	Attn: Mike Garner
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover

Respectfully Submitted,

Kay Hower

(717) 556-7364



2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
NOA-01-1 Composite Soil	07/10/2018 13:45	9702387
NOA-01-MS Composite Soil	07/10/2018 13:45	9702388
NOA-01-MSD Composite Soil	07/10/2018 13:45	9702389
NOA-01-1 Duplicate Composite Soil	07/10/2018 13:45	9702390
NOA-01-2 Composite Soil	07/10/2018 13:45	9702391
NOA-01-3 Grab Soil	07/10/2018 13:45	9702392
NOA-01-4 Grab Soil	07/10/2018 13:45	9702393
NOA-02-1 Composite Soil	07/11/2018 15:00	9702394
NOA-02-2 Composite Soil	07/11/2018 15:00	9702395
NOA-02-3 Grab Soil	07/11/2018 15:00	9702396
NOA-02-4 Grab Soil	07/11/2018 15:00	9702397
NOA-01-DUP Composite Soil	07/10/2018 13:45	9702398
VS-01-1 Composite Soil	07/11/2018 13:45	9702399
VS-01-2 Grab Soil	07/11/2018 13:45	9702400
VS-01-3 Grab Soil	07/11/2018 13:45	9702401
VS-01-4 Grab Soil	07/11/2018 13:45	9702402
LA-01-1 Composite Soil	07/12/2018 10:25	9702403
LA-01-2 Grab Soil	07/12/2018 10:25	9702404
LA-01-3 Grab Soil	07/12/2018 10:25	9702405
LA-01-4 Grab Soil	07/12/2018 10:25	9702406
T1A3728071118 Grab Water	07/11/2018 12:45	9702407
T2A393071118 Grab Water	07/11/2018 12:45	9702408
TB18163-Cooler 1 Water	06/15/2018	9702409
TB18163-Cooler 2 Water	06/15/2018	9702410
TB18163-Cooler 3 Water	06/15/2018	9702411
TB18163-Cooler 4 Water	06/15/2018	9702412

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **NOA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01BKG

BASF Corporation
ELLE Sample #: **SW 9702387**
ELLE Group #: **1965554**
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	40	6	18	0.87
11995	Benzene	71-43-2	1 J	0.5	5	0.87
11995	2-Butanone	78-93-3	N.D.	4	9	0.87
11995	Carbon Disulfide	75-15-0	3 J	0.9	5	0.87
11995	Carbon Tetrachloride	56-23-5	N.D.	0.9	5	0.87
11995	Chlorobenzene	108-90-7	N.D.	0.9	5	0.87
11995	Chloroethane	75-00-3	N.D.	2	5	0.87
11995	Chloroform	67-66-3	N.D.	0.9	5	0.87
11995	Dibromochloromethane	124-48-1	N.D.	0.9	5	0.87
11995	1,1-Dichloroethane	75-34-3	N.D.	0.9	5	0.87
11995	1,2-Dichloroethane	107-06-2	N.D.	0.9	5	0.87
11995	1,1-Dichloroethene	75-35-4	N.D.	0.9	5	0.87
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.9	5	0.87
11995	1,3-Dichloropropane	142-28-9	N.D.	0.9	5	0.87
11995	Ethylbenzene	100-41-4	N.D.	0.9	5	0.87
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	9	0.87
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.87
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.9	5	0.87
11995	Tetrachloroethene	127-18-4	N.D.	0.9	5	0.87
11995	Toluene	108-88-3	N.D.	0.9	5	0.87
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.9	5	0.87
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.9	5	0.87
11995	Trichloroethene	79-01-6	N.D.	0.9	5	0.87
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.9	5	0.87
11995	Vinyl Chloride	75-01-4	N.D.	0.9	5	0.87
11995	Xylene (Total)	1330-20-7	N.D.	0.9	5	0.87
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	12 J	3	17	1
10726	Acenaphthylene	208-96-8	35	3	17	1
10726	Aniline	62-53-3	N.D.	170	520	1
10726	Anthracene	120-12-7	66	3	17	1
10726	Benzo(a)anthracene	56-55-3	240	3	17	1
10726	Benzo(a)pyrene	50-32-8	220	7	17	1
10726	Benzo(b)fluoranthene	205-99-2	290	3	17	1
10726	Benzo(g,h,i)perylene	191-24-2	140	7	17	1
10726	Benzo(k)fluoranthene	207-08-9	100	3	17	1
10726	Butylbenzylphthalate	85-68-7	N.D.	70	170	1
10726	Di-n-butylphthalate	84-74-2	N.D.	70	170	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	17	38	1
10726	4-Chloroaniline	106-47-8	N.D.	35	170	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01BKG

BASF Corporation
ELLE Sample #: **SW 9702387**
ELLE Group #: **1965554**
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2-Chlorophenol	95-57-8	N.D.	17	38	1
10726	Chrysene	218-01-9	230	3	17	1
10726	Dibenz(a,h)anthracene	53-70-3	32	3	17	1
10726	Dibenzofuran	132-64-9	24 J	17	38	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	21	52	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	17	38	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	17	38	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	100	350	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	17	38	1
10726	Diethylphthalate	84-66-2	N.D.	70	170	1
10726	Dimethylphthalate	131-11-3	N.D.	70	170	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	380	1,000	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	21	52	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	70	170	1
10726	Fluoranthene	206-44-0	440	3	17	1
10726	Fluorene	86-73-7	15 J	3	17	1
10726	Hexachlorobenzene	118-74-1	N.D.	3	17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	120	7	17	1
10726	Isophorone	78-59-1	N.D.	17	38	1
10726	2-Methylnaphthalene	91-57-6	74	10	35	1
10726	2-Methylphenol	95-48-7	N.D.	28	70	1
10726	4-Methylphenol	106-44-5	N.D.	21	52	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	62	7	17	1
10726	2-Nitroaniline	88-74-4	83	21	52	1
10726	3-Nitroaniline	99-09-2	280	70	170	1
10726	Nitrobenzene	98-95-3	160	28	70	1
10726	2-Nitrophenol	88-75-5	N.D.	17	38	1
10726	4-Nitrophenol	100-02-7	N.D.	170	520	1
10726	Di-n-octylphthalate	117-84-0	N.D.	70	170	1
10726	Pentachlorophenol	87-86-5	N.D.	38	170	1
10726	Phenanthrene	85-01-8	190	3	17	1
10726	Phenol	108-95-2	N.D.	24	52	1
10726	Pyrene	129-00-0	410	3	17	1
10726	1,2,4-Trichlorobenzene	120-82-1	37 J	17	38	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	21	52	1
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01BKG

BASF Corporation
ELLE Sample #: SW 9702387
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1221	11104-28-2	N.D. D1	4.8	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.4	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	19 D1	3.5	18	1
10885	PCB-1254	11097-69-1	31 D2	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.1	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	13 JD2	3.5	18	1
10885	Total PCBs	1336-36-3	62	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D1	0.89	4.3	5
10590	Alpha BHC	319-84-6	N.D. D2	0.89	4.3	5
10590	Beta BHC	319-85-7	N.D. D1	1.6	5.2	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.89	4.3	5
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.89	4.3	5
10590	Gamma Chlordane	5103-74-2	N.D. D1	1.3	4.3	5
10590	p,p-DDD	72-54-8	N.D. D2	1.7	8.9	5
10590	p,p-DDE	72-55-9	N.D. D2	1.7	8.9	5
10590	p,p-DDT	50-29-3	5.1 JD1	1.9	8.9	5
10590	Delta BHC	319-86-8	N.D. D2	2.4	4.7	5
10590	Dieldrin	60-57-1	N.D. D1	1.7	8.9	5
10590	Endosulfan I	959-98-8	N.D. D1	1.2	4.3	5
10590	Endosulfan II	33213-65-9	N.D. D1	1.7	8.9	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	1.7	8.9	5
10590	Endrin	72-20-8	N.D. D1	1.8	8.9	5
10590	Endrin Ketone	53494-70-5	N.D. D2	3.1	9.4	5
10590	Heptachlor	76-44-8	N.D. D2	0.89	4.3	5
10590	Heptachlor Epoxide	1024-57-3	N.D. D1	0.89	4.3	5
10590	Methoxychlor	72-43-5	N.D. D1	8.9	35	5

Reporting limits were raised due to interference from the sample matrix.

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	14.4	1.00	8.36	1
06946	Barium	7440-39-3	69.8	0.125	0.836	1
06949	Cadmium	7440-43-9	0.0894 J	0.0836	0.836	1
06951	Chromium	7440-47-3	229	0.176	2.51	1
06955	Lead	7439-92-1	74.3	0.502	2.51	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01BKG

BASF Corporation
ELLE Sample #: SW 9702387
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06936	Selenium	7782-49-2	N.D.	1.25	8.36	1
06966	Silver	7440-22-4	1.28 J	0.334	1.67	1
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.188	0.0325	0.139	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.8	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A182003AA	07/20/2018 01:15	Patrick T Herres	0.87
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 13:48	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 01:15	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 09:12	Andrea L Jones	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01BKG

BASF Corporation
ELLE Sample #: SW 9702387
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 13:44	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 13:51	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MS Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MS

BASF Corporation
ELLE Sample #: SW 9702388
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	230	7	20	0.93
11995	Benzene	71-43-2	21	0.5	5	0.93
11995	2-Butanone	78-93-3	200	4	10	0.93
11995	Carbon Disulfide	75-15-0	21	1	5	0.93
11995	Carbon Tetrachloride	56-23-5	21	1	5	0.93
11995	Chlorobenzene	108-90-7	18	1	5	0.93
11995	Chloroethane	75-00-3	18	2	5	0.93
11995	Chloroform	67-66-3	21	1	5	0.93
11995	Dibromochloromethane	124-48-1	19	1	5	0.93
11995	1,1-Dichloroethane	75-34-3	21	1	5	0.93
11995	1,2-Dichloroethane	107-06-2	21	1	5	0.93
11995	1,1-Dichloroethene	75-35-4	21	1	5	0.93
11995	trans-1,2-Dichloroethene	156-60-5	19	1	5	0.93
11995	1,3-Dichloropropane	142-28-9	20	1	5	0.93
11995	Ethylbenzene	100-41-4	18	1	5	0.93
11995	4-Methyl-2-pentanone	108-10-1	130	3	10	0.93
11995	Methylene Chloride	75-09-2	20	2	5	0.93
11995	1,1,2,2-Tetrachloroethane	79-34-5	26	1	5	0.93
11995	Tetrachloroethene	127-18-4	19	1	5	0.93
11995	Toluene	108-88-3	20	1	5	0.93
11995	1,1,1-Trichloroethane	71-55-6	19	1	5	0.93
11995	1,1,2-Trichloroethane	79-00-5	22	1	5	0.93
11995	Trichloroethene	79-01-6	19	1	5	0.93
11995	1,2,3-Trichloropropane	96-18-4	28	1	5	0.93
11995	Vinyl Chloride	75-01-4	21	1	5	0.93
11995	Xylene (Total)	1330-20-7	51	1	5	0.93
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,800	3	17	1
10726	Acenaphthylene	208-96-8	1,800	3	17	1
10726	Aniline	62-53-3	1,400	170	520	1
10726	Anthracene	120-12-7	1,800	3	17	1
10726	Benzo(a)anthracene	56-55-3	1,700	3	17	1
10726	Benzo(a)pyrene	50-32-8	1,900	7	17	1
10726	Benzo(b)fluoranthene	205-99-2	1,900	3	17	1
10726	Benzo(g,h,i)perylene	191-24-2	1,800	7	17	1
10726	Benzo(k)fluoranthene	207-08-9	1,700	3	17	1
10726	Butylbenzylphthalate	85-68-7	1,700	70	170	1
10726	Di-n-butylphthalate	84-74-2	1,700	70	170	1
10726	4-Chloro-3-methylphenol	59-50-7	1,700	17	38	1
10726	4-Chloroaniline	106-47-8	1,500	35	170	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MS Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MS

BASF Corporation
ELLE Sample #: **SW 9702388**
ELLE Group #: **1965554**
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	2-Chlorophenol	95-57-8	1,700		17	38	1
10726	Chrysene	218-01-9	1,600		3	17	1
10726	Dibenz(a,h)anthracene	53-70-3	1,700		3	17	1
10726	Dibenzofuran	132-64-9	1,700		17	38	1
10726	1,2-Dichlorobenzene	95-50-1	1,700		21	52	1
10726	1,3-Dichlorobenzene	541-73-1	1,600		17	38	1
10726	1,4-Dichlorobenzene	106-46-7	1,600		17	38	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,500		100	350	1
10726	2,4-Dichlorophenol	120-83-2	1,800		17	38	1
10726	Diethylphthalate	84-66-2	1,600		70	170	1
10726	Dimethylphthalate	131-11-3	1,600		70	170	1
10726	2,4-Dinitrophenol	51-28-5	2,300		380	1,000	1
10726	2,6-Dinitrotoluene	606-20-2	1,700		21	52	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,600		70	170	1
10726	Fluoranthene	206-44-0	2,000		3	17	1
10726	Fluorene	86-73-7	1,600		3	17	1
10726	Hexachlorobenzene	118-74-1	1,800		3	17	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,700		7	17	1
10726	Isophorone	78-59-1	1,600		17	38	1
10726	2-Methylnaphthalene	91-57-6	1,700		10	35	1
10726	2-Methylphenol	95-48-7	1,600		28	70	1
10726	4-Methylphenol	106-44-5	1,700		21	52	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	1,700		7	17	1
10726	2-Nitroaniline	88-74-4	1,900		21	52	1
10726	3-Nitroaniline	99-09-2	2,100		70	170	1
10726	Nitrobenzene	98-95-3	1,800		28	70	1
10726	2-Nitrophenol	88-75-5	1,800		17	38	1
10726	4-Nitrophenol	100-02-7	1,700		170	520	1
10726	Di-n-octylphthalate	117-84-0	1,900		70	170	1
10726	Pentachlorophenol	87-86-5	1,400		38	170	1
10726	Phenanthrene	85-01-8	1,900		3	17	1
10726	Phenol	108-95-2	1,500		24	52	1
10726	Pyrene	129-00-0	2,000		3	17	1
10726	1,2,4-Trichlorobenzene	120-82-1	1,800		17	38	1
10726	2,4,5-Trichlorophenol	95-95-4	1,700		21	52	1
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**		**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	150	D2	3.8	18	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MS Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MS

BASF Corporation
ELLE Sample #: SW 9702388
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1221	11104-28-2	N.D. D1	4.8	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.4	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	140 D1	3.5	18	1
10885	PCB-1254	11097-69-1	46 PD2	3.5	18	1
10885	PCB-1260	11096-82-5	210 D1	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	55 D2	3.5	18	1
10885	Total PCBs	1336-36-3	590	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	3.1 JD1	0.89	4.3	5
10590	Alpha BHC	319-84-6	2.9 JD1	0.89	4.3	5
10590	Beta BHC	319-85-7	3.5 JD1	1.6	5.2	5
10590	Gamma BHC - Lindane	58-89-9	2.9 JD2	0.89	4.3	5
10590	Alpha Chlordane	5103-71-9	3.1 JD2	0.89	4.3	5
10590	Gamma Chlordane	5103-74-2	3.1 JPD1	1.3	4.3	5
10590	p,p-DDD	72-54-8	6.1 JD2	1.7	8.9	5
10590	p,p-DDE	72-55-9	7.2 JD2	1.7	8.9	5
10590	p,p-DDT	50-29-3	10 D1	1.9	8.9	5
10590	Delta BHC	319-86-8	3.1 JD1	2.4	4.7	5
10590	Dieldrin	60-57-1	6.4 JD2	1.7	8.9	5
10590	Endosulfan I	959-98-8	2.0 JD2	1.2	4.3	5
10590	Endosulfan II	33213-65-9	5.0 JD1	1.7	8.9	5
10590	Endosulfan Sulfate	1031-07-8	6.7 JD1	1.7	8.9	5
10590	Endrin	72-20-8	6.3 JD1	1.8	8.9	5
10590	Endrin Ketone	53494-70-5	6.4 JPD2	3.1	9.4	5
10590	Heptachlor	76-44-8	3.1 JD2	0.89	4.3	5
10590	Heptachlor Epoxide	1024-57-3	3.3 JD1	0.89	4.3	5
10590	Methoxychlor	72-43-5	38 PD1	8.9	35	5
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	26.8	1.10	9.15	1
06946	Barium	7440-39-3	255	0.137	0.915	1
06949	Cadmium	7440-43-9	4.59	0.0915	0.915	1
06951	Chromium	7440-47-3	140	0.192	2.75	1
06955	Lead	7439-92-1	73.5	0.549	2.75	1
06936	Selenium	7782-49-2	12.7	1.37	9.15	1
06966	Silver	7440-22-4	5.08	0.366	1.83	1
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MS Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MS

BASF Corporation
ELLE Sample #: SW 9702388
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		**SW-846 7471B**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.547	0.0315	0.135	1
Wet Chemistry		**SM 2540 G-1997 %Moisture Calc**	**%**	**%**	**%**	
00118	Moisture	n.a.	5.8	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/16/2018 22:49	Kelly Devlin	0.93
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 14:11	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 01:26	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 09:39	Andrea L Jones	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 13:52	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MS Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MS

BASF Corporation
ELLE Sample #: SW 9702388
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 13:57	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MSD Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MSD

BASF Corporation
ELLE Sample #: **SW 9702389**
ELLE Group #: **1965554**
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	180	7	20	0.94
11995	Benzene	71-43-2	20	0.5	5	0.94
11995	2-Butanone	78-93-3	170	4	10	0.94
11995	Carbon Disulfide	75-15-0	20	1	5	0.94
11995	Carbon Tetrachloride	56-23-5	20	1	5	0.94
11995	Chlorobenzene	108-90-7	18	1	5	0.94
11995	Chloroethane	75-00-3	20	2	5	0.94
11995	Chloroform	67-66-3	21	1	5	0.94
11995	Dibromochloromethane	124-48-1	20	1	5	0.94
11995	1,1-Dichloroethane	75-34-3	21	1	5	0.94
11995	1,2-Dichloroethane	107-06-2	22	1	5	0.94
11995	1,1-Dichloroethene	75-35-4	22	1	5	0.94
11995	trans-1,2-Dichloroethene	156-60-5	20	1	5	0.94
11995	1,3-Dichloropropane	142-28-9	21	1	5	0.94
11995	Ethylbenzene	100-41-4	17	1	5	0.94
11995	4-Methyl-2-pentanone	108-10-1	140	3	10	0.94
11995	Methylene Chloride	75-09-2	21	2	5	0.94
11995	1,1,2,2-Tetrachloroethane	79-34-5	23	1	5	0.94
11995	Tetrachloroethene	127-18-4	18	1	5	0.94
11995	Toluene	108-88-3	19	1	5	0.94
11995	1,1,1-Trichloroethane	71-55-6	20	1	5	0.94
11995	1,1,2-Trichloroethane	79-00-5	22	1	5	0.94
11995	Trichloroethene	79-01-6	19	1	5	0.94
11995	1,2,3-Trichloropropane	96-18-4	25	1	5	0.94
11995	Vinyl Chloride	75-01-4	22	1	5	0.94
11995	Xylene (Total)	1330-20-7	51	1	5	0.94
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	1,900	4	18	1
10726	Acenaphthylene	208-96-8	1,900	4	18	1
10726	Aniline	62-53-3	1,200	180	530	1
10726	Anthracene	120-12-7	1,900	4	18	1
10726	Benzo(a)anthracene	56-55-3	1,700	4	18	1
10726	Benzo(a)pyrene	50-32-8	1,900	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	2,100	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	1,900	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	1,600	4	18	1
10726	Butylbenzylphthalate	85-68-7	1,700	71	180	1
10726	Di-n-butylphthalate	84-74-2	1,700	71	180	1
10726	4-Chloro-3-methylphenol	59-50-7	1,800	18	39	1
10726	4-Chloroaniline	106-47-8	1,100	35	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MSD Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MSD

BASF Corporation
ELLE Sample #: SW 9702389
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	2-Chlorophenol	95-57-8	1,800		18	39	1
10726	Chrysene	218-01-9	1,600		4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	1,900		4	18	1
10726	Dibenzofuran	132-64-9	1,800		18	39	1
10726	1,2-Dichlorobenzene	95-50-1	1,700		21	53	1
10726	1,3-Dichlorobenzene	541-73-1	1,700		18	39	1
10726	1,4-Dichlorobenzene	106-46-7	1,700		18	39	1
10726	3,3'-Dichlorobenzidine	91-94-1	1,500		110	350	1
10726	2,4-Dichlorophenol	120-83-2	1,800		18	39	1
10726	Diethylphthalate	84-66-2	1,800		71	180	1
10726	Dimethylphthalate	131-11-3	1,700		71	180	1
10726	2,4-Dinitrophenol	51-28-5	2,600		390	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	1,800		21	53	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	1,600		71	180	1
10726	Fluoranthene	206-44-0	1,900		4	18	1
10726	Fluorene	86-73-7	1,800		4	18	1
10726	Hexachlorobenzene	118-74-1	1,900		4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	1,900		7	18	1
10726	Isophorone	78-59-1	1,700		18	39	1
10726	2-Methylnaphthalene	91-57-6	1,800		11	35	1
10726	2-Methylphenol	95-48-7	1,700		28	71	1
10726	4-Methylphenol	106-44-5	1,700		21	53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	1,800		7	18	1
10726	2-Nitroaniline	88-74-4	2,000		21	53	1
10726	3-Nitroaniline	99-09-2	1,800		71	180	1
10726	Nitrobenzene	98-95-3	1,800		28	71	1
10726	2-Nitrophenol	88-75-5	1,900		18	39	1
10726	4-Nitrophenol	100-02-7	1,700		180	530	1
10726	Di-n-octylphthalate	117-84-0	2,000		71	180	1
10726	Pentachlorophenol	87-86-5	1,300		39	180	1
10726	Phenanthrene	85-01-8	1,900		4	18	1
10726	Phenol	108-95-2	1,700		25	53	1
10726	Pyrene	129-00-0	1,900		4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	1,800		18	39	1
10726	2,4,5-Trichlorophenol	95-95-4	1,800		21	53	1
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**		**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	170	D2	3.8	18	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MSD Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MSD

BASF Corporation
ELLE Sample #: SW 9702389
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	140 D2	3.5	18	1
10885	PCB-1254	11097-69-1	35 D1	3.5	18	1
10885	PCB-1260	11096-82-5	200 D1	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D2	3.5	18	1
10885	PCB-1268	11100-14-4	68 D2	3.5	18	1
10885	Total PCBs	1336-36-3	600	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	3.0 JD1	0.89	4.3	5
10590	Alpha BHC	319-84-6	2.8 JD2	0.89	4.3	5
10590	Beta BHC	319-85-7	3.9 JD1	1.6	5.2	5
10590	Gamma BHC - Lindane	58-89-9	2.9 JD1	0.89	4.3	5
10590	Alpha Chlordane	5103-71-9	3.0 JD1	0.89	4.3	5
10590	Gamma Chlordane	5103-74-2	3.0 JPD1	1.3	4.3	5
10590	p,p-DDD	72-54-8	6.3 JD2	1.7	8.9	5
10590	p,p-DDE	72-55-9	6.3 JD2	1.7	8.9	5
10590	p,p-DDT	50-29-3	7.3 JD1	1.9	8.9	5
10590	Delta BHC	319-86-8	3.0 JD2	2.4	4.7	5
10590	Dieldrin	60-57-1	6.1 JD1	1.7	8.9	5
10590	Endosulfan I	959-98-8	2.1 JD2	1.1	4.3	5
10590	Endosulfan II	33213-65-9	5.0 JD1	1.7	8.9	5
10590	Endosulfan Sulfate	1031-07-8	6.4 JD1	1.7	8.9	5
10590	Endrin	72-20-8	6.1 JD1	1.8	8.9	5
10590	Endrin Ketone	53494-70-5	6.4 JD2	3.1	9.4	5
10590	Heptachlor	76-44-8	3.0 JD2	0.89	4.3	5
10590	Heptachlor Epoxide	1024-57-3	3.2 JD1	0.89	4.3	5
10590	Methoxychlor	72-43-5	37 D1	8.9	35	5
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	24.6	1.05	8.77	1
06946	Barium	7440-39-3	242	0.132	0.877	1
06949	Cadmium	7440-43-9	4.40	0.0877	0.877	1
06951	Chromium	7440-47-3	490	0.184	2.63	1
06955	Lead	7439-92-1	98.3	0.526	2.63	1
06936	Selenium	7782-49-2	12.8	1.32	8.77	1
06966	Silver	7440-22-4	4.92	0.351	1.75	1
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MSD Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MSD

BASF Corporation
ELLE Sample #: SW 9702389
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		**SW-846 7471B**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.339	0.0320	0.137	1
Wet Chemistry		**SM 2540 G-1997 %Moisture Calc**	**%**	**%**	**%**	
00118	Moisture	n.a.	5.8	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/16/2018 23:12	Kelly Devlin	0.94
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 14:35	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 01:38	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 10:07	Andrea L Jones	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 13:55	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-MSD Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01MSD

BASF Corporation
ELLE Sample #: SW 9702389
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 13:59	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-1 Duplicate Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-01DUP

BASF Corporation
ELLE Sample #: SW 9702390
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	11.6	1.13	9.39	1
06946	Barium	7440-39-3	57.6	0.141	0.939	1
06949	Cadmium	7440-43-9	0.148 J	0.0939	0.939	1
06951	Chromium	7440-47-3	211	0.197	2.82	1
06955	Lead	7439-92-1	88.9	0.564	2.82	1
06936	Selenium	7782-49-2	N.D.	1.41	9.39	1
06966	Silver	7440-22-4	0.931 J	0.376	1.88	1
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.280	0.0315	0.135	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00118	Moisture	n.a.	5.8	0.50	0.50	1
00121	Moisture Duplicate	n.a.	5.3	0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010C	1	181971063702	07/18/2018 23:46	Xavier Arroyo	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 13:50	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 13:55	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00118	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1
00121	Moisture Duplicate	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-02

BASF Corporation
ELLE Sample #: SW 9702391
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	75	7	21	0.97
11995	Benzene	71-43-2	3 J	0.5	5	0.97
11995	2-Butanone	78-93-3	5 J	4	10	0.97
11995	Carbon Disulfide	75-15-0	3 J	1	5	0.97
11995	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.97
11995	Chlorobenzene	108-90-7	2 J	1	5	0.97
11995	Chloroethane	75-00-3	N.D.	2	5	0.97
11995	Chloroform	67-66-3	N.D.	1	5	0.97
11995	Dibromochloromethane	124-48-1	N.D.	1	5	0.97
11995	1,1-Dichloroethane	75-34-3	N.D.	1	5	0.97
11995	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.97
11995	1,1-Dichloroethene	75-35-4	N.D.	1	5	0.97
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	1	5	0.97
11995	1,3-Dichloropropane	142-28-9	N.D.	1	5	0.97
11995	Ethylbenzene	100-41-4	N.D.	1	5	0.97
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	0.97
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.97
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.97
11995	Tetrachloroethene	127-18-4	N.D.	1	5	0.97
11995	Toluene	108-88-3	1 J	1	5	0.97
11995	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.97
11995	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.97
11995	Trichloroethene	79-01-6	N.D.	1	5	0.97
11995	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.97
11995	Vinyl Chloride	75-01-4	N.D.	1	5	0.97
11995	Xylene (Total)	1330-20-7	N.D.	1	5	0.97

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	9 J	4	18	1
10726	Acenaphthylene	208-96-8	40	4	18	1
10726	Aniline	62-53-3	N.D.	180	530	1
10726	Anthracene	120-12-7	100	4	18	1
10726	Benzo(a)anthracene	56-55-3	260	4	18	1
10726	Benzo(a)pyrene	50-32-8	250	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	320	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	170	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	110	4	18	1
10726	Butylbenzylphthalate	85-68-7	N.D.	71	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-02

BASF Corporation
ELLE Sample #: SW 9702391
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.		71	180	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		18	39	1
10726	4-Chloroaniline	106-47-8	N.D.		35	180	1
10726	2-Chlorophenol	95-57-8	N.D.		18	39	1
10726	Chrysene	218-01-9	260		4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	39		4	18	1
10726	Dibenzofuran	132-64-9	N.D.		18	39	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.		21	53	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.		18	39	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.		18	39	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		110	350	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		18	39	1
10726	Diethylphthalate	84-66-2	N.D.		71	180	1
10726	Dimethylphthalate	131-11-3	N.D.		71	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		390	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		21	53	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		71	180	1
10726	Fluoranthene	206-44-0	460		4	18	1
10726	Fluorene	86-73-7	14	J	4	18	1
10726	Hexachlorobenzene	118-74-1	N.D.		4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	130		7	18	1
10726	Isophorone	78-59-1	N.D.		18	39	1
10726	2-Methylnaphthalene	91-57-6	37		11	35	1
10726	2-Methylphenol	95-48-7	N.D.		28	71	1
10726	4-Methylphenol	106-44-5	N.D.		21	53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	45		7	18	1
10726	2-Nitroaniline	88-74-4	130		21	53	1
10726	3-Nitroaniline	99-09-2	360		71	180	1
10726	Nitrobenzene	98-95-3	190		28	71	1
10726	2-Nitrophenol	88-75-5	N.D.		18	39	1
10726	4-Nitrophenol	100-02-7	N.D.		180	530	1
10726	Di-n-octylphthalate	117-84-0	N.D.		71	180	1
10726	Pentachlorophenol	87-86-5	N.D.		39	180	1
10726	Phenanthrene	85-01-8	220		4	18	1
10726	Phenol	108-95-2	N.D.		25	53	1
10726	Pyrene	129-00-0	430		4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.		18	39	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		21	53	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-02

BASF Corporation
ELLE Sample #: SW 9702391
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.8	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.4	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	38 D1	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	15 JD2	3.5	18	1
10885	Total PCBs	1336-36-3	52	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	0.26 JPD1	0.18	0.87	1
10590	Alpha BHC	319-84-6	0.22 JPD2	0.18	0.87	1
10590	Beta BHC	319-85-7	N.D. D1	0.32	1.1	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	0.18	0.87	1
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.18	0.87	1
10590	Gamma Chlordane	5103-74-2	N.D. D1	0.26	0.87	1
10590	p,p-DDD	72-54-8	N.D. D1	0.35	1.8	1
10590	p,p-DDE	72-55-9	0.85 JPD2	0.35	1.8	1
10590	p,p-DDT	50-29-3	1.9 D1	0.38	1.8	1
10590	Delta BHC	319-86-8	N.D. D2	0.47	0.95	1
10590	Dieldrin	60-57-1	N.D. D2	0.35	1.8	1
10590	Endosulfan I	959-98-8	N.D. D1	0.23	0.87	1
10590	Endosulfan II	33213-65-9	N.D. D1	0.35	1.8	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.35	1.8	1
10590	Endrin	72-20-8	N.D. D2	0.36	1.8	1
10590	Endrin Ketone	53494-70-5	N.D. D2	0.63	1.9	1
10590	Heptachlor	76-44-8	N.D. D2	0.18	0.87	1
10590	Heptachlor Epoxide	1024-57-3	0.42 JPD1	0.18	0.87	1
10590	Methoxychlor	72-43-5	N.D. VD1	4.3	7.0	1
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	14.5	1.24	10.4	1
06946	Barium	7440-39-3	52.9	0.156	1.04	1
06949	Cadmium	7440-43-9	0.211 J	0.104	1.04	1
06951	Chromium	7440-47-3	125	0.218	3.11	1
06955	Lead	7439-92-1	73.3	0.622	3.11	1
06936	Selenium	7782-49-2	N.D.	1.56	10.4	1
06966	Silver	7440-22-4	0.713 J	0.415	2.07	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-02

BASF Corporation
ELLE Sample #: SW 9702391
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		**SW-846 7471B**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.143	0.0333	0.142	1
Wet Chemistry		**SM 2540 G-1997 %Moisture Calc**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.4	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/16/2018 23:34	Kelly Devlin	0.97
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 16:57	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 01:49	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 06:00	Andrea L Jones	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-02

BASF Corporation
ELLE Sample #: SW 9702391
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:21	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:27	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-03

BASF Corporation
ELLE Sample #: SW 9702392
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	54	7	19	0.89
11995	Benzene	71-43-2	1 J	0.5	5	0.89
11995	2-Butanone	78-93-3	N.D.	4	9	0.89
11995	Carbon Disulfide	75-15-0	2 J	0.9	5	0.89
11995	Carbon Tetrachloride	56-23-5	N.D.	0.9	5	0.89
11995	Chlorobenzene	108-90-7	1 J	0.9	5	0.89
11995	Chloroethane	75-00-3	N.D.	2	5	0.89
11995	Chloroform	67-66-3	N.D.	0.9	5	0.89
11995	Dibromochloromethane	124-48-1	N.D.	0.9	5	0.89
11995	1,1-Dichloroethane	75-34-3	N.D.	0.9	5	0.89
11995	1,2-Dichloroethane	107-06-2	N.D.	0.9	5	0.89
11995	1,1-Dichloroethene	75-35-4	N.D.	0.9	5	0.89
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.9	5	0.89
11995	1,3-Dichloropropane	142-28-9	N.D.	0.9	5	0.89
11995	Ethylbenzene	100-41-4	N.D.	0.9	5	0.89
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	9	0.89
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.89
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.9	5	0.89
11995	Tetrachloroethene	127-18-4	N.D.	0.9	5	0.89
11995	Toluene	108-88-3	N.D.	0.9	5	0.89
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.9	5	0.89
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.9	5	0.89
11995	Trichloroethene	79-01-6	N.D.	0.9	5	0.89
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.9	5	0.89
11995	Vinyl Chloride	75-01-4	N.D.	0.9	5	0.89
11995	Xylene (Total)	1330-20-7	N.D.	0.9	5	0.89
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	5.1	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-03

BASF Corporation
ELLE Sample #: SW 9702392
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/16/2018 23:57	Kelly Devlin	0.89
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-04

BASF Corporation
ELLE Sample #: SW 9702393
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	80	6	18	0.88
11995	Benzene	71-43-2	0.7 J	0.5	5	0.88
11995	2-Butanone	78-93-3	N.D.	4	9	0.88
11995	Carbon Disulfide	75-15-0	2 J	0.9	5	0.88
11995	Carbon Tetrachloride	56-23-5	N.D.	0.9	5	0.88
11995	Chlorobenzene	108-90-7	N.D.	0.9	5	0.88
11995	Chloroethane	75-00-3	N.D.	2	5	0.88
11995	Chloroform	67-66-3	N.D.	0.9	5	0.88
11995	Dibromochloromethane	124-48-1	N.D.	0.9	5	0.88
11995	1,1-Dichloroethane	75-34-3	N.D.	0.9	5	0.88
11995	1,2-Dichloroethane	107-06-2	N.D.	0.9	5	0.88
11995	1,1-Dichloroethene	75-35-4	N.D.	0.9	5	0.88
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.9	5	0.88
11995	1,3-Dichloropropane	142-28-9	N.D.	0.9	5	0.88
11995	Ethylbenzene	100-41-4	N.D.	0.9	5	0.88
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	9	0.88
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.88
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.9	5	0.88
11995	Tetrachloroethene	127-18-4	N.D.	0.9	5	0.88
11995	Toluene	108-88-3	N.D.	0.9	5	0.88
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.9	5	0.88
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.9	5	0.88
11995	Trichloroethene	79-01-6	N.D.	0.9	5	0.88
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.9	5	0.88
11995	Vinyl Chloride	75-01-4	N.D.	0.9	5	0.88
11995	Xylene (Total)	1330-20-7	N.D.	0.9	5	0.88
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	4.3	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-04

BASF Corporation
ELLE Sample #: SW 9702393
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 00:20	Kelly Devlin	0.88
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-05

BASF Corporation
ELLE Sample #: SW 9702394
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	120	6	17	0.79
11995	Benzene	71-43-2	3 J	0.4	4	0.79
11995	2-Butanone	78-93-3	7 J	3	8	0.79
11995	Carbon Disulfide	75-15-0	6	0.8	4	0.79
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.79
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.79
11995	Chloroethane	75-00-3	N.D.	2	4	0.79
11995	Chloroform	67-66-3	N.D.	0.8	4	0.79
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.79
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.79
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.79
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.79
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.79
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.79
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	8	0.79
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.79
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.79
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.79
11995	Toluene	108-88-3	1 J	0.8	4	0.79
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.79
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.79
11995	Trichloroethene	79-01-6	9	0.8	4	0.79
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.79
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.79
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.79

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	6 J	4	18	1
10726	Acenaphthylene	208-96-8	45	4	18	1
10726	Aniline	62-53-3	N.D.	180	530	1
10726	Anthracene	120-12-7	80	4	18	1
10726	Benzo(a)anthracene	56-55-3	140	4	18	1
10726	Benzo(a)pyrene	50-32-8	130	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	200	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	87	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	78	4	18	1
10726	Butylbenzylphthalate	85-68-7	N.D.	70	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-05

BASF Corporation
ELLE Sample #: SW 9702394
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.	70	180	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	18	39	1
10726	4-Chloroaniline	106-47-8	N.D.	35	180	1
10726	2-Chlorophenol	95-57-8	N.D.	18	39	1
10726	Chrysene	218-01-9	140	4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	21	4	18	1
10726	Dibenzofuran	132-64-9	N.D.	18	39	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	21	53	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	18	39	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	18	39	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	110	350	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	18	39	1
10726	Diethylphthalate	84-66-2	N.D.	70	180	1
10726	Dimethylphthalate	131-11-3	N.D.	70	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	390	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	21	53	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	70	180	1
10726	Fluoranthene	206-44-0	260	4	18	1
10726	Fluorene	86-73-7	29	4	18	1
10726	Hexachlorobenzene	118-74-1	N.D.	4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	81	7	18	1
10726	Isophorone	78-59-1	N.D.	18	39	1
10726	2-Methylnaphthalene	91-57-6	15 J	11	35	1
10726	2-Methylphenol	95-48-7	N.D.	28	70	1
10726	4-Methylphenol	106-44-5	N.D.	21	53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	19	7	18	1
10726	2-Nitroaniline	88-74-4	N.D.	21	53	1
10726	3-Nitroaniline	99-09-2	N.D.	70	180	1
10726	Nitrobenzene	98-95-3	N.D.	28	70	1
10726	2-Nitrophenol	88-75-5	N.D.	18	39	1
10726	4-Nitrophenol	100-02-7	N.D.	180	530	1
10726	Di-n-octylphthalate	117-84-0	N.D.	70	180	1
10726	Pentachlorophenol	87-86-5	N.D.	39	180	1
10726	Phenanthrene	85-01-8	210	4	18	1
10726	Phenol	108-95-2	N.D.	25	53	1
10726	Pyrene	129-00-0	230	4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	18	39	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	21	53	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-05

BASF Corporation
ELLE Sample #: SW 9702394
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	9.1 JD2	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	N.D. D1	3.5	18	1
10885	Total PCBs	1336-36-3	9.1 J	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D2	0.91	4.4	5
10590	Alpha BHC	319-84-6	N.D. D1	0.91	4.4	5
10590	Beta BHC	319-85-7	N.D. D1	1.6	5.3	5
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.91	4.4	5
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.91	4.4	5
10590	Gamma Chlordane	5103-74-2	N.D. D1	1.3	4.4	5
10590	p,p-DDD	72-54-8	N.D. D2	1.8	9.1	5
10590	p,p-DDE	72-55-9	2.3 JD1	1.8	9.1	5
10590	p,p-DDT	50-29-3	N.D. D1	1.9	9.1	5
10590	Delta BHC	319-86-8	N.D. D1	2.4	4.8	5
10590	Dieldrin	60-57-1	N.D. D2	1.8	9.1	5
10590	Endosulfan I	959-98-8	N.D. D2	1.2	4.4	5
10590	Endosulfan II	33213-65-9	N.D. D2	1.8	9.1	5
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	1.8	9.1	5
10590	Endrin	72-20-8	N.D. D2	1.8	9.1	5
10590	Endrin Ketone	53494-70-5	N.D. D2	3.2	9.6	5
10590	Heptachlor	76-44-8	N.D. D2	0.91	4.4	5
10590	Heptachlor Epoxide	1024-57-3	1.4 JPD2	0.91	4.4	5
10590	Methoxychlor	72-43-5	N.D. D1	9.1	36	5

Reporting limits were raised due to interference from the sample matrix.

Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	27.9	1.17	9.79	1
06946	Barium	7440-39-3	61.1	0.147	0.979	1
06949	Cadmium	7440-43-9	0.590 J	0.0979	0.979	1
06951	Chromium	7440-47-3	13.0	0.206	2.94	1
06955	Lead	7439-92-1	21.0	0.587	2.94	1
06936	Selenium	7782-49-2	N.D.	1.47	9.79	1
06966	Silver	7440-22-4	0.492 J	0.392	1.96	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-05

BASF Corporation
ELLE Sample #: SW 9702394
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 7471B**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.132 J	0.0322	0.138	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.3	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 00:43	Kelly Devlin	0.79
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18200SLC026	07/23/2018 15:47	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	2	18200SLC026	07/20/2018 09:30	Ryan J Dowdy	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 02:00	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 10:34	Andrea L Jones	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-05

BASF Corporation
ELLE Sample #: SW 9702394
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:24	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:30	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-06

BASF Corporation
ELLE Sample #: SW 9702395
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	42	6	16	0.74
11995	Benzene	71-43-2	0.6 J	0.4	4	0.74
11995	2-Butanone	78-93-3	N.D.	3	8	0.74
11995	Carbon Disulfide	75-15-0	4	0.8	4	0.74
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.74
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.74
11995	Chloroethane	75-00-3	N.D.	2	4	0.74
11995	Chloroform	67-66-3	N.D.	0.8	4	0.74
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.74
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.74
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.74
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.74
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.74
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.74
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.74
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	8	0.74
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.74
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.74
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.74
11995	Toluene	108-88-3	1 J	0.8	4	0.74
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.74
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.74
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.74
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.74
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.74
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.74
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	5 J	4	18	1
10726	Acenaphthylene	208-96-8	20	4	18	1
10726	Aniline	62-53-3	N.D.	180	550	1
10726	Anthracene	120-12-7	48	4	18	1
10726	Benzo(a)anthracene	56-55-3	130	4	18	1
10726	Benzo(a)pyrene	50-32-8	130	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	130	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	91	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	68	4	18	1
10726	Butylbenzylphthalate	85-68-7	N.D.	73	180	1
10726	Di-n-butylphthalate	84-74-2	N.D.	73	180	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	18	40	1
10726	4-Chloroaniline	106-47-8	N.D.	36	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-06

BASF Corporation
ELLE Sample #: SW 9702395
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	2-Chlorophenol	95-57-8	N.D.	18	40	1
10726	Chrysene	218-01-9	130	4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	22	4	18	1
10726	Dibenzofuran	132-64-9	N.D.	18	40	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.	22	55	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.	18	40	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.	18	40	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	110	360	1
10726	2,4-Dichlorophenol	120-83-2	N.D.	18	40	1
10726	Diethylphthalate	84-66-2	N.D.	73	180	1
10726	Dimethylphthalate	131-11-3	N.D.	73	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.	400	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.	22	55	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	73	180	1
10726	Fluoranthene	206-44-0	240	4	18	1
10726	Fluorene	86-73-7	8 J	4	18	1
10726	Hexachlorobenzene	118-74-1	N.D.	4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	80	7	18	1
10726	Isophorone	78-59-1	N.D.	18	40	1
10726	2-Methylnaphthalene	91-57-6	23 J	11	36	1
10726	2-Methylphenol	95-48-7	N.D.	29	73	1
10726	4-Methylphenol	106-44-5	N.D.	22	55	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	30	7	18	1
10726	2-Nitroaniline	88-74-4	N.D.	22	55	1
10726	3-Nitroaniline	99-09-2	85 J	73	180	1
10726	Nitrobenzene	98-95-3	61 J	29	73	1
10726	2-Nitrophenol	88-75-5	N.D.	18	40	1
10726	4-Nitrophenol	100-02-7	N.D.	180	550	1
10726	Di-n-octylphthalate	117-84-0	N.D.	73	180	1
10726	Pentachlorophenol	87-86-5	N.D.	40	180	1
10726	Phenanthrene	85-01-8	120	4	18	1
10726	Phenol	108-95-2	N.D.	26	55	1
10726	Pyrene	129-00-0	230	4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	18	40	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	22	55	1
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	4.0	19	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-06

BASF Corporation
ELLE Sample #: SW 9702395
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1221	11104-28-2	N.D. D1	5.1	19	1
10885	PCB-1232	11141-16-5	N.D. D1	8.8	19	1
10885	PCB-1242	53469-21-9	N.D. D1	3.6	19	1
10885	PCB-1248	12672-29-6	N.D. D1	3.6	19	1
10885	PCB-1254	11097-69-1	N.D. D1	3.6	19	1
10885	PCB-1260	11096-82-5	N.D. D1	5.4	19	1
10885	PCB-1262	37324-23-5	N.D. D1	3.6	19	1
10885	PCB-1268	11100-14-4	N.D. D1	3.6	19	1
10885	Total PCBs	1336-36-3	N.D.	3.6	19	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D1	0.19	0.92	1
10590	Alpha BHC	319-84-6	N.D. D2	0.19	0.92	1
10590	Beta BHC	319-85-7	N.D. D1	0.33	1.1	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.19	0.92	1
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.19	0.92	1
10590	Gamma Chlordane	5103-74-2	N.D. D1	0.28	0.92	1
10590	p,p-DDD	72-54-8	N.D. D2	0.36	1.9	1
10590	p,p-DDE	72-55-9	N.D. D2	0.36	1.9	1
10590	p,p-DDT	50-29-3	0.79 JD1	0.40	1.9	1
10590	Delta BHC	319-86-8	N.D. D1	0.50	0.99	1
10590	Dieldrin	60-57-1	N.D. D2	0.36	1.9	1
10590	Endosulfan I	959-98-8	N.D. D1	0.24	0.92	1
10590	Endosulfan II	33213-65-9	N.D. D1	0.36	1.9	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.36	1.9	1
10590	Endrin	72-20-8	N.D. D1	0.38	1.9	1
10590	Endrin Ketone	53494-70-5	N.D. D2	0.66	2.0	1
10590	Heptachlor	76-44-8	N.D. D2	0.19	0.92	1
10590	Heptachlor Epoxide	1024-57-3	N.D. D1	0.19	0.92	1
10590	Methoxychlor	72-43-5	N.D. D1	1.9	7.4	1
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	5.99 J	0.926	7.72	1
06946	Barium	7440-39-3	42.7	0.116	0.772	1
06949	Cadmium	7440-43-9	0.137 J	0.0772	0.772	1
06951	Chromium	7440-47-3	20.6	0.162	2.31	1
06955	Lead	7439-92-1	17.3	0.463	2.31	1
06936	Selenium	7782-49-2	N.D.	1.16	7.72	1
06966	Silver	7440-22-4	0.586 J	0.309	1.54	1
	SW-846 7471B		**mg/kg**	**mg/kg**	**mg/kg**	

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-06

BASF Corporation
ELLE Sample #: SW 9702395
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 7471B**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0628 J	0.0341	0.146	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	10.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 01:05	Kelly Devlin	0.74
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 17:44	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 02:12	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 06:28	Andrea L Jones	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/19/2018 00:18	Xavier Arroyo	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-2 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-06

BASF Corporation
ELLE Sample #: SW 9702395
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:27	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:32	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-07

BASF Corporation
ELLE Sample #: SW 9702396
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	22	5	16	0.75
11995	Benzene	71-43-2	N.D.	0.4	4	0.75
11995	2-Butanone	78-93-3	N.D.	3	8	0.75
11995	Carbon Disulfide	75-15-0	2 J	0.8	4	0.75
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.75
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.75
11995	Chloroethane	75-00-3	N.D.	2	4	0.75
11995	Chloroform	67-66-3	N.D.	0.8	4	0.75
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.75
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.75
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.75
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.75
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.75
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.75
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.75
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	8	0.75
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.75
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.75
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.75
11995	Toluene	108-88-3	N.D.	0.8	4	0.75
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.75
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.75
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.75
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.75
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.75
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.75
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	4.1	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-07

BASF Corporation
ELLE Sample #: SW 9702396
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	X181991AA	07/18/2018 16:45	Stephen C Nolte	0.75
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-08

BASF Corporation
ELLE Sample #: SW 9702397
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	270	6	18	0.82
11995	Benzene	71-43-2	0.9 J	0.4	4	0.82
11995	2-Butanone	78-93-3	12	4	9	0.82
11995	Carbon Disulfide	75-15-0	4 J	0.9	4	0.82
11995	Carbon Tetrachloride	56-23-5	N.D.	0.9	4	0.82
11995	Chlorobenzene	108-90-7	N.D.	0.9	4	0.82
11995	Chloroethane	75-00-3	N.D.	2	4	0.82
11995	Chloroform	67-66-3	N.D.	0.9	4	0.82
11995	Dibromochloromethane	124-48-1	N.D.	0.9	4	0.82
11995	1,1-Dichloroethane	75-34-3	N.D.	0.9	4	0.82
11995	1,2-Dichloroethane	107-06-2	N.D.	0.9	4	0.82
11995	1,1-Dichloroethene	75-35-4	N.D.	0.9	4	0.82
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.9	4	0.82
11995	1,3-Dichloropropane	142-28-9	N.D.	0.9	4	0.82
11995	Ethylbenzene	100-41-4	N.D.	0.9	4	0.82
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	9	0.82
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.82
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.9	4	0.82
11995	Tetrachloroethene	127-18-4	N.D.	0.9	4	0.82
11995	Toluene	108-88-3	1 J	0.9	4	0.82
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.9	4	0.82
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.9	4	0.82
11995	Trichloroethene	79-01-6	N.D.	0.9	4	0.82
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.9	4	0.82
11995	Vinyl Chloride	75-01-4	N.D.	0.9	4	0.82
11995	Xylene (Total)	1330-20-7	N.D.	0.9	4	0.82
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	7.5	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-02-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 15:00
SDG#: RNS01-08

BASF Corporation
ELLE Sample #: SW 9702397
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A182003AA	07/20/2018 01:38	Patrick T Herres	0.82
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 15:00	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-DUP Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-09FD

BASF Corporation
ELLE Sample #: SW 9702398
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	61	7	19	0.9
11995	Benzene	71-43-2	5	0.5	5	0.9
11995	2-Butanone	78-93-3	N.D.	4	10	0.9
11995	Carbon Disulfide	75-15-0	5	1	5	0.9
11995	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.9
11995	Chlorobenzene	108-90-7	2 J	1	5	0.9
11995	Chloroethane	75-00-3	N.D.	2	5	0.9
11995	Chloroform	67-66-3	N.D.	1	5	0.9
11995	Dibromochloromethane	124-48-1	N.D.	1	5	0.9
11995	1,1-Dichloroethane	75-34-3	N.D.	1	5	0.9
11995	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.9
11995	1,1-Dichloroethene	75-35-4	N.D.	1	5	0.9
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	1	5	0.9
11995	1,3-Dichloropropane	142-28-9	N.D.	1	5	0.9
11995	Ethylbenzene	100-41-4	N.D.	1	5	0.9
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	0.9
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.9
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.9
11995	Tetrachloroethene	127-18-4	N.D.	1	5	0.9
11995	Toluene	108-88-3	1 J	1	5	0.9
11995	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.9
11995	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.9
11995	Trichloroethene	79-01-6	N.D.	1	5	0.9
11995	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.9
11995	Vinyl Chloride	75-01-4	N.D.	1	5	0.9
11995	Xylene (Total)	1330-20-7	N.D.	1	5	0.9

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	16 J	4	18	1
10726	Acenaphthylene	208-96-8	29	4	18	1
10726	Aniline	62-53-3	N.D.	180	530	1
10726	Anthracene	120-12-7	73	4	18	1
10726	Benzo(a)anthracene	56-55-3	190	4	18	1
10726	Benzo(a)pyrene	50-32-8	190	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	220	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	140	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	110	4	18	1
10726	Butylbenzylphthalate	85-68-7	N.D.	71	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-DUP Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-09FD

BASF Corporation
ELLE Sample #: SW 9702398
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.		71	180	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		18	39	1
10726	4-Chloroaniline	106-47-8	N.D.		35	180	1
10726	2-Chlorophenol	95-57-8	N.D.		18	39	1
10726	Chrysene	218-01-9	190		4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	32		4	18	1
10726	Dibenzofuran	132-64-9	20	J	18	39	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.		21	53	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.		18	39	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.		18	39	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		110	350	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		18	39	1
10726	Diethylphthalate	84-66-2	N.D.		71	180	1
10726	Dimethylphthalate	131-11-3	N.D.		71	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		390	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		21	53	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		71	180	1
10726	Fluoranthene	206-44-0	390		4	18	1
10726	Fluorene	86-73-7	19		4	18	1
10726	Hexachlorobenzene	118-74-1	N.D.		4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	120		7	18	1
10726	Isophorone	78-59-1	N.D.		18	39	1
10726	2-Methylnaphthalene	91-57-6	36		11	35	1
10726	2-Methylphenol	95-48-7	N.D.		28	71	1
10726	4-Methylphenol	106-44-5	N.D.		21	53	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	41		7	18	1
10726	2-Nitroaniline	88-74-4	24	J	21	53	1
10726	3-Nitroaniline	99-09-2	91	J	71	180	1
10726	Nitrobenzene	98-95-3	50	J	28	71	1
10726	2-Nitrophenol	88-75-5	N.D.		18	39	1
10726	4-Nitrophenol	100-02-7	N.D.		180	530	1
10726	Di-n-octylphthalate	117-84-0	N.D.		71	180	1
10726	Pentachlorophenol	87-86-5	N.D.		39	180	1
10726	Phenanthrene	85-01-8	240		4	18	1
10726	Phenol	108-95-2	N.D.		25	53	1
10726	Pyrene	129-00-0	340		4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	21	J	18	39	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		21	53	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-DUP Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-09FD

BASF Corporation
ELLE Sample #: SW 9702398
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.4	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	18 D1	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	6.5 JD2	3.5	18	1
10885	Total PCBs	1336-36-3	25	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D1	1.8	8.8	10
10590	Alpha BHC	319-84-6	N.D. D2	1.8	8.8	10
10590	Beta BHC	319-85-7	N.D. D2	3.2	11	10
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	1.8	8.8	10
10590	Alpha Chlordane	5103-71-9	N.D. D2	1.8	8.8	10
10590	Gamma Chlordane	5103-74-2	N.D. D1	2.6	8.8	10
10590	p,p-DDD	72-54-8	N.D. D2	3.5	18	10
10590	p,p-DDE	72-55-9	N.D. D2	3.5	18	10
10590	p,p-DDT	50-29-3	N.D. D1	3.8	18	10
10590	Delta BHC	319-86-8	N.D. D2	4.8	9.5	10
10590	Dieldrin	60-57-1	N.D. D2	3.5	18	10
10590	Endosulfan I	959-98-8	N.D. D1	2.3	8.8	10
10590	Endosulfan II	33213-65-9	N.D. D1	3.5	18	10
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	3.5	18	10
10590	Endrin	72-20-8	N.D. D1	3.6	18	10
10590	Endrin Ketone	53494-70-5	N.D. D1	6.3	19	10
10590	Heptachlor	76-44-8	N.D. D1	1.8	8.8	10
10590	Heptachlor Epoxide	1024-57-3	N.D. D1	1.8	8.8	10
10590	Methoxychlor	72-43-5	N.D. D1	18	71	10
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	8.35	0.960	8.00	1
06946	Barium	7440-39-3	40.0	0.120	0.800	1
06949	Cadmium	7440-43-9	0.172 J	0.0800	0.800	1
06951	Chromium	7440-47-3	349	0.168	2.40	1
06955	Lead	7439-92-1	56.7	0.480	2.40	1
06936	Selenium	7782-49-2	N.D.	1.20	8.00	1
06966	Silver	7440-22-4	0.611 J	0.320	1.60	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-DUP Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-09FD

BASF Corporation
ELLE Sample #: SW 9702398
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		**SW-846 7471B**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.163	0.0311	0.133	1
Wet Chemistry		**SM 2540 G-1997 %Moisture Calc**	**%**	**%**	**%**	
00111	Moisture	n.a.	6.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 02:14	Kelly Devlin	0.9
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/10/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/10/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 18:08	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 02:23	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/20/2018 19:58	Anita M Dale	10
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/19/2018 00:20	Xavier Arroyo	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **NOA-01-DUP Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/10/2018 13:45
SDG#: RNS01-09FD

BASF Corporation
ELLE Sample #: SW 9702398
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:29	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:34	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-10

BASF Corporation
ELLE Sample #: SW 9702399
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	53	5	16	0.69
11995	Benzene	71-43-2	0.4 J	0.4	4	0.69
11995	2-Butanone	78-93-3	N.D.	3	8	0.69
11995	Carbon Disulfide	75-15-0	1 J	0.8	4	0.69
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.69
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.69
11995	Chloroethane	75-00-3	N.D.	2	4	0.69
11995	Chloroform	67-66-3	N.D.	0.8	4	0.69
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.69
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.69
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.69
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.69
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.69
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.69
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.69
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	8	0.69
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.69
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.69
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.69
11995	Toluene	108-88-3	N.D.	0.8	4	0.69
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.69
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.69
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.69
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.69
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.69
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.69

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	15 J	4	19	1
10726	Acenaphthylene	208-96-8	19	4	19	1
10726	Aniline	62-53-3	N.D.	190	560	1
10726	Anthracene	120-12-7	42	4	19	1
10726	Benzo(a)anthracene	56-55-3	130	4	19	1
10726	Benzo(a)pyrene	50-32-8	140	7	19	1
10726	Benzo(b)fluoranthene	205-99-2	210	4	19	1
10726	Benzo(g,h,i)perylene	191-24-2	120	7	19	1
10726	Benzo(k)fluoranthene	207-08-9	68	4	19	1
10726	Butylbenzylphthalate	85-68-7	N.D.	75	190	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-10

BASF Corporation
ELLE Sample #: SW 9702399
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.		75	190	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		19	41	1
10726	4-Chloroaniline	106-47-8	N.D.		37	190	1
10726	2-Chlorophenol	95-57-8	N.D.		19	41	1
10726	Chrysene	218-01-9	160		4	19	1
10726	Dibenz(a,h)anthracene	53-70-3	29		4	19	1
10726	Dibenzofuran	132-64-9	30	J	19	41	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.		22	56	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.		19	41	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.		19	41	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		110	370	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		19	41	1
10726	Diethylphthalate	84-66-2	N.D.		75	190	1
10726	Dimethylphthalate	131-11-3	N.D.		75	190	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		410	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		22	56	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		75	190	1
10726	Fluoranthene	206-44-0	250		4	19	1
10726	Fluorene	86-73-7	19		4	19	1
10726	Hexachlorobenzene	118-74-1	N.D.		4	19	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	93		7	19	1
10726	Isophorone	78-59-1	N.D.		19	41	1
10726	2-Methylnaphthalene	91-57-6	100		11	37	1
10726	2-Methylphenol	95-48-7	N.D.		30	75	1
10726	4-Methylphenol	106-44-5	N.D.		22	56	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	180		7	19	1
10726	2-Nitroaniline	88-74-4	N.D.		22	56	1
10726	3-Nitroaniline	99-09-2	N.D.		75	190	1
10726	Nitrobenzene	98-95-3	N.D.		30	75	1
10726	2-Nitrophenol	88-75-5	N.D.		19	41	1
10726	4-Nitrophenol	100-02-7	N.D.		190	560	1
10726	Di-n-octylphthalate	117-84-0	N.D.		75	190	1
10726	Pentachlorophenol	87-86-5	N.D.		41	190	1
10726	Phenanthrene	85-01-8	150		4	19	1
10726	Phenol	108-95-2	N.D.		26	56	1
10726	Pyrene	129-00-0	220		4	19	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.		19	41	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		22	56	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-10

BASF Corporation
ELLE Sample #: SW 9702399
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	4.0	19	1
10885	PCB-1221	11104-28-2	N.D. D1	5.1	19	1
10885	PCB-1232	11141-16-5	N.D. D1	8.9	19	1
10885	PCB-1242	53469-21-9	N.D. D1	3.7	19	1
10885	PCB-1248	12672-29-6	N.D. D1	3.7	19	1
10885	PCB-1254	11097-69-1	28 D1	3.7	19	1
10885	PCB-1260	11096-82-5	N.D. D1	5.5	19	1
10885	PCB-1262	37324-23-5	N.D. D1	3.7	19	1
10885	PCB-1268	11100-14-4	N.D. D1	3.7	19	1
10885	Total PCBs	1336-36-3	28	3.7	19	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D2	0.19	0.93	1
10590	Alpha BHC	319-84-6	1.0 D2	0.19	0.93	1
10590	Beta BHC	319-85-7	N.D. D2	0.34	1.1	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.19	0.93	1
10590	Alpha Chlordane	5103-71-9	2.0 D2	0.19	0.93	1
10590	Gamma Chlordane	5103-74-2	N.D. VD1	0.79	0.93	1
10590	p,p-DDD	72-54-8	N.D. D2	0.37	1.9	1
10590	p,p-DDE	72-55-9	3.5 D2	0.37	1.9	1
10590	p,p-DDT	50-29-3	3.2 D1	0.40	1.9	1
10590	Delta BHC	319-86-8	N.D. D2	0.50	1.0	1
10590	Dieldrin	60-57-1	0.68 JPD1	0.37	1.9	1
10590	Endosulfan I	959-98-8	N.D. VD2	0.45	0.93	1
10590	Endosulfan II	33213-65-9	N.D. D1	0.37	1.9	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D2	0.37	1.9	1
10590	Endrin	72-20-8	N.D. D1	0.38	1.9	1
10590	Endrin Ketone	53494-70-5	N.D. D2	0.67	2.0	1
10590	Heptachlor	76-44-8	0.40 JD1	0.19	0.93	1
10590	Heptachlor Epoxide	1024-57-3	2.2 D2	0.19	0.93	1
10590	Methoxychlor	72-43-5	N.D. D1	1.9	7.5	1
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	28.7	1.00	8.35	1
06946	Barium	7440-39-3	68.8	0.125	0.835	1
06949	Cadmium	7440-43-9	0.224 J	0.0835	0.835	1
06951	Chromium	7440-47-3	23.3	0.175	2.51	1
06955	Lead	7439-92-1	29.7	0.501	2.51	1
06936	Selenium	7782-49-2	N.D.	1.25	8.35	1
06966	Silver	7440-22-4	0.656 J	0.334	1.67	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-10

BASF Corporation
ELLE Sample #: SW 9702399
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals		**SW-846 7471B**	**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	4.29	0.669	2.86	20
Wet Chemistry		**SM 2540 G-1997 %Moisture Calc**	**%**	**%**	**%**	
00111	Moisture	n.a.	11.3	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 02:36	Kelly Devlin	0.69
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 18:31	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 02:57	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 06:55	Andrea L Jones	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-10

BASF Corporation
ELLE Sample #: SW 9702399
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:32	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:46	Damary Valentin	20
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-2 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-11

BASF Corporation
ELLE Sample #: SW 9702400
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	55	5	14	0.65
11995	Benzene	71-43-2	N.D.	0.4	4	0.65
11995	2-Butanone	78-93-3	3 J	3	7	0.65
11995	Carbon Disulfide	75-15-0	1 J	0.7	4	0.65
11995	Carbon Tetrachloride	56-23-5	N.D.	0.7	4	0.65
11995	Chlorobenzene	108-90-7	N.D.	0.7	4	0.65
11995	Chloroethane	75-00-3	N.D.	1	4	0.65
11995	Chloroform	67-66-3	0.8 J	0.7	4	0.65
11995	Dibromochloromethane	124-48-1	N.D.	0.7	4	0.65
11995	1,1-Dichloroethane	75-34-3	N.D.	0.7	4	0.65
11995	1,2-Dichloroethane	107-06-2	N.D.	0.7	4	0.65
11995	1,1-Dichloroethene	75-35-4	N.D.	0.7	4	0.65
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.7	4	0.65
11995	1,3-Dichloropropane	142-28-9	N.D.	0.7	4	0.65
11995	Ethylbenzene	100-41-4	N.D.	0.7	4	0.65
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	7	0.65
11995	Methylene Chloride	75-09-2	N.D.	1	4	0.65
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.7	4	0.65
11995	Tetrachloroethene	127-18-4	N.D.	0.7	4	0.65
11995	Toluene	108-88-3	N.D.	0.7	4	0.65
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.7	4	0.65
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.7	4	0.65
11995	Trichloroethene	79-01-6	N.D.	0.7	4	0.65
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.7	4	0.65
11995	Vinyl Chloride	75-01-4	N.D.	0.7	4	0.65
11995	Xylene (Total)	1330-20-7	N.D.	0.7	4	0.65

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	10	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-2 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-11

BASF Corporation
ELLE Sample #: SW 9702400
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 02:59	Kelly Devlin	0.65
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-12

BASF Corporation
ELLE Sample #: SW 9702401
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	70	6	16	0.71
11995	Benzene	71-43-2	0.6 J	0.4	4	0.71
11995	2-Butanone	78-93-3	N.D.	3	8	0.71
11995	Carbon Disulfide	75-15-0	1 J	0.8	4	0.71
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.71
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.71
11995	Chloroethane	75-00-3	N.D.	2	4	0.71
11995	Chloroform	67-66-3	N.D.	0.8	4	0.71
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.71
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.71
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.71
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.71
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.71
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.71
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.71
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	8	0.71
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.71
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.71
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.71
11995	Toluene	108-88-3	N.D.	0.8	4	0.71
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.71
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.71
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.71
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.71
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.71
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.71

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	13.9	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-12

BASF Corporation
ELLE Sample #: SW 9702401
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A181971AA	07/17/2018 03:21	Kelly Devlin	0.71
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-13

BASF Corporation
ELLE Sample #: SW 9702402
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	54	5	16	0.72
11995	Benzene	71-43-2	0.5 J	0.4	4	0.72
11995	2-Butanone	78-93-3	N.D.	3	8	0.72
11995	Carbon Disulfide	75-15-0	3 J	0.8	4	0.72
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.72
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.72
11995	Chloroethane	75-00-3	N.D.	2	4	0.72
11995	Chloroform	67-66-3	2 J	0.8	4	0.72
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.72
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.72
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.72
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.72
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.72
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.72
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.72
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	8	0.72
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.72
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.72
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.72
11995	Toluene	108-88-3	N.D.	0.8	4	0.72
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.72
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.72
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.72
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.72
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.72
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.72

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	8.6	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **VS-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 13:45
SDG#: RNS01-13

BASF Corporation
ELLE Sample #: SW 9702402
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	X181991AA	07/18/2018 18:41	Stephen C Nolte	0.72
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/11/2018 13:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/11/2018 13:45	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-14

BASF Corporation
ELLE Sample #: SW 9702403
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	17 J	6	17	0.78
11995	Benzene	71-43-2	2 J	0.4	4	0.78
11995	2-Butanone	78-93-3	N.D.	3	8	0.78
11995	Carbon Disulfide	75-15-0	6	0.8	4	0.78
11995	Carbon Tetrachloride	56-23-5	N.D.	0.8	4	0.78
11995	Chlorobenzene	108-90-7	N.D.	0.8	4	0.78
11995	Chloroethane	75-00-3	N.D.	2	4	0.78
11995	Chloroform	67-66-3	N.D.	0.8	4	0.78
11995	Dibromochloromethane	124-48-1	N.D.	0.8	4	0.78
11995	1,1-Dichloroethane	75-34-3	N.D.	0.8	4	0.78
11995	1,2-Dichloroethane	107-06-2	N.D.	0.8	4	0.78
11995	1,1-Dichloroethene	75-35-4	N.D.	0.8	4	0.78
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	4	0.78
11995	1,3-Dichloropropane	142-28-9	N.D.	0.8	4	0.78
11995	Ethylbenzene	100-41-4	N.D.	0.8	4	0.78
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	8	0.78
11995	Methylene Chloride	75-09-2	N.D.	2	4	0.78
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.8	4	0.78
11995	Tetrachloroethene	127-18-4	N.D.	0.8	4	0.78
11995	Toluene	108-88-3	N.D.	0.8	4	0.78
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	4	0.78
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	4	0.78
11995	Trichloroethene	79-01-6	N.D.	0.8	4	0.78
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.8	4	0.78
11995	Vinyl Chloride	75-01-4	N.D.	0.8	4	0.78
11995	Xylene (Total)	1330-20-7	N.D.	0.8	4	0.78

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	5 J	4	18	1
10726	Acenaphthylene	208-96-8	12 J	4	18	1
10726	Aniline	62-53-3	N.D.	180	540	1
10726	Anthracene	120-12-7	24	4	18	1
10726	Benzo(a)anthracene	56-55-3	90	4	18	1
10726	Benzo(a)pyrene	50-32-8	93	7	18	1
10726	Benzo(b)fluoranthene	205-99-2	140	4	18	1
10726	Benzo(g,h,i)perylene	191-24-2	71	7	18	1
10726	Benzo(k)fluoranthene	207-08-9	43	4	18	1
10726	Butylbenzylphthalate	85-68-7	N.D.	71	180	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-14

BASF Corporation
ELLE Sample #: SW 9702403
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.		71	180	1
10726	4-Chloro-3-methylphenol	59-50-7	N.D.		18	39	1
10726	4-Chloroaniline	106-47-8	N.D.		36	180	1
10726	2-Chlorophenol	95-57-8	N.D.		18	39	1
10726	Chrysene	218-01-9	140		4	18	1
10726	Dibenz(a,h)anthracene	53-70-3	15	J	4	18	1
10726	Dibenzofuran	132-64-9	N.D.		18	39	1
10726	1,2-Dichlorobenzene	95-50-1	N.D.		21	54	1
10726	1,3-Dichlorobenzene	541-73-1	N.D.		18	39	1
10726	1,4-Dichlorobenzene	106-46-7	N.D.		18	39	1
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.		110	360	1
10726	2,4-Dichlorophenol	120-83-2	N.D.		18	39	1
10726	Diethylphthalate	84-66-2	N.D.		71	180	1
10726	Dimethylphthalate	131-11-3	N.D.		71	180	1
10726	2,4-Dinitrophenol	51-28-5	N.D.		390	1,100	1
10726	2,6-Dinitrotoluene	606-20-2	N.D.		21	54	1
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		71	180	1
10726	Fluoranthene	206-44-0	230		4	18	1
10726	Fluorene	86-73-7	N.D.		4	18	1
10726	Hexachlorobenzene	118-74-1	N.D.		4	18	1
10726	Indeno(1,2,3-cd)pyrene	193-39-5	51		7	18	1
10726	Isophorone	78-59-1	N.D.		18	39	1
10726	2-Methylnaphthalene	91-57-6	25	J	11	36	1
10726	2-Methylphenol	95-48-7	N.D.		29	71	1
10726	4-Methylphenol	106-44-5	N.D.		21	54	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	20		7	18	1
10726	2-Nitroaniline	88-74-4	N.D.		21	54	1
10726	3-Nitroaniline	99-09-2	N.D.		71	180	1
10726	Nitrobenzene	98-95-3	N.D.		29	71	1
10726	2-Nitrophenol	88-75-5	N.D.		18	39	1
10726	4-Nitrophenol	100-02-7	N.D.		180	540	1
10726	Di-n-octylphthalate	117-84-0	N.D.		71	180	1
10726	Pentachlorophenol	87-86-5	N.D.		39	180	1
10726	Phenanthrene	85-01-8	140		4	18	1
10726	Phenol	108-95-2	N.D.		25	54	1
10726	Pyrene	129-00-0	260		4	18	1
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.		18	39	1
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		21	54	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-14

BASF Corporation
ELLE Sample #: SW 9702403
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.8	18	1
10885	PCB-1221	11104-28-2	N.D. D1	4.9	18	1
10885	PCB-1232	11141-16-5	N.D. D1	8.5	18	1
10885	PCB-1242	53469-21-9	N.D. D1	3.5	18	1
10885	PCB-1248	12672-29-6	N.D. D1	3.5	18	1
10885	PCB-1254	11097-69-1	N.D. D1	3.5	18	1
10885	PCB-1260	11096-82-5	N.D. D1	5.2	18	1
10885	PCB-1262	37324-23-5	N.D. D1	3.5	18	1
10885	PCB-1268	11100-14-4	N.D. D1	3.5	18	1
10885	Total PCBs	1336-36-3	N.D.	3.5	18	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D2	0.18	0.88	1
10590	Alpha BHC	319-84-6	N.D. D2	0.18	0.88	1
10590	Beta BHC	319-85-7	N.D. D1	0.32	1.1	1
10590	Gamma BHC - Lindane	58-89-9	N.D. D1	0.18	0.88	1
10590	Alpha Chlordane	5103-71-9	N.D. D2	0.18	0.88	1
10590	Gamma Chlordane	5103-74-2	N.D. D1	0.27	0.88	1
10590	p,p-DDD	72-54-8	N.D. D2	0.35	1.8	1
10590	p,p-DDE	72-55-9	0.45 JD1	0.35	1.8	1
10590	p,p-DDT	50-29-3	0.53 JD1	0.38	1.8	1
10590	Delta BHC	319-86-8	N.D. D1	0.48	0.95	1
10590	Dieldrin	60-57-1	N.D. D2	0.35	1.8	1
10590	Endosulfan I	959-98-8	N.D. D2	0.23	0.88	1
10590	Endosulfan II	33213-65-9	N.D. D1	0.35	1.8	1
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	0.35	1.8	1
10590	Endrin	72-20-8	N.D. D1	0.36	1.8	1
10590	Endrin Ketone	53494-70-5	N.D. D1	0.64	1.9	1
10590	Heptachlor	76-44-8	N.D. D2	0.18	0.88	1
10590	Heptachlor Epoxide	1024-57-3	N.D. D1	0.18	0.88	1
10590	Methoxychlor	72-43-5	N.D. D2	1.8	7.1	1
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	280	1.04	8.63	1
06946	Barium	7440-39-3	156	0.130	0.863	1
06949	Cadmium	7440-43-9	0.146 J	0.0863	0.863	1
06951	Chromium	7440-47-3	17.5	0.181	2.59	1
06955	Lead	7439-92-1	29.0	0.518	2.59	1
06936	Selenium	7782-49-2	N.D.	1.30	8.63	1
06966	Silver	7440-22-4	1.10 J	0.345	1.73	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-14

BASF Corporation
ELLE Sample #: SW 9702403
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 7471B**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	N.D.	0.0328	0.140	1
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	6.6	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of New York Certification No. 10670
The volatile containers were collected as a grab.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	A182003AA	07/20/2018 02:23	Patrick T Herres	0.78
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/12/2018 10:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
10726	TCL SOM01.2	SW-846 8270D	1	18198SLB026	07/18/2018 18:54	Edward C Monborne	1
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18198SLB026	07/18/2018 01:45	Sherry L Morrow	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	181970038A	07/18/2018 03:08	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	181970039A	07/18/2018 06:41	Andrea L Jones	1
10497	PCB Microwave Soil Extraction	SW-846 3546	1	181970038A	07/17/2018 09:30	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	181970039A	07/17/2018 09:30	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
06946	Barium	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
06949	Cadmium	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
06951	Chromium	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-1 Composite Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-14

BASF Corporation
ELLE Sample #: SW 9702403
ELLE Group #: 1965554
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06955	Lead	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
06936	Selenium	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
06966	Silver	SW-846 6010C	1	181971063702	07/17/2018 14:35	Eric L Eby	1
00159	Mercury	SW-846 7471B	1	181971063805	07/17/2018 14:42	Damary Valentin	1
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	181971063702	07/16/2018 23:05	Denise L Trimby	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	181971063805	07/17/2018 03:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-2 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-15

BASF Corporation
ELLE Sample #: SW 9702404
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	15 J	7	19	0.89
11995	Benzene	71-43-2	N.D.	0.5	5	0.89
11995	2-Butanone	78-93-3	N.D.	4	10	0.89
11995	Carbon Disulfide	75-15-0	24	1	5	0.89
11995	Carbon Tetrachloride	56-23-5	N.D.	1	5	0.89
11995	Chlorobenzene	108-90-7	N.D.	1	5	0.89
11995	Chloroethane	75-00-3	N.D.	2	5	0.89
11995	Chloroform	67-66-3	N.D.	1	5	0.89
11995	Dibromochloromethane	124-48-1	N.D.	1	5	0.89
11995	1,1-Dichloroethane	75-34-3	N.D.	1	5	0.89
11995	1,2-Dichloroethane	107-06-2	N.D.	1	5	0.89
11995	1,1-Dichloroethene	75-35-4	N.D.	1	5	0.89
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	1	5	0.89
11995	1,3-Dichloropropane	142-28-9	N.D.	1	5	0.89
11995	Ethylbenzene	100-41-4	N.D.	1	5	0.89
11995	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	0.89
11995	Methylene Chloride	75-09-2	N.D.	2	5	0.89
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	0.89
11995	Tetrachloroethene	127-18-4	N.D.	1	5	0.89
11995	Toluene	108-88-3	N.D.	1	5	0.89
11995	1,1,1-Trichloroethane	71-55-6	N.D.	1	5	0.89
11995	1,1,2-Trichloroethane	79-00-5	N.D.	1	5	0.89
11995	Trichloroethene	79-01-6	N.D.	1	5	0.89
11995	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	0.89
11995	Vinyl Chloride	75-01-4	N.D.	1	5	0.89
11995	Xylene (Total)	1330-20-7	N.D.	1	5	0.89

The recovery for the sample internal standard(s) is outside the QC acceptance limits. Sufficient sample was not available to repeat the analysis.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	7.3	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-2 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-15

BASF Corporation
ELLE Sample #: SW 9702404
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	X181991AA	07/18/2018 19:27	Stephen C Nolte	0.89
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-16

BASF Corporation
ELLE Sample #: SW 9702405
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	15 J	9	25	1.17
11995	Benzene	71-43-2	2 J	0.6	6	1.17
11995	2-Butanone	78-93-3	N.D.	5	13	1.17
11995	Carbon Disulfide	75-15-0	4 J	1	6	1.17
11995	Carbon Tetrachloride	56-23-5	N.D.	1	6	1.17
11995	Chlorobenzene	108-90-7	N.D.	1	6	1.17
11995	Chloroethane	75-00-3	N.D.	3	6	1.17
11995	Chloroform	67-66-3	N.D.	1	6	1.17
11995	Dibromochloromethane	124-48-1	N.D.	1	6	1.17
11995	1,1-Dichloroethane	75-34-3	N.D.	1	6	1.17
11995	1,2-Dichloroethane	107-06-2	N.D.	1	6	1.17
11995	1,1-Dichloroethene	75-35-4	N.D.	1	6	1.17
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	1	6	1.17
11995	1,3-Dichloropropane	142-28-9	N.D.	1	6	1.17
11995	Ethylbenzene	100-41-4	N.D.	1	6	1.17
11995	4-Methyl-2-pentanone	108-10-1	N.D.	4	13	1.17
11995	Methylene Chloride	75-09-2	N.D.	3	6	1.17
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	6	1.17
11995	Tetrachloroethene	127-18-4	N.D.	1	6	1.17
11995	Toluene	108-88-3	N.D.	1	6	1.17
11995	1,1,1-Trichloroethane	71-55-6	N.D.	1	6	1.17
11995	1,1,2-Trichloroethane	79-00-5	N.D.	1	6	1.17
11995	Trichloroethene	79-01-6	N.D.	1	6	1.17
11995	1,2,3-Trichloropropane	96-18-4	N.D.	1	6	1.17
11995	Vinyl Chloride	75-01-4	N.D.	1	6	1.17
11995	Xylene (Total)	1330-20-7	N.D.	1	6	1.17

The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	7.5	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-3 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-16

BASF Corporation
ELLE Sample #: SW 9702405
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	X181991AA	07/18/2018 19:50	Stephen C Nolte	1.17
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201819550499	07/12/2018 10:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-17

BASF Corporation
ELLE Sample #: SW 9702406
ELLE Group #: 1965554
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	9 J	5	15	0.68
11995	Benzene	71-43-2	N.D.	0.4	4	0.68
11995	2-Butanone	78-93-3	N.D.	3	7	0.68
11995	Carbon Disulfide	75-15-0	11	0.7	4	0.68
11995	Carbon Tetrachloride	56-23-5	N.D.	0.7	4	0.68
11995	Chlorobenzene	108-90-7	N.D.	0.7	4	0.68
11995	Chloroethane	75-00-3	N.D.	1	4	0.68
11995	Chloroform	67-66-3	N.D.	0.7	4	0.68
11995	Dibromochloromethane	124-48-1	N.D.	0.7	4	0.68
11995	1,1-Dichloroethane	75-34-3	N.D.	0.7	4	0.68
11995	1,2-Dichloroethane	107-06-2	N.D.	0.7	4	0.68
11995	1,1-Dichloroethene	75-35-4	N.D.	0.7	4	0.68
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	0.7	4	0.68
11995	1,3-Dichloropropane	142-28-9	N.D.	0.7	4	0.68
11995	Ethylbenzene	100-41-4	N.D.	0.7	4	0.68
11995	4-Methyl-2-pentanone	108-10-1	N.D.	2	7	0.68
11995	Methylene Chloride	75-09-2	N.D.	1	4	0.68
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.7	4	0.68
11995	Tetrachloroethene	127-18-4	N.D.	0.7	4	0.68
11995	Toluene	108-88-3	N.D.	0.7	4	0.68
11995	1,1,1-Trichloroethane	71-55-6	N.D.	0.7	4	0.68
11995	1,1,2-Trichloroethane	79-00-5	N.D.	0.7	4	0.68
11995	Trichloroethene	79-01-6	N.D.	0.7	4	0.68
11995	1,2,3-Trichloropropane	96-18-4	N.D.	0.7	4	0.68
11995	Vinyl Chloride	75-01-4	N.D.	0.7	4	0.68
11995	Xylene (Total)	1330-20-7	N.D.	0.7	4	0.68

The recovery for the sample internal standard(s) is outside the QC acceptance limits. Sufficient sample was not available to repeat the analysis.

Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	7.7	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-4 Grab Soil**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/12/2018 10:25
SDG#: RNS01-17

BASF Corporation
ELLE Sample #: SW 9702406
ELLE Group #: 1965554
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	X181991AA	07/18/2018 20:14	Stephen C Nolte	0.68
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201819550499	07/12/2018 10:25	Client Supplied	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18197820005B	07/16/2018 17:39	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **T1A3728071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-18

BASF Corporation
ELLE Sample #: WW 9702407
ELLE Group #: 1965554
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14242	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14242	Aniline	62-53-3	N.D.	3	11	1
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1

*=This limit was used in the evaluation of the final result

Sample Description: **T1A3728071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-18

BASF Corporation
ELLE Sample #: **WW 9702407**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	2-Chlorophenol	95-57-8	N.D.	0.5	2	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	Dibenzofuran	132-64-9	N.D.	0.5	2	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.5	2	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.5	2	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	2	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	3	11	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.5	2	1
14242	Diethylphthalate	84-66-2	N.D.	2	5	1
14242	Dimethylphthalate	131-11-3	N.D.	2	5	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	15	32	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	2	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Fluorene	86-73-7	N.D.	0.1	0.5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	Isophorone	78-59-1	N.D.	0.5	2	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	2-Nitroaniline	88-74-4	N.D.	2	8	1
14242	3-Nitroaniline	99-09-2	N.D.	3	8	1
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	2-Nitrophenol	88-75-5	N.D.	3	11	1
14242	4-Nitrophenol	100-02-7	N.D.	11	32	1
14242	Di-n-octylphthalate	117-84-0	N.D.	5	12	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0503 J	0.0160	0.100	1
07046	Barium	7440-39-3	0.0358	0.0010	0.0100	1

*=This limit was used in the evaluation of the final result

Sample Description: **T1A3728071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-18

BASF Corporation
ELLE Sample #: **WW 9702407**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0100	1
07051	Chromium	7440-47-3	0.0182 J	0.0053	0.0300	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 13:26	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 13:26	Linda C Pape	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18194WAI026	07/16/2018 23:41	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18194WAI026	07/16/2018 08:00	Logan M Brosemer	1
07035	Arsenic	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07046	Barium	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07049	Cadmium	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07051	Chromium	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07055	Lead	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07036	Selenium	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
07066	Silver	SW-846 6010C	1	181971063501	07/17/2018 00:56	Jonathan J Allen	1
00259	Mercury	SW-846 7470A	1	181980571307	07/18/2018 09:34	Damary Valentin	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	181971063501	07/16/2018 15:40	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181980571307	07/18/2018 06:26	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **T2A393071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-19

BASF Corporation
ELLE Sample #: **WW 9702408**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14242	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14242	Aniline	62-53-3	N.D.	3	11	1
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1

*=This limit was used in the evaluation of the final result

Sample Description: **T2A393071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-19

BASF Corporation
ELLE Sample #: **WW 9702408**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	2-Chlorophenol	95-57-8	N.D.	0.5	2	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	Dibenzofuran	132-64-9	N.D.	0.5	2	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.5	2	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.5	2	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	2	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	3	11	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.5	2	1
14242	Diethylphthalate	84-66-2	N.D.	2	5	1
14242	Dimethylphthalate	131-11-3	N.D.	2	5	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	15	32	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	2	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Fluorene	86-73-7	N.D.	0.1	0.5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	Isophorone	78-59-1	N.D.	0.5	2	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	2-Nitroaniline	88-74-4	N.D.	2	8	1
14242	3-Nitroaniline	99-09-2	N.D.	3	8	1
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	2-Nitrophenol	88-75-5	N.D.	3	11	1
14242	4-Nitrophenol	100-02-7	N.D.	11	32	1
14242	Di-n-octylphthalate	117-84-0	N.D.	5	12	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0541 J	0.0160	0.100	1
07046	Barium	7440-39-3	0.0425	0.0010	0.0100	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **T2A393071118 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 07/11/2018 12:45
SDG#: RNS01-19

BASF Corporation
ELLE Sample #: WW 9702408
ELLE Group #: 1965554
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0100	1
07051	Chromium	7440-47-3	0.0157 J	0.0053	0.0300	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 13:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 13:48	Linda C Pape	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18194WAI026	07/17/2018 00:10	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18194WAI026	07/16/2018 08:00	Logan M Brosemer	1
07035	Arsenic	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07046	Barium	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07049	Cadmium	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07051	Chromium	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07055	Lead	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07036	Selenium	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
07066	Silver	SW-846 6010C	1	181971063501	07/17/2018 00:58	Jonathan J Allen	1
00259	Mercury	SW-846 7470A	1	181980571307	07/18/2018 10:27	Damary Valentin	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	181971063501	07/16/2018 15:40	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	181980571307	07/18/2018 06:26	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18163-Cooler 1 Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 06/15/2018
SDG#: RNS01-20TB

BASF Corporation
ELLE Sample #: **WW 9702409**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 14:10	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 14:10	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18163-Cooler 2 Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 06/15/2018
SDG#: RNS01-21TB

BASF Corporation
ELLE Sample #: **WW 9702410**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 14:32	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 14:32	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18163-Cooler 3 Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 06/15/2018
SDG#: RNS01-22TB

BASF Corporation
ELLE Sample #: **WW 9702411**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 14:54	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 14:54	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18163-Cooler 4 Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/13/2018 09:45
Collection Date/Time: 06/15/2018
SDG#: RNS01-23TB

BASF Corporation
ELLE Sample #: **WW 9702412**
ELLE Group #: **1965554**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	6	20	1
11997	Benzene	71-43-2	N.D.	0.5	1	1
11997	2-Butanone	78-93-3	N.D.	3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	1	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.5	1	1
11997	Chloroethane	75-00-3	N.D.	0.5	1	1
11997	Chloroform	67-66-3	N.D.	0.5	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.5	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.5	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.5	1	1
11997	Toluene	108-88-3	N.D.	0.5	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	1	1
11997	Trichloroethene	79-01-6	N.D.	0.5	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	1	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.5	1	1
11997	Xylene (Total)	1330-20-7	N.D.	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L181991AA	07/18/2018 15:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L181991AA	07/18/2018 15:15	Linda C Pape	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 1965554
Reported: 07/24/2018 11:37

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Batch number: A181971AA	Sample number(s): 9702388-9702389,9702391-9702395,9702398-9702401		
Acetone	N.D.	7	20
Benzene	N.D.	0.5	5
2-Butanone	N.D.	4	10
Carbon Disulfide	N.D.	1	5
Carbon Tetrachloride	N.D.	1	5
Chlorobenzene	N.D.	1	5
Chloroethane	N.D.	2	5
Chloroform	N.D.	1	5
Dibromochloromethane	N.D.	1	5
1,1-Dichloroethane	N.D.	1	5
1,2-Dichloroethane	N.D.	1	5
1,1-Dichloroethene	N.D.	1	5
trans-1,2-Dichloroethene	N.D.	1	5
1,3-Dichloropropane	N.D.	1	5
Ethylbenzene	N.D.	1	5
4-Methyl-2-pentanone	N.D.	3	10
Methylene Chloride	N.D.	2	5
1,1,2,2-Tetrachloroethane	N.D.	1	5
Tetrachloroethene	N.D.	1	5
Toluene	N.D.	1	5
1,1,1-Trichloroethane	N.D.	1	5
1,1,2-Trichloroethane	N.D.	1	5
Trichloroethene	N.D.	1	5
1,2,3-Trichloropropane	N.D.	1	5
Vinyl Chloride	N.D.	1	5
Xylene (Total)	N.D.	1	5
Batch number: A182003AA	Sample number(s): 9702387,9702397,9702403		
Acetone	N.D.	7	20
Benzene	N.D.	0.5	5
2-Butanone	N.D.	4	10
Carbon Disulfide	N.D.	1	5
Carbon Tetrachloride	N.D.	1	5
Chlorobenzene	N.D.	1	5
Chloroethane	N.D.	2	5
Chloroform	N.D.	1	5
Dibromochloromethane	N.D.	1	5
1,1-Dichloroethane	N.D.	1	5
1,2-Dichloroethane	N.D.	1	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
1,1-Dichloroethene	N.D.	1	5
trans-1,2-Dichloroethene	N.D.	1	5
1,3-Dichloropropane	N.D.	1	5
Ethylbenzene	N.D.	1	5
4-Methyl-2-pentanone	N.D.	3	10
Methylene Chloride	N.D.	2	5
1,1,2,2-Tetrachloroethane	N.D.	1	5
Tetrachloroethene	N.D.	1	5
Toluene	N.D.	1	5
1,1,1-Trichloroethane	N.D.	1	5
1,1,2-Trichloroethane	N.D.	1	5
Trichloroethene	N.D.	1	5
1,2,3-Trichloropropane	N.D.	1	5
Vinyl Chloride	N.D.	1	5
Xylene (Total)	N.D.	1	5
Batch number: X181991AA	Sample number(s): 9702396,9702402,9702404-9702406		
Acetone	N.D.	7	20
Benzene	N.D.	0.5	5
2-Butanone	N.D.	4	10
Carbon Disulfide	N.D.	1	5
Carbon Tetrachloride	N.D.	1	5
Chlorobenzene	N.D.	1	5
Chloroethane	N.D.	2	5
Chloroform	N.D.	1	5
Dibromochloromethane	N.D.	1	5
1,1-Dichloroethane	N.D.	1	5
1,2-Dichloroethane	N.D.	1	5
1,1-Dichloroethene	N.D.	1	5
trans-1,2-Dichloroethene	N.D.	1	5
1,3-Dichloropropane	N.D.	1	5
Ethylbenzene	N.D.	1	5
4-Methyl-2-pentanone	N.D.	3	10
Methylene Chloride	N.D.	2	5
1,1,2,2-Tetrachloroethane	N.D.	1	5
Tetrachloroethene	N.D.	1	5
Toluene	N.D.	1	5
1,1,1-Trichloroethane	N.D.	1	5
1,1,2-Trichloroethane	N.D.	1	5
Trichloroethene	N.D.	1	5
1,2,3-Trichloropropane	N.D.	1	5
Vinyl Chloride	N.D.	1	5
Xylene (Total)	N.D.	1	5
	ug/l	ug/l	ug/l
Batch number: L181991AA	Sample number(s): 9702407-9702412		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Acetone	N.D.	6	20
Benzene	N.D.	0.5	1
2-Butanone	N.D.	3	10
Carbon Disulfide	N.D.	1	5
Carbon Tetrachloride	N.D.	0.5	1
Chlorobenzene	N.D.	0.5	1
Chloroethane	N.D.	0.5	1
Chloroform	N.D.	0.5	1
Dibromochloromethane	N.D.	0.5	1
1,1-Dichloroethane	N.D.	0.5	1
1,2-Dichloroethane	N.D.	0.5	1
1,1-Dichloroethene	N.D.	0.5	1
trans-1,2-Dichloroethene	N.D.	0.5	1
1,3-Dichloropropane	N.D.	0.5	1
Ethylbenzene	N.D.	0.5	1
4-Methyl-2-pentanone	N.D.	3	10
Methylene Chloride	N.D.	0.5	1
1,1,2,2-Tetrachloroethane	N.D.	0.5	1
Tetrachloroethene	N.D.	0.5	1
Toluene	N.D.	0.5	1
1,1,1-Trichloroethane	N.D.	0.5	1
1,1,2-Trichloroethane	N.D.	0.5	1
Trichloroethene	N.D.	0.5	1
1,2,3-Trichloropropane	N.D.	1	5
Vinyl Chloride	N.D.	0.5	1
Xylene (Total)	N.D.	0.5	1
	ug/kg	ug/kg	ug/kg
Batch number: 18198SLB026	Sample number(s): 9702387-9702389,9702391,9702395,9702398-9702399,9702403		
Acenaphthene	N.D.	3	17
Acenaphthylene	N.D.	3	17
Aniline	N.D.	170	500
Anthracene	N.D.	3	17
Benzo(a)anthracene	N.D.	3	17
Benzo(a)pyrene	N.D.	7	17
Benzo(b)fluoranthene	N.D.	3	17
Benzo(g,h,i)perylene	N.D.	7	17
Benzo(k)fluoranthene	N.D.	3	17
Butylbenzylphthalate	N.D.	67	170
Di-n-butylphthalate	N.D.	67	170
4-Chloro-3-methylphenol	N.D.	17	37
4-Chloroaniline	N.D.	33	170
2-Chlorophenol	N.D.	17	37
Chrysene	N.D.	3	17
Dibenz(a,h)anthracene	N.D.	3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Dibenzofuran	N.D.	17	37
1,2-Dichlorobenzene	N.D.	20	50
1,3-Dichlorobenzene	N.D.	17	37
1,4-Dichlorobenzene	N.D.	17	37
3,3'-Dichlorobenzidine	N.D.	100	330
2,4-Dichlorophenol	N.D.	17	37
Diethylphthalate	N.D.	67	170
Dimethylphthalate	N.D.	67	170
2,4-Dinitrophenol	N.D.	370	1,000
2,6-Dinitrotoluene	N.D.	20	50
bis(2-Ethylhexyl)phthalate	N.D.	67	170
Fluoranthene	N.D.	3	17
Fluorene	N.D.	3	17
Hexachlorobenzene	N.D.	3	17
Indeno(1,2,3-cd)pyrene	N.D.	7	17
Isophorone	N.D.	17	37
2-Methylnaphthalene	N.D.	10	33
2-Methylphenol	N.D.	27	67
4-Methylphenol	N.D.	20	50
Naphthalene	N.D.	7	17
2-Nitroaniline	N.D.	20	50
3-Nitroaniline	N.D.	67	170
Nitrobenzene	N.D.	27	67
2-Nitrophenol	N.D.	17	37
4-Nitrophenol	N.D.	170	500
Di-n-octylphthalate	N.D.	67	170
Pentachlorophenol	N.D.	37	170
Phenanthrene	N.D.	3	17
Phenol	N.D.	23	50
Pyrene	N.D.	3	17
1,2,4-Trichlorobenzene	N.D.	17	37
2,4,5-Trichlorophenol	N.D.	20	50
Batch number: 18200SLC026	Sample number(s): 9702394		
Acenaphthene	N.D.	3	17
Acenaphthylene	N.D.	3	17
Aniline	N.D.	170	500
Anthracene	N.D.	3	17
Benzo(a)anthracene	N.D.	3	17
Benzo(a)pyrene	N.D.	7	17
Benzo(b)fluoranthene	N.D.	3	17
Benzo(g,h,i)perylene	N.D.	7	17
Benzo(k)fluoranthene	N.D.	3	17
Butylbenzylphthalate	N.D.	67	170
Di-n-butylphthalate	N.D.	67	170

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
4-Chloro-3-methylphenol	N.D.	17	37
4-Chloroaniline	N.D.	33	170
2-Chlorophenol	N.D.	17	37
Chrysene	N.D.	3	17
Dibenz(a,h)anthracene	N.D.	3	17
Dibenzofuran	N.D.	17	37
1,2-Dichlorobenzene	N.D.	20	50
1,3-Dichlorobenzene	N.D.	17	37
1,4-Dichlorobenzene	N.D.	17	37
3,3'-Dichlorobenzidine	N.D.	100	330
2,4-Dichlorophenol	N.D.	17	37
Diethylphthalate	N.D.	67	170
Dimethylphthalate	N.D.	67	170
2,4-Dinitrophenol	N.D.	370	1,000
2,6-Dinitrotoluene	N.D.	20	50
bis(2-Ethylhexyl)phthalate	N.D.	67	170
Fluoranthene	N.D.	3	17
Fluorene	N.D.	3	17
Hexachlorobenzene	N.D.	3	17
Indeno(1,2,3-cd)pyrene	N.D.	7	17
Isophorone	N.D.	17	37
2-Methylnaphthalene	N.D.	10	33
2-Methylphenol	N.D.	27	67
4-Methylphenol	N.D.	20	50
Naphthalene	N.D.	7	17
2-Nitroaniline	N.D.	20	50
3-Nitroaniline	N.D.	67	170
Nitrobenzene	N.D.	27	67
2-Nitrophenol	N.D.	17	37
4-Nitrophenol	N.D.	170	500
Di-n-octylphthalate	N.D.	67	170
Pentachlorophenol	N.D.	37	170
Phenanthrene	N.D.	3	17
Phenol	N.D.	23	50
Pyrene	N.D.	3	17
1,2,4-Trichlorobenzene	N.D.	17	37
2,4,5-Trichlorophenol	N.D.	20	50
	ug/l	ug/l	ug/l
Batch number: 18194WAI026	Sample number(s): 9702407-9702408		
Acenaphthene	N.D.	0.1	0.5
Acenaphthylene	N.D.	0.1	0.5
Aniline	N.D.	3	10
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(g,h,i)perylene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
4-Chloro-3-methylphenol	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chlorophenol	N.D.	0.5	2
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
Dibenzofuran	N.D.	0.5	2
1,2-Dichlorobenzene	N.D.	0.5	2
1,3-Dichlorobenzene	N.D.	0.5	2
1,4-Dichlorobenzene	N.D.	0.5	2
3,3'-Dichlorobenzidine	N.D.	3	10
2,4-Dichlorophenol	N.D.	0.5	2
Diethylphthalate	N.D.	2	5
Dimethylphthalate	N.D.	2	5
2,4-Dinitrophenol	N.D.	14	30
2,6-Dinitrotoluene	N.D.	0.5	2
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Fluorene	N.D.	0.1	0.5
Hexachlorobenzene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
Isophorone	N.D.	0.5	2
2-Methylnaphthalene	N.D.	0.1	0.5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
2-Nitroaniline	N.D.	2	7
3-Nitroaniline	N.D.	3	7
Nitrobenzene	N.D.	0.5	2
2-Nitrophenol	N.D.	3	10
4-Nitrophenol	N.D.	10	30
Di-n-octylphthalate	N.D.	5	11
Pentachlorophenol	N.D.	1	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
2,4,5-Trichlorophenol	N.D.	0.5	2
	ug/kg	ug/kg	ug/kg

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Batch number: 181970038A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
Batch number: 181970039A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403		
Aldrin	N.D.	0.17	0.83
Alpha BHC	N.D.	0.17	0.83
Beta BHC	N.D.	0.30	1.0
Gamma BHC - Lindane	N.D.	0.17	0.83
Alpha Chlordane	N.D.	0.17	0.83
Gamma Chlordane	N.D.	0.25	0.83
p,p-DDD	N.D.	0.33	1.7
p,p-DDE	N.D.	0.33	1.7
p,p-DDT	N.D.	0.36	1.7
Delta BHC	N.D.	0.45	0.90
Dieldrin	N.D.	0.33	1.7
Endosulfan I	N.D.	0.22	0.83
Endosulfan II	N.D.	0.33	1.7
Endosulfan Sulfate	N.D.	0.33	1.7
Endrin	N.D.	0.34	1.7
Endrin Ketone	N.D.	0.60	1.8
Heptachlor	N.D.	0.17	0.83
Heptachlor Epoxide	N.D.	0.17	0.83
Methoxychlor	N.D.	1.7	6.7
	mg/kg	mg/kg	mg/kg
Batch number: 181971063702	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403		
Arsenic	N.D.	1.20	10.0
Barium	N.D.	0.150	1.00
Cadmium	N.D.	0.100	1.00
Chromium	N.D.	0.210	3.00
Lead	N.D.	0.600	3.00
Selenium	N.D.	1.50	10.0
Silver	N.D.	0.400	2.00
Batch number: 181971063805	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403		
Mercury	N.D.	0.0312	0.133

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 181971063501	Sample number(s): 9702407-9702408		
Arsenic	N.D.	0.0160	0.100
Barium	N.D.	0.0010	0.0100
Cadmium	N.D.	0.0010	0.0100
Chromium	N.D.	0.0053	0.0300
Lead	N.D.	0.0071	0.0300
Selenium	N.D.	0.0210	0.100
Silver	N.D.	0.0050	0.0200
Batch number: 181980571307	Sample number(s): 9702407-9702408		
Mercury	N.D.	0.000050	0.00020

LCS/LCSD

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: A181971AA	Sample number(s): 9702388-9702389,9702391-9702395,9702398-9702401								
Acetone	150	151.89	150	154.66	101	103	55-131	2	30
Benzene	20	19.29	20	19.26	96	96	80-120	0	30
2-Butanone	150	165.45	150	166.35	110	111	57-128	1	30
Carbon Disulfide	20	18.76	20	18.4	94	92	64-133	2	30
Carbon Tetrachloride	20	19.32	20	19.09	97	95	64-134	1	30
Chlorobenzene	20	18.27	20	18.16	91	91	80-120	1	30
Chloroethane	20	18.75	20	18.36	94	92	50-131	2	30
Chloroform	20	19.63	20	19.5	98	98	80-120	1	30
Dibromochloromethane	20	17.71	20	17.89	89	89	65-120	1	30
1,1-Dichloroethane	20	19.52	20	19.34	98	97	77-120	1	30
1,2-Dichloroethane	20	19.92	20	19.94	100	100	71-128	0	30
1,1-Dichloroethene	20	20.23	20	20.09	101	100	73-129	1	30
trans-1,2-Dichloroethene	20	19.71	20	19.53	99	98	80-125	1	30
1,3-Dichloropropane	20	18.52	20	18.49	93	92	74-120	0	30
Ethylbenzene	20	18.16	20	17.96	91	90	74-120	1	30
4-Methyl-2-pentanone	100	96.03	100	94.49	96	94	61-135	2	30
Methylene Chloride	20	20.03	20	19.74	100	99	76-122	1	30
1,1,2,2-Tetrachloroethane	20	17.76	20	16.93	89	85	61-131	5	30
Tetrachloroethene	20	17.7	20	17.29	89	86	73-120	2	30
Toluene	20	18.13	20	17.85	91	89	80-120	2	30
1,1,1-Trichloroethane	20	18.46	20	18.44	92	92	69-123	0	30
1,1,2-Trichloroethane	20	18.79	20	19.26	94	96	80-120	2	30
Trichloroethene	20	18.67	20	18.49	93	92	80-120	1	30
1,2,3-Trichloropropane	20	18.63	20	18.34	93	92	66-131	2	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Vinyl Chloride	20	19.67	20	19.4	98	97	59-120	1	30
Xylene (Total)	60	53.95	60	53.33	90	89	75-120	1	30
Batch number: A182003AA	Sample number(s): 9702387,9702397,9702403								
Acetone	150	144.73	150	142.02	96	95	55-131	2	30
Benzene	20	19.61	20	19.08	98	95	80-120	3	30
2-Butanone	150	154.62	150	153.45	103	102	57-128	1	30
Carbon Disulfide	20	18.95	20	18.42	95	92	64-133	3	30
Carbon Tetrachloride	20	20.34	20	19.93	102	100	64-134	2	30
Chlorobenzene	20	19.08	20	18.64	95	93	80-120	2	30
Chloroethane	20	17.29	20	15.97	86	80	50-131	8	30
Chloroform	20	19.95	20	19.54	100	98	80-120	2	30
Dibromochloromethane	20	19.03	20	18.8	95	94	65-120	1	30
1,1-Dichloroethane	20	19.86	20	19.44	99	97	77-120	2	30
1,2-Dichloroethane	20	20.34	20	20.01	102	100	71-128	2	30
1,1-Dichloroethene	20	21.29	20	20.57	106	103	73-129	3	30
trans-1,2-Dichloroethene	20	20.34	20	19.97	102	100	80-125	2	30
1,3-Dichloropropane	20	18.92	20	18.89	95	94	74-120	0	30
Ethylbenzene	20	18.95	20	18.43	95	92	74-120	3	30
4-Methyl-2-pentanone	100	94.96	100	97.69	95	98	61-135	3	30
Methylene Chloride	20	20.61	20	20.16	103	101	76-122	2	30
1,1,2,2-Tetrachloroethane	20	17.35	20	17.45	87	87	61-131	1	30
Tetrachloroethene	20	19.15	20	18.68	96	93	73-120	3	30
Toluene	20	18.82	20	18.28	94	91	80-120	3	30
1,1,1-Trichloroethane	20	19.35	20	18.96	97	95	69-123	2	30
1,1,2-Trichloroethane	20	19.47	20	19.57	97	98	80-120	1	30
Trichloroethene	20	19.21	20	18.84	96	94	80-120	2	30
1,2,3-Trichloropropane	20	18.75	20	19.12	94	96	66-131	2	30
Vinyl Chloride	20	17.46	20	17.11	87	86	59-120	2	30
Xylene (Total)	60	56.37	60	54.98	94	92	75-120	2	30
Batch number: X181991AA	Sample number(s): 9702396,9702402,9702404-9702406								
Acetone	150	157.43	150	143.84	105	96	55-131	9	30
Benzene	20	19.66	20	18.96	98	95	80-120	4	30
2-Butanone	150	165.7	150	158.02	110	105	57-128	5	30
Carbon Disulfide	20	17.44	20	16.69	87	83	64-133	4	30
Carbon Tetrachloride	20	18.94	20	18.35	95	92	64-134	3	30
Chlorobenzene	20	18.76	20	18.05	94	90	80-120	4	30
Chloroethane	20	19.6	20	18.6	98	93	50-131	5	30
Chloroform	20	19.87	20	19.29	99	96	80-120	3	30
Dibromochloromethane	20	20.54	20	19.71	103	99	65-120	4	30
1,1-Dichloroethane	20	20.23	20	19.44	101	97	77-120	4	30
1,2-Dichloroethane	20	21.23	20	19.93	106	100	71-128	6	30
1,1-Dichloroethene	20	20.83	20	20.36	104	102	73-129	2	30
trans-1,2-Dichloroethene	20	20.21	20	19.4	101	97	80-125	4	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3-Dichloropropane	20	21.31	20	20.32	107	102	74-120	5	30
Ethylbenzene	20	19.25	20	18.33	96	92	74-120	5	30
4-Methyl-2-pentanone	100	122.65	100	112.71	123	113	61-135	8	30
Methylene Chloride	20	20.56	20	20.05	103	100	76-122	3	30
1,1,2,2-Tetrachloroethane	20	22.41	20	20.88	112	104	61-131	7	30
Tetrachloroethene	20	17.71	20	16.88	89	84	73-120	5	30
Toluene	20	18.82	20	18.27	94	91	80-120	3	30
1,1,1-Trichloroethane	20	19.25	20	18.75	96	94	69-123	3	30
1,1,2-Trichloroethane	20	21.59	20	20.66	108	103	80-120	4	30
Trichloroethene	20	18.68	20	18.24	93	91	80-120	2	30
1,2,3-Trichloropropane	20	22.53	20	21.82	113	109	66-131	3	30
Vinyl Chloride	20	19.46	20	19	97	95	59-120	2	30
Xylene (Total)	60	56.86	60	54.97	95	92	75-120	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: L181991AA	Sample number(s): 9702407-9702412								
Acetone	150	178.78	150	179.03	119	119	54-157	0	30
Benzene	20	22.11	20	20.59	111	103	80-120	7	30
2-Butanone	150	160.28	150	155.08	107	103	59-135	3	30
Carbon Disulfide	20	21.07	20	19.65	105	98	65-128	7	30
Carbon Tetrachloride	20	16.34	20	15.35	82	77	64-134	6	30
Chlorobenzene	20	20.72	20	19.32	104	97	80-120	7	30
Chloroethane	20	18.55	20	16.64	93	83	61-123	11	30
Chloroform	20	20.37	20	18.86	102	94	80-120	8	30
Dibromochloromethane	20	18.13	20	17.61	91	88	71-120	3	30
1,1-Dichloroethane	20	22.18	20	20.89	111	104	80-120	6	30
1,2-Dichloroethane	20	18.57	20	17.09	93	85	73-124	8	30
1,1-Dichloroethene	20	22.26	20	21.9	111	110	80-131	2	30
trans-1,2-Dichloroethene	20	21.74	20	20.36	109	102	80-120	7	30
1,3-Dichloropropane	20	22.48	20	20.98	112	105	80-120	7	30
Ethylbenzene	20	21.96	20	20.31	110	102	80-120	8	30
4-Methyl-2-pentanone	100	108.61	100	100.66	109	101	62-133	8	30
Methylene Chloride	20	22.51	20	21.15	113	106	80-120	6	30
1,1,2,2-Tetrachloroethane	20	23.85	20	21.36	119	107	72-120	11	30
Tetrachloroethene	20	20.54	20	19.21	103	96	80-120	7	30
Toluene	20	23.32	20	20.81	117	104	80-120	11	30
1,1,1-Trichloroethane	20	18	20	16.5	90	83	67-126	9	30
1,1,2-Trichloroethane	20	22.25	20	20.75	111	104	80-120	7	30
Trichloroethene	20	21.23	20	18.97	106	95	80-120	11	30
1,2,3-Trichloropropane	20	22.25	20	19.61	111	98	80-120	13	30
Vinyl Chloride	20	19.33	20	17.97	97	90	68-120	7	30
Xylene (Total)	60	63.71	60	59	106	98	80-120	8	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18198SLB026	Sample number(s): 9702387-9702389,9702391,9702395,9702398-9702399,9702403								
Acenaphthene	1666.67	1709.93			103		78-119		
Acenaphthylene	1666.67	1791.18			107		45-149		
Aniline	1666.67	1276.75			77		45-105		
Anthracene	1666.67	1699.85			102		82-113		
Benzo(a)anthracene	1666.67	1652.17			99		76-119		
Benzo(a)pyrene	1666.67	1681.5			101		77-112		
Benzo(b)fluoranthene	1666.67	1730.66			104		78-120		
Benzo(g,h,i)perylene	1666.67	1571.1			94		76-111		
Benzo(k)fluoranthene	1666.67	1527.02			92		78-119		
Butylbenzylphthalate	1666.67	1740.04			104		81-118		
Di-n-butylphthalate	1666.67	1722.69			103		77-121		
4-Chloro-3-methylphenol	1666.67	1851.71			111		70-128		
4-Chloroaniline	1666.67	1096.42			66		10-117		
2-Chlorophenol	1666.67	1633.92			98		75-124		
Chrysene	1666.67	1600.97			96		78-115		
Dibenz(a,h)anthracene	1666.67	1643.99			99		79-117		
Dibenzofuran	1666.67	1629.2			98		79-114		
1,2-Dichlorobenzene	1666.67	1558.11			93		77-113		
1,3-Dichlorobenzene	1666.67	1521.7			91		77-108		
1,4-Dichlorobenzene	1666.67	1511.92			91		79-112		
3,3'-Dichlorobenzidine	1666.67	1681.28			101		33-117		
2,4-Dichlorophenol	1666.67	1781.04			107		79-125		
Diethylphthalate	1666.67	1680.4			101		74-120		
Dimethylphthalate	1666.67	1661.39			100		77-116		
2,4-Dinitrophenol	3333.33	3693.7			111		51-139		
2,6-Dinitrotoluene	1666.67	1796.98			108		80-120		
bis(2-Ethylhexyl)phthalate	1666.67	1689.89			101		78-118		
Fluoranthene	1666.67	1714.02			103		76-115		
Fluorene	1666.67	1638.07			98		80-112		
Hexachlorobenzene	1666.67	1703.08			102		77-114		
Indeno(1,2,3-cd)pyrene	1666.67	1564.03			94		78-113		
Isophorone	1666.67	1612.49			97		65-120		
2-Methylnaphthalene	1666.67	1680.46			101		77-116		
2-Methylphenol	1666.67	1631.56			98		74-128		
4-Methylphenol	1666.67	1621.58			97		66-121		
Naphthalene	1666.67	1567.28			94		81-111		
2-Nitroaniline	1666.67	1881.06			113		81-126		
3-Nitroaniline	1666.67	1710.87			103		68-124		
Nitrobenzene	1666.67	1603.15			96		70-122		
2-Nitrophenol	1666.67	1763.7			106		77-129		
4-Nitrophenol	1666.67	1659.35			100		44-131		
Di-n-octylphthalate	1666.67	1847.85			111		81-134		
Pentachlorophenol	1666.67	1513.77			91		54-131		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Phenanthrene	1666.67	1667.16			100		81-109		
Phenol	1666.67	1518.85			91		68-123		
Pyrene	1666.67	1589.91			95		80-107		
1,2,4-Trichlorobenzene	1666.67	1632.8			98		79-114		
2,4,5-Trichlorophenol	1666.67	1823.17			109		84-122		
Batch number: 18200SLC026	Sample number(s): 9702394								
Acenaphthene	1666.67	1662.78			100		78-119		
Acenaphthylene	1666.67	1692.21			102		45-149		
Aniline	1666.67	1316.55			79		45-105		
Anthracene	1666.67	1640.85			98		82-113		
Benzo(a)anthracene	1666.67	1539.22			92		76-119		
Benzo(a)pyrene	1666.67	1621.44			97		77-112		
Benzo(b)fluoranthene	1666.67	1691.69			102		78-120		
Benzo(g,h,i)perylene	1666.67	1550.1			93		76-111		
Benzo(k)fluoranthene	1666.67	1409.7			85		78-119		
Butylbenzylphthalate	1666.67	1605.2			96		81-118		
Di-n-butylphthalate	1666.67	1639.17			98		77-121		
4-Chloro-3-methylphenol	1666.67	1681.23			101		70-128		
4-Chloroaniline	1666.67	347.61			21		10-117		
2-Chlorophenol	1666.67	1678.37			101		75-124		
Chrysene	1666.67	1474.91			88		78-115		
Dibenz(a,h)anthracene	1666.67	1584.16			95		79-117		
Dibenzofuran	1666.67	1540.88			92		79-114		
1,2-Dichlorobenzene	1666.67	1595.15			96		77-113		
1,3-Dichlorobenzene	1666.67	1553.69			93		77-108		
1,4-Dichlorobenzene	1666.67	1573.14			94		79-112		
3,3'-Dichlorobenzidine	1666.67	1097.61			66		33-117		
2,4-Dichlorophenol	1666.67	1699.4			102		79-125		
Diethylphthalate	1666.67	1564.32			94		74-120		
Dimethylphthalate	1666.67	1528.65			92		77-116		
2,4-Dinitrophenol	3333.33	3268.69			98		51-139		
2,6-Dinitrotoluene	1666.67	1627.77			98		80-120		
bis(2-Ethylhexyl)phthalate	1666.67	1559.31			94		78-118		
Fluoranthene	1666.67	1514.31			91		76-115		
Fluorene	1666.67	1575.95			95		80-112		
Hexachlorobenzene	1666.67	1725.4			104		77-114		
Indeno(1,2,3-cd)pyrene	1666.67	1526.5			92		78-113		
Isophorone	1666.67	1589.58			95		65-120		
2-Methylnaphthalene	1666.67	1592.81			96		77-116		
2-Methylphenol	1666.67	1659.24			100		74-128		
4-Methylphenol	1666.67	1549.49			93		66-121		
Naphthalene	1666.67	1570.03			94		81-111		
2-Nitroaniline	1666.67	1738.03			104		81-126		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
3-Nitroaniline	1666.67	1560.88			94		68-124		
Nitrobenzene	1666.67	1590			95		70-122		
2-Nitrophenol	1666.67	1717.85			103		77-129		
4-Nitrophenol	1666.67	1487.93			89		44-131		
Di-n-octylphthalate	1666.67	1734.11			104		81-134		
Pentachlorophenol	1666.67	1676.09			101		54-131		
Phenanthrene	1666.67	1638.35			98		81-109		
Phenol	1666.67	1491.13			89		68-123		
Pyrene	1666.67	1542.98			93		80-107		
1,2,4-Trichlorobenzene	1666.67	1632.51			98		79-114		
2,4,5-Trichlorophenol	1666.67	1678.74			101		84-122		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18194WAI026	Sample number(s): 9702407-9702408								
Acenaphthene	50	46.18	50	37.19	92	74	49-123	22	30
Acenaphthylene	50	48.55	50	39.33	97	79	67-111	21	30
Aniline	50	31.07	50	26.29	62	53	22-92	17	30
Anthracene	50	49.64	50	40.95	99	82	55-126	19	30
Benzo(a)anthracene	50	48.52	50	40.77	97	82	63-124	17	30
Benzo(a)pyrene	50	49.4	50	39.86	99	80	50-128	21	30
Benzo(b)fluoranthene	50	48.3	50	40.13	97	80	58-127	18	30
Benzo(g,h,i)perylene	50	43.19	50	35.74	86	71	51-124	19	30
Benzo(k)fluoranthene	50	49.31	50	40.26	99	81	63-123	20	30
Butylbenzylphthalate	50	52.15	50	43.59	104	87	40-131	18	30
Di-n-butylphthalate	50	52.52	50	43.32	105	87	58-119	19	30
4-Chloro-3-methylphenol	50	46.22	50	37.87	92	76	50-130	20	30
4-Chloroaniline	50	40.93	50	34.09	82	68	33-106	18	30
2-Chlorophenol	50	41.83	50	34.5	84	69	47-116	19	30
Chrysene	50	48.68	50	41.39	97	83	65-124	16	30
Dibenz(a,h)anthracene	50	45.46	50	36.4	91	73	53-132	22	30
Dibenzofuran	50	45.55	50	37.05	91	74	50-124	21	30
1,2-Dichlorobenzene	50	35.91	50	29.67	72	59	31-116	19	30
1,3-Dichlorobenzene	50	34.75	50	29	70	58	24-115	18	30
1,4-Dichlorobenzene	50	35.31	50	29.59	71	59	30-109	18	30
3,3'-Dichlorobenzidine	50	44.57	50	37.23	89	74	32-106	18	30
2,4-Dichlorophenol	50	45.48	50	37.69	91	75	53-126	19	30
Diethylphthalate	50	48.09	50	39.38	96	79	42-124	20	30
Dimethylphthalate	50	45.56	50	37.98	91	76	19-119	18	30
2,4-Dinitrophenol	100	111.23	100	89.68	111	90	19-140	21	30
2,6-Dinitrotoluene	50	51.61	50	42.19	103	84	57-131	20	30
bis(2-Ethylhexyl)phthalate	50	52.83	50	43.79	106	88	52-132	19	30
Fluoranthene	50	49.11	50	40.19	98	80	61-123	20	30
Fluorene	50	46.35	50	37.79	93	76	48-124	20	30
Hexachlorobenzene	50	44.98	50	37.4	90	75	57-123	18	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Indeno(1,2,3-cd)pyrene	50	42.17	50	34.35	84	69	52-127	20	30
Isophorone	50	42.57	50	35.01	85	70	49-129	19	30
2-Methylnaphthalene	50	39.1	50	31.82	78	64	42-120	21	30
2-Methylphenol	50	38.85	50	32.38	78	65	46-113	18	30
4-Methylphenol	50	39.15	50	33.61	78	67	42-115	15	30
Naphthalene	50	40.39	50	33.03	81	66	44-114	20	30
2-Nitroaniline	50	54.28	50	43.1	109	86	54-133	23	30
3-Nitroaniline	50	50.25	50	41.28	101	83	41-123	20	30
Nitrobenzene	50	39.44	50	32.22	79	64	43-128	20	30
2-Nitrophenol	50	50.03	50	40.67	100	81	58-125	21	30
4-Nitrophenol	50	26.03	50	21.77	52	44	10-96	18	30
Di-n-octylphthalate	50	53.5	50	43.8	107	88	51-134	20	30
Pentachlorophenol	50	49.13	50	40.54	98	81	50-127	19	30
Phenanthrene	50	49.88	50	40.81	100	82	54-122	20	30
Phenol	50	23.36	50	20.13	47	40	10-92	15	30
Pyrene	50	46.42	50	39.11	93	78	54-123	17	30
1,2,4-Trichlorobenzene	50	36.48	50	30.07	73	60	29-120	19	30
2,4,5-Trichlorophenol	50	49.01	50	39.78	98	80	59-129	21	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 181970038A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403								
PCB-1016	167	155.55			93		76-121		
PCB-1260	168	178.97			107		79-130		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 181970039A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403								
Aldrin	3.33	2.85			86		60-117		
Alpha BHC	3.40	2.84			84		65-124		
Beta BHC	3.33	3.16			95		68-129		
Gamma BHC - Lindane	3.40	2.86			84		68-133		
Alpha Chlordane	3.33	3.06			92		73-131		
Gamma Chlordane	3.33	3.46			104		76-134		
p,p-DDD	6.80	6.50			96		69-138		
p,p-DDE	6.67	5.84			88		68-146		
p,p-DDT	6.80	6.11			90		67-135		
Delta BHC	3.33	2.94			88		45-151		
Dieldrin	6.80	5.97			88		63-126		
Endosulfan I	3.40	2.29			67		62-119		
Endosulfan II	6.67	5.45			82		65-126		
Endosulfan Sulfate	6.73	6.50			97		71-132		
Endrin	6.73	6.19			92		86-135		
Endrin Ketone	6.67	6.92			104		85-131		
Heptachlor	3.40	3.01			89		66-118		
Heptachlor Epoxide	3.33	3.05			92		74-128		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methoxychlor	33.9	34.54			102		88-145		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181971063702	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403								
Arsenic	15	15.53			104		80-120		
Barium	200	186.23			93		80-120		
Cadmium	5.00	4.95			99		80-120		
Chromium	20	19.24			96		80-120		
Lead	15	14.9			99		80-120		
Selenium	15	14.54			97		80-120		
Silver	5.00	4.42			88		80-120		
Batch number: 181971063805	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403								
Mercury	0.100	0.0911			91		80-110		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 181971063501	Sample number(s): 9702407-9702408								
Arsenic	0.150	0.152			101		80-120		
Barium	2.00	1.87			94		87-111		
Cadmium	0.0500	0.0485			97		90-111		
Chromium	0.200	0.188			94		87-110		
Lead	0.150	0.147			98		87-113		
Selenium	0.150	0.139			92		80-120		
Silver	0.0500	0.0478			96		80-120		
Batch number: 181980571307	Sample number(s): 9702407-9702408								
Mercury	0.00100	0.000977			98		80-114		
	%	**%**	**%**	**%**					
Batch number: 18197820005B	Sample number(s): 9702387-9702406								
Moisture	89.5	89.43			100		99-101		
Moisture	89.5	89.43			100		99-101		
Moisture Duplicate	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: A181971AA	Sample number(s): 9702388-9702389,9702391-9702395,9702398-9702401 UNSPK: 9702387									

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Acetone	53.22	139.67	216.85	140.97	169	117	82	55-131	25	30
Benzene	1.77	18.62	19.86	18.8	19.18	97	93	80-120	3	30
2-Butanone	5.71	139.67	192.09	140.97	159.18	133*	109	57-128	19	30
Carbon Disulfide	2.55	18.62	19.59	18.8	19.17	92	88	64-133	2	30
Carbon Tetrachloride	N.D.	18.62	19.37	18.8	19.31	104	103	64-134	0	30
Chlorobenzene	1.29	18.62	16.54	18.8	16.79	82	82	80-120	2	30
Chloroethane	N.D.	18.62	17.37	18.8	18.85	93	100	50-131	8	30
Chloroform	N.D.	18.62	19.36	18.8	19.42	104	103	80-120	0	30
Dibromochloromethane	N.D.	18.62	18.16	18.8	18.61	98	99	65-120	2	30
1,1-Dichloroethane	N.D.	18.62	19.39	18.8	19.42	104	103	77-120	0	30
1,2-Dichloroethane	N.D.	18.62	19.82	18.8	20.91	106	111	71-128	5	30
1,1-Dichloroethene	N.D.	18.62	20.23	18.8	20.51	109	109	73-129	1	30
trans-1,2-Dichloroethene	N.D.	18.62	17.95	18.8	19.18	96	102	80-125	7	30
1,3-Dichloropropane	N.D.	18.62	19.04	18.8	19.35	102	103	74-120	2	30
Ethylbenzene	N.D.	18.62	17.02	18.8	16.48	91	88	74-120	3	30
4-Methyl-2-pentanone	N.D.	93.11	121.7	93.98	129.83	131	138*	61-135	6	30
Methylene Chloride	N.D.	18.62	18.81	18.8	19.83	101	105	76-122	5	30
1,1,2,2-Tetrachloroethane	N.D.	18.62	24.17	18.8	22.1	130	118	61-131	9	30
Tetrachloroethene	N.D.	18.62	18.11	18.8	16.78	97	89	73-120	8	30
Toluene	N.D.	18.62	19.1	18.8	17.93	103	95	80-120	6	30
1,1,1-Trichloroethane	N.D.	18.62	18.18	18.8	18.39	98	98	69-123	1	30
1,1,2-Trichloroethane	N.D.	18.62	20.36	18.8	20.54	109	109	80-120	1	30
Trichloroethene	N.D.	18.62	17.71	18.8	17.87	95	95	80-120	1	30
1,2,3-Trichloropropane	N.D.	18.62	26.34	18.8	23.67	141*	126	66-131	11	30
Vinyl Chloride	N.D.	18.62	19.83	18.8	20.76	106	110	59-120	5	30
Xylene (Total)	N.D.	55.87	48.44	56.39	47.78	87	85	75-120	1	30
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 18198SLB026	Sample number(s): 9702387-9702389,9702391,9702395,9702398-9702399,9702403 UNSPK: 9702387									
Acenaphthene	11.31	1641.5	1666.77	1663.89	1793.58	101	107	78-119	7	30
Acenaphthylene	32.62	1641.5	1715.46	1663.89	1829.75	103	108	45-149	6	30
Aniline	N.D.	1641.5	1326.77	1663.89	1133.04	81	68	45-105	16	30
Anthracene	62.38	1641.5	1677.63	1663.89	1752.64	98	102	82-113	4	30
Benzo(a)anthracene	223.68	1641.5	1635.62	1663.89	1582.28	86	82	76-119	3	30
Benzo(a)pyrene	207.31	1641.5	1768.02	1663.89	1786.08	95	95	77-112	1	30
Benzo(b)fluoranthene	277.09	1641.5	1779.08	1663.89	2000.54	92	104	78-120	12	30
Benzo(g,h,i)perylene	130.54	1641.5	1665.82	1663.89	1796.78	94	100	76-111	8	30
Benzo(k)fluoranthene	94.42	1641.5	1567.76	1663.89	1501.89	90	85	78-119	4	30
Butylbenzylphthalate	N.D.	1641.5	1569.2	1663.89	1586.75	96	95	81-118	1	30
Di-n-butylphthalate	N.D.	1641.5	1632.18	1663.89	1646.78	99	99	77-121	1	30
4-Chloro-3-methylphenol	N.D.	1641.5	1626.59	1663.89	1683.42	99	101	70-128	3	30
4-Chloroaniline	N.D.	1641.5	1394.49	1663.89	995.67	85	60	10-117	33*	30
2-Chlorophenol	N.D.	1641.5	1581.83	1663.89	1684.14	96	101	75-124	6	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chrysene	215.15	1641.5	1469.06	1663.89	1503.86	76*	77*	78-115	2	30
Dibenz(a,h)anthracene	29.97	1641.5	1602.28	1663.89	1777.59	96	105	79-117	10	30
Dibenzofuran	22.6	1641.5	1564.31	1663.89	1696.3	94	101	79-114	8	30
1,2-Dichlorobenzene	N.D.	1641.5	1554.34	1663.89	1646.93	95	99	77-113	6	30
1,3-Dichlorobenzene	N.D.	1641.5	1488.18	1663.89	1617.31	91	97	77-108	8	30
1,4-Dichlorobenzene	N.D.	1641.5	1517.99	1663.89	1613.64	92	97	79-112	6	30
3,3'-Dichlorobenzidine	N.D.	1641.5	1395.71	1663.89	1409.27	85	85	33-117	1	30
2,4-Dichlorophenol	N.D.	1641.5	1683.85	1663.89	1726.27	103	104	79-125	2	30
Diethylphthalate	N.D.	1641.5	1536.87	1663.89	1671.33	94	100	74-120	8	30
Dimethylphthalate	N.D.	1641.5	1522.67	1663.89	1603.86	93	96	77-116	5	30
2,4-Dinitrophenol	N.D.	3282.99	2138.58	3327.79	2470.1	65	74	51-139	14	30
2,6-Dinitrotoluene	N.D.	1641.5	1619.86	1663.89	1725.77	99	104	80-120	6	30
bis(2-Ethylhexyl)phthalate	N.D.	1641.5	1531.98	1663.89	1517.21	93	91	78-118	1	30
Fluoranthene	416.01	1641.5	1865.9	1663.89	1790.74	88	83	76-115	4	30
Fluorene	14	1641.5	1553.86	1663.89	1703.79	94	102	80-112	9	30
Hexachlorobenzene	N.D.	1641.5	1668.94	1663.89	1795.48	102	108	77-114	7	30
Indeno(1,2,3-cd)pyrene	115.59	1641.5	1631.91	1663.89	1746.86	92	98	78-113	7	30
Isophorone	N.D.	1641.5	1530.16	1663.89	1606.64	93	97	65-120	5	30
2-Methylnaphthalene	69.64	1641.5	1637.24	1663.89	1649	95	95	77-116	1	30
2-Methylphenol	N.D.	1641.5	1515.28	1663.89	1627.62	92	98	74-128	7	30
4-Methylphenol	N.D.	1641.5	1591.03	1663.89	1635.94	97	98	66-121	3	30
Naphthalene	58.69	1641.5	1625.15	1663.89	1666.86	95	97	81-111	3	30
2-Nitroaniline	78.03	1641.5	1813.29	1663.89	1880.95	106	108	81-126	4	30
3-Nitroaniline	264.28	1641.5	1978.76	1663.89	1695.43	104	86	68-124	15	30
Nitrobenzene	150.09	1641.5	1719.47	1663.89	1677.5	96	92	70-122	2	30
2-Nitrophenol	N.D.	1641.5	1699.83	1663.89	1821.82	104	109	77-129	7	30
4-Nitrophenol	N.D.	1641.5	1569.87	1663.89	1619.83	96	97	44-131	3	30
Di-n-octylphthalate	N.D.	1641.5	1789.05	1663.89	1915.56	109	115	81-134	7	30
Pentachlorophenol	N.D.	1641.5	1339.14	1663.89	1269.95	82	76	54-131	5	30
Phenanthrene	182.06	1641.5	1758.27	1663.89	1832.56	96	99	81-109	4	30
Phenol	N.D.	1641.5	1458.8	1663.89	1559.2	89	94	68-123	7	30
Pyrene	388.52	1641.5	1851.12	1663.89	1806.64	89	85	80-107	2	30
1,2,4-Trichlorobenzene	35.18	1641.5	1653.5	1663.89	1725.71	99	102	79-114	4	30
2,4,5-Trichlorophenol	N.D.	1641.5	1644.08	1663.89	1701.01	100	102	84-122	3	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 181970038A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403 UNSPK: 9702387									
PCB-1016	N.D.	165	137.28	166	155.53	83	94	76-121	12	50
PCB-1260	N.D.	167	193.67	168	187.59	116	112	79-130	3	50
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/kg	MS Spike Added ug/kg	MS Conc ug/kg	MSD Spike Added ug/kg	MSD Conc ug/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 181970039A	Sample number(s): 9702387-9702389,9702391,9702394-9702395,9702398-9702399,9702403 UNSPK: 9702387									
Aldrin	N.D.	3.29	2.92	3.28	2.78	89	85	60-117	5	50
Alpha BHC	N.D.	3.36	2.75	3.35	2.66	82	79	65-124	3	50
Beta BHC	N.D.	3.29	3.33	3.28	3.63	101	111	68-129	9	50
Gamma BHC - Lindane	N.D.	3.36	2.70	3.35	2.70	80	81	68-133	0	50
Alpha Chlordane	N.D.	3.29	2.89	3.28	2.86	88	87	73-131	1	50
Gamma Chlordane	N.D.	3.29	2.90	3.28	2.78	88	85	76-134	4	50
p,p-DDD	N.D.	6.71	5.77	6.70	5.89	86	88	69-138	2	50
p,p-DDE	N.D.	6.58	6.77	6.56	5.96	103	91	68-146	13	50
p,p-DDT	4.85	6.71	9.74	6.70	6.85	73	30*	67-135	35	50
Delta BHC	N.D.	3.29	2.88	3.28	2.87	88	88	45-151	0	50
Dieldrin	N.D.	6.71	6.04	6.70	5.74	90	86	63-126	5	50
Endosulfan I	N.D.	3.36	1.87	3.35	2.02	56*	60*	62-119	8	50
Endosulfan II	N.D.	6.58	4.75	6.56	4.67	72	71	65-126	2	50
Endosulfan Sulfate	N.D.	6.64	6.27	6.63	6.05	94	91	71-132	4	50
Endrin	N.D.	6.64	5.89	6.63	5.71	89	86	86-135	3	50
Endrin Ketone	N.D.	6.58	6.00	6.56	6.01	91	92	85-131	0	50
Heptachlor	N.D.	3.36	2.88	3.35	2.80	86	84	66-118	3	50
Heptachlor Epoxide	N.D.	3.29	3.08	3.28	3.02	94	92	74-128	2	50
Methoxychlor	N.D.	33.4	35.88	33.3	34.93	107	105	88-145	3	50
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181971063702	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403 UNSPK: 9702387									
Arsenic	13.6	12.93	25.21	12.4	23.17	90	77	75-125	8	20
Barium	65.74	172.41	239.87	165.29	228.1	101	98	75-125	5	20
Cadmium	0.0843	4.31	4.33	4.13	4.14	98	98	75-125	4	20
Chromium	215.53	17.24	132.15	16.53	461.56	-484 (2)	1488 (2)	75-125	111*	20
Lead	69.98	12.93	69.2	12.4	92.59	-6 (2)	182 (2)	75-125	29*	20
Selenium	N.D.	12.93	11.98	12.4	12.06	93	97	75-125	1	20
Silver	1.20	4.31	4.79	4.13	4.64	83	83	75-125	3	20
Batch number: 181971063805	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403 UNSPK: 9702387									
Mercury	0.177	0.159	0.516	0.161	0.320	213*	88	80-120	47*	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 181980571307	Sample number(s): 9702407-9702408 UNSPK: 9702407									
Mercury	N.D.	0.00100	0.000976	0.00100	0.000957	98	96	80-120	2	20

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Batch number: 181971063702	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403 BKG: 9702387			
Arsenic	13.6	10.96	22* (1)	20
Barium	65.74	54.27	19	20
Cadmium	0.0843	0.140	50* (1)	20
Chromium	215.53	198.4	8	20
Lead	69.98	83.7	18	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	1.20	0.877	31* (1)	20
Batch number: 181971063805	Sample number(s): 9702387-9702391,9702394-9702395,9702398-9702399,9702403 BKG: 9702387			
Mercury	0.177	0.264	39* (1)	20
	mg/l	mg/l		
Batch number: 181980571307	Sample number(s): 9702407-9702408 BKG: 9702407			
Mercury	N.D.	N.D.	0 (1)	20
	%	%		
Batch number: 18197820005B	Sample number(s): 9702387-9702406 BKG: 9702387			
Moisture	5.75	5.27	9*	5
Moisture	5.75	5.27	9*	5
Moisture Duplicate	5.75	5.27	9*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: A181971AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9702388	106	108	107	88
9702389	107	108	101	98
9702391	106	106	107	79
9702392	106	111	99	88
9702393	107	111	102	85
9702394	107	109	109	77
9702395	108	111	102	84
9702398	108	109	107	76
9702399	109	107	103	79
9702400	109	106	107	75
9702401	109	108	107	75
Blank	103	104	97	97

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: A181971AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	102	101	98	100
LCSD	102	100	98	101
MS	106	108	107	88
MSD	107	108	101	98
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- Solid by 8260C
Batch number: A182003AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9702387	105	108	105	79
9702397	104	105	105	82
9702403	109	108	121	64
Blank	105	103	97	95
LCS	104	102	98	99
LCSD	104	105	98	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L181991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9702407	92	98	102	101
9702408	92	99	101	100
9702409	92	98	103	100
9702410	93	99	102	100
9702411	92	99	102	101
9702412	92	100	103	100
Blank	91	95	102	100
LCS	95	98	106	107
LCSD	93	98	103	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- Solid by 8260C
Batch number: X181991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9702396	112	118	102	88
9702402	111	113	109	67
9702404	127	122	134	48*
9702405	136	129	141	42*
9702406	121	117	122	57

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: X181991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	107	108	104	95
LCS	102	107	105	109
LCSD	101	104	106	107
Limits:	50-141	54-135	52-141	50-131

Analysis Name: TCL SW846 8270D MINI
Batch number: 18194WAI026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9702407	41	54	90	78	86	90
9702408	39	50	87	73	80	90
Blank	34	47	82	71	79	98
LCS	43	58	91	82	87	98
LCSD	36	48	73	65	69	80
Limits:	10-71	10-82	21-134	30-111	39-105	27-116

Analysis Name: TCL SOM01.2
Batch number: 18198SLB026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9702387	88	90	96	88	90	97
9702388	87	92	95	90	89	94
9702389	89	95	103	91	94	96
9702391	85	92	89	93	95	96
9702395	83	89	87	88	90	96
9702398	87	91	94	93	96	97
9702399	89	95	67	92	92	93
9702403	82	85	57	90	92	94
Blank	79	88	108	90	95	101
LCS	89	93	107	91	91	101
MS	87	92	95	90	89	94
MSD	89	95	103	91	94	96
Limits:	46-125	51-123	27-137	49-118	57-116	55-118

Analysis Name: TCL SOM01.2
Batch number: 18200SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9702394	84	91	85	85	97	97
Blank	84	88	109	90	91	100
LCS	90	97	105	92	89	96

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/24/2018 11:37

Group Number: 1965554

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SOM01.2
Batch number: 18200SLC026

Limits:	46-125	51-123	27-137	49-118	57-116	55-118

Analysis Name: PCBs 8082A/3546
Batch number: 181970038A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9702387	109	108	106	104
9702388	100	123	96	138
9702389	109	108	107	101
9702391	106	106	104	105
9702394	107	100	104	100
9702395	106	91	105	97
9702398	111	107	108	107
9702399	112	104	108	98
9702403	109	101	108	103
Blank	113	103	107	107
LCS	106	106	106	107
MS	100	123	96	138
MSD	109	108	107	101
Limits:	53-140	45-143	53-140	45-143

Analysis Name: OC Pesticides in Soils
Batch number: 181970039A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9702387	246*	100	68	100
9702388	334*	101	70	95
9702389	151*	97	69	99
9702391	372*	86	67	86
9702394	96	95	75	112
9702395	92	86	65	92
9702398	170*	121	79	119
9702399	78	84	64	90
9702403	76	92	67	99
Blank	67	98	55	106
LCS	68	95	57	105
MS	334*	101	70	95
MSD	151*	97	69	99
Limits:	26-145	39-152	26-145	45-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1965554 Sample # 9702387-412

COC # 562566 3 OF 3

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Hudson River OU-2 60323713	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: Soil ☑ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: moisture

Analysis Requested — Preservation and Filtration Codes: O

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260 VOCs	8270 SVOCs	6010/7471 Metals	8081A/8082 Pesticide/PCB	Remarks
NOA-01-1	7/10/18	1345	X	X	5	X	X	X	X	
NOA-01-2		1345	X	X	5	X	X	X	X	
NOA-01-3		1345	X		4	X				
NOA-01-4		1345	X		4	X				
NOA-02-1	7/11/18	1500	X	X	5	X	X	X	X	
NOA-02-2		1500	X	X	5	X	X	X	X	
NOA-02-3		1500	X		4	X				
NOA-02-4		1500	X		4	X				
NOA-01-MS	7/10/18	1345	X	X	5	X	X	X	X	
NOA-01-MSD	7/10/18	1345	X	X	5	X	X	X	X	

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

O=SB/MeOH

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 5 day TAT

E-mail address: mike.garner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7/12/18	1300			
			[signature]	7-13-18	9:45

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.4-4.6 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1965554 Sample # 9702387-412

COC # 562566 2 of 3

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Hudson River OU-2 60323713	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

Matrix: ☐ Tissue ☒ Soil ☐ Sediment | ☐ Ground Water ☐ Potable ☐ NPDES ☐ Surface | Other: moisture

Analysis Requested — Preservation and Filtration Codes: O

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

O=SB/MeOH

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260 VOCs	8270 SVOCs	6010/7471 metals	8081A/8082 Pesticides/PCBs
NOA-01-Dup	7/10/18	1345	X	X	5	X	X	X	X
VS-01-1	7/11/18	1345	X	X	5	X	X	X	X
VS-01-2	↓	1345	X		4	X			
VS-01-3		1345	X		4	X			
VS-01-4		1345	X		4	X			
LA-01-1	7/12/18	1025	X	X	5	X	X	X	X
LA-01-2	↓	1025	X		4	X			
LA-01-3		1025	X		4	X			
LA-01-4		1025	X		4	X			

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 5 day TAT

E-mail address: mike.garner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	7/12/18	1300			

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.4-4.6 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1965554 Sample # 9702387-412

COC # 562566 1 of 3

For Lab Use Only

FSC:

SCR#:

Client Information

Client: AECOM

Acct. #:

Project Name/#: BASF Hudson River OU-2 60323713

PWSID #:

Project Manager: John Bleiler

P.O. #:

Sampler: Jeff Denman

Quote #:

State where samples were collected: NY

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Other: moisture

Analysis Requested

Preservation and Filtration Codes: H | | N

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	8260 VOCs	8270D SVOCs	6010/7471 metals
TI##A372807 1118	7/11/18	1245	X		6	X	X	X
TI2A393071118	7/11/18	1245	X		6	X	X	X
Temp Blank	—	—	X		1			
TB18163-Cooler 1	6/15/18	—	X		2	X		
TB18163-Cooler 2	6/15/18	—	X		2	X		
TB18163-Cooler 3	6/15/18	—	X		2	X		
TB18163-Cooler 4	6/15/18	—	X		2	X		

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 5 day TAT

E-mail address: mike.garner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7/12/18	1300			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	7-13-18	945

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.4-4.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 221521

Group Number(s): 1965554

Client: AECOM

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	07/13/2018 9:45
Number of Packages:	4	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	8
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Melvin Sanchez (8943) at 15:21 on 07/13/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.6	DT	Wet	Y	Bagged	N
2	DT131	3.9	DT	Wet	Y	Bagged	N
3	DT131	2.4	DT	Wet	Y	Bagged	N
4	DT131	4.6	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
LA-01-4	3	4	

Sample ID Discrepancy Details

Sample ID on COC	Sample ID on Label	Comments
T1A3728071118	T13728071118	
T2A393071118	T23393071118	
LA-01-4	FD Grab Soil	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
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Client: AECOM

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
VS-01-1	7/11/2018 15:00	
VS-01-2	7/11/2018 15:00	
VS-01-3	7/11/2018 15:00	
VS-01-4	7/11/2018 15:00	

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 04, 2018 10:30

Project: BASF Hudson River OU-2 60323713

Account #: 04285
Group Number: 1979238
SDG: RNS02
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
LA-01-5 082118 Grab Soil	08/21/2018 07:45	9766874
LA-01-5 082118 Grab Soil	08/21/2018 07:45	9766875
Pipe-01-1 082018 Grab Solid	08/20/2018 14:00	9766876
Pipe-01-1 082018 Grab Solid	08/20/2018 14:00	9766878

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **LA-01-5 082118 Grab Soil**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/21/2018 07:45
SDG#: RNS02-01

BASF Corporation
ELLE Sample #: SW 9766874
ELLE Group #: 1979238
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	20.0	59.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	8.52	0.0100	0.0100	1
	The pH was measured in water at 19.6 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 8.52 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	9.4	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-5 082118 Grab Soil**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/21/2018 07:45
SDG#: RNS02-01

BASF Corporation
ELLE Sample #: SW 9766874
ELLE Group #: 1979238
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01123	Cyanide (Reactivity)	SW-846 Chapter 7.3	1	18240104201A	08/28/2018 12:58	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18239054201A	08/27/2018 19:45	Daniel S Smith	1
00394	pH	SW-846 9045D Nov 2004	1	18236039401A	08/24/2018 18:20	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18236039401A	08/24/2018 18:20	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18240112101A	08/28/2018 05:00	Kevin Litwa	1
01122	Sulfide (Reactivity)	SW-846 Chapter 7.3	1	18240112101A	08/28/2018 05:00	Kevin Litwa	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18235820005A	08/23/2018 13:15	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **LA-01-5 082118 Grab Soil**
TCLP NVE
COC: 579381

BASF Corporation
ELLE Sample #: TL 9766875
ELLE Group #: 1979238
Matrix: Soil

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/21/2018 07:45
SDG#: RNS02-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.100	1
07046	Barium	7440-39-3	1.32	0.0010	0.0100	1
07049	Cadmium	7440-43-9	0.0023 J	0.0010	0.0100	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0300	1
07055	Lead	7439-92-1	2.02	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00015 J	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07035	Arsenic	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	182391063601	08/31/2018 14:17	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	182400571301	08/29/2018 08:43	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	182391063601	08/31/2018 06:16	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	182360571302	08/24/2018 17:45	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	182400571301	08/28/2018 19:45	Barbara A Kane	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18235-2807-947	08/23/2018 12:53	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-03

BASF Corporation
ELLE Sample #: SW 9766876
ELLE Group #: 1979238
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**		**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	33,000		1,100	3,800	186.57
11995	Benzene	71-43-2	340	J	94	940	186.57
11995	2-Butanone	78-93-3	150,000		1,900	19,000	1865.67
11995	Carbon Disulfide	75-15-0	N.D.		110	940	186.57
11995	Carbon Tetrachloride	56-23-5	N.D.		94	940	186.57
11995	Chlorobenzene	108-90-7	N.D.		94	940	186.57
11995	Chloroethane	75-00-3	1,500		190	940	186.57
11995	Chloroform	67-66-3	N.D.		110	940	186.57
11995	Dibromochloromethane	124-48-1	N.D.		75	940	186.57
11995	1,1-Dichloroethane	75-34-3	N.D.		94	940	186.57
11995	1,2-Dichloroethane	107-06-2	N.D.		110	940	186.57
11995	1,1-Dichloroethene	75-35-4	N.D.		94	940	186.57
11995	trans-1,2-Dichloroethene	156-60-5	N.D.		94	940	186.57
11995	1,3-Dichloropropane	142-28-9	N.D.		75	940	186.57
11995	Ethylbenzene	100-41-4	18,000		75	940	186.57
11995	4-Methyl-2-pentanone	108-10-1	N.D.		190	1,900	186.57
11995	Methylene Chloride	75-09-2	N.D.		380	940	186.57
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		75	940	186.57
11995	Tetrachloroethene	127-18-4	210	J	94	940	186.57
11995	Toluene	108-88-3	250	J	110	940	186.57
11995	1,1,1-Trichloroethane	71-55-6	N.D.		110	940	186.57
11995	1,1,2-Trichloroethane	79-00-5	N.D.		94	940	186.57
11995	Trichloroethene	79-01-6	N.D.		94	940	186.57
11995	1,2,3-Trichloropropane	96-18-4	N.D.		110	940	186.57
11995	Vinyl Chloride	75-01-4	N.D.		110	940	186.57
11995	Xylene (Total)	1330-20-7	6,300		190	940	186.57

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	N.D.		17	83	5
10726	Acenaphthylene	208-96-8	N.D.		17	83	5
10726	Aniline	62-53-3	N.D.		830	2,500	5
10726	Anthracene	120-12-7	N.D.		17	83	5
10726	Benzo(a)anthracene	56-55-3	N.D.		17	83	5
10726	Benzo(a)pyrene	50-32-8	N.D.		33	83	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.		17	83	5
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		33	83	5
10726	Benzo(k)fluoranthene	207-08-9	N.D.		17	83	5
10726	Butylbenzylphthalate	85-68-7	N.D.		330	830	5

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-03

BASF Corporation
ELLE Sample #: SW 9766876
ELLE Group #: 1979238
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Di-n-butylphthalate	84-74-2	N.D.	330	830	5
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	83	180	5
10726	4-Chloroaniline	106-47-8	N.D.	170	830	5
10726	2-Chlorophenol	95-57-8	N.D.	83	180	5
10726	Chrysene	218-01-9	N.D.	17	83	5
10726	Dibenz(a,h)anthracene	53-70-3	N.D.	17	83	5
10726	Dibenzofuran	132-64-9	N.D.	83	180	5
10726	1,2-Dichlorobenzene	95-50-1	N.D.	99	250	5
10726	1,3-Dichlorobenzene	541-73-1	N.D.	83	180	5
10726	1,4-Dichlorobenzene	106-46-7	N.D.	83	180	5
10726	3,3'-Dichlorobenzidine	91-94-1	N.D.	500	1,700	5
10726	2,4-Dichlorophenol	120-83-2	N.D.	83	180	5
10726	Diethylphthalate	84-66-2	N.D.	330	830	5
10726	Dimethylphthalate	131-11-3	700,000	13,000	33,000	200
10726	2,4-Dinitrophenol	51-28-5	N.D.	1,800	5,000	5
10726	2,6-Dinitrotoluene	606-20-2	N.D.	99	250	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	330	830	5
10726	Fluoranthene	206-44-0	N.D.	17	83	5
10726	Fluorene	86-73-7	N.D.	17	83	5
10726	Hexachlorobenzene	118-74-1	N.D.	17	83	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	33	83	5
10726	Isophorone	78-59-1	N.D.	83	180	5
10726	2-Methylnaphthalene	91-57-6	160 J	50	170	5
10726	2-Methylphenol	95-48-7	N.D.	130	330	5
10726	4-Methylphenol	106-44-5	N.D.	99	250	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	250	33	83	5
10726	2-Nitroaniline	88-74-4	N.D.	99	250	5
10726	3-Nitroaniline	99-09-2	N.D.	330	830	5
10726	Nitrobenzene	98-95-3	N.D.	130	330	5
10726	2-Nitrophenol	88-75-5	N.D.	83	180	5
10726	4-Nitrophenol	100-02-7	N.D.	830	2,500	5
10726	Di-n-octylphthalate	117-84-0	N.D.	330	830	5
10726	Pentachlorophenol	87-86-5	N.D.	180	830	5
10726	Phenanthrene	85-01-8	120	17	83	5
10726	Phenol	108-95-2	1,500	120	250	5
10726	Pyrene	129-00-0	N.D.	17	83	5
10726	1,2,4-Trichlorobenzene	120-82-1	N.D.	83	180	5
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	99	250	5

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-03

BASF Corporation
ELLE Sample #: SW 9766876
ELLE Group #: 1979238
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	3.6	17	1
10885	PCB-1221	11104-28-2	N.D. D1	4.6	17	1
10885	PCB-1232	11141-16-5	N.D. D1	8.0	17	1
10885	PCB-1242	53469-21-9	N.D. D1	3.3	17	1
10885	PCB-1248	12672-29-6	N.D. D1	3.3	17	1
10885	PCB-1254	11097-69-1	N.D. D1	3.3	17	1
10885	PCB-1260	11096-82-5	N.D. D1	4.9	17	1
10885	PCB-1262	37324-23-5	N.D. D1	3.3	17	1
10885	PCB-1268	11100-14-4	N.D. D1	3.3	17	1
10885	Total PCBs	1336-36-3	N.D.	3.3	17	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Aldrin	309-00-2	N.D. D1	8.5	41	50
10590	Alpha BHC	319-84-6	N.D. D1	8.5	41	50
10590	Beta BHC	319-85-7	N.D. D2	22	50	50
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	10	41	50
10590	Alpha Chlordane	5103-71-9	N.D. VD2	63	63	50
10590	Gamma Chlordane	5103-74-2	N.D. D2	12	41	50
10590	p,p-DDD	72-54-8	N.D. D1	16	85	50
10590	p,p-DDE	72-55-9	N.D. D2	16	85	50
10590	p,p-DDT	50-29-3	N.D. D2	39	85	50
10590	Delta BHC	319-86-8	N.D. D2	22	50	50
10590	Dieldrin	60-57-1	N.D. D1	16	85	50
10590	Endosulfan I	959-98-8	40 JD1	11	41	50
10590	Endosulfan II	33213-65-9	N.D. D2	55	110	50
10590	Endosulfan Sulfate	1031-07-8	N.D. D1	16	85	50
10590	Endrin	72-20-8	N.D. D2	34	85	50
10590	Endrin Ketone	53494-70-5	N.D. D1	30	100	50
10590	Heptachlor	76-44-8	N.D. D2	15	41	50
10590	Heptachlor Epoxide	1024-57-3	N.D. VD1	52	52	50
10590	Methoxychlor	72-43-5	N.D. D1	85	330	50
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/kg**	**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	N.D.	0.852	7.10	1
06946	Barium	7440-39-3	21.8	0.107	0.710	1
06949	Cadmium	7440-43-9	N.D.	0.0710	0.710	1
06951	Chromium	7440-47-3	2.54	0.149	2.13	1
06955	Lead	7439-92-1	10.1	0.426	2.13	1
06936	Selenium	7782-49-2	N.D.	1.07	7.10	1
06966	Silver	7440-22-4	N.D.	0.284	1.42	1

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-03

BASF Corporation
ELLE Sample #: SW 9766876
ELLE Group #: 1979238
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 7471B**		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.843	0.0761	0.325	2.5
Wet Chemistry	**SW-846 Chapter 7.3**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.9	59.8	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	6.65	0.0100	0.0100	1
	The pH was measured in water at 20 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 6.65 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	0.87	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-03

BASF Corporation
ELLE Sample #: SW 9766876
ELLE Group #: 1979238
Matrix: Solid

Sample Comments

State of New York Certification No. 10670

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q182392AA	08/27/2018 16:00	Jennifer K Howe	186.57
11995	VOCs- Solid by 8260C	SW-846 8260C	1	R182401AA	08/28/2018 17:09	Jennifer K Howe	1865.67
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201823550997	08/23/2018 12:31	Anastasia K Jaynes	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201823550997	08/23/2018 12:31	Anastasia K Jaynes	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201823550997	08/23/2018 12:12	Anastasia K Jaynes	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	2	201823550997	08/23/2018 12:13	Anastasia K Jaynes	n.a.
10726	TCL SOM01.2	SW-846 8270D	1	18235SLC026	08/24/2018 03:03	Anthony P Bauer	5
10726	TCL SOM01.2	SW-846 8270D	1	18235SLC026	08/24/2018 09:29	Linda M Hartenstine	200
10813	BNA Soil Microwave APP IX	SW-846 3546	1	18235SLC026	08/23/2018 17:15	Kate E Lutte	1
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	182360003A	08/27/2018 01:17	Kirby B Turner	1
10590	OC Pesticides in Soils	SW-846 8081B	1	182360004A	08/28/2018 17:38	Lisa A Reinert	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	182360003A	08/25/2018 12:00	Michelle A Newswanger	1
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	182360004A	08/25/2018 12:00	Michelle A Newswanger	1
06935	Arsenic	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06946	Barium	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06949	Cadmium	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06951	Chromium	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06955	Lead	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06936	Selenium	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
06966	Silver	SW-846 6010C	1	182391063701	08/29/2018 09:38	Lisa J Cooke	1
00159	Mercury	SW-846 7471B	1	182401063801	08/29/2018 07:05	Damary Valentin	2.5
10637	ICP/ICPMS-SW, 3050B - U4	SW-846 3050B	1	182391063701	08/28/2018 15:30	JoElla L Rice	1
10638	Hg - SW, 7471B - U4	SW-846 7471B	1	182401063801	08/28/2018 16:30	JoElla L Rice	1
01123	Cyanide (Reactivity)	SW-846 Chapter 7.3	1	18243104201A	08/31/2018 20:29	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18242054201A	08/30/2018 00:40	Hannah M Royer	1
00394	pH	SW-846 9045D Nov 2004	1	18236039401A	08/24/2018 18:20	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18236039401A	08/24/2018 18:20	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18242112101A	08/30/2018 05:00	Kevin Litwa	1
01122	Sulfide (Reactivity)	SW-846 Chapter 7.3	1	18242112101A	08/30/2018 05:00	Kevin Litwa	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18236820002B	08/24/2018 13:05	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **Pipe-01-1 082018 Grab Solid**
TCLP ZHE
COC: 579381

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:00
SDG#: RNS02-05

BASF Corporation
ELLE Sample #: TL 9766878
ELLE Group #: 1979238
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	N.D.	0.004	0.020	20
11997	2-Butanone	78-93-3	0.73	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	N.D.	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182402AA	08/29/2018 03:12	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182402AA	08/29/2018 03:12	Kevin D Kelly	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18238-2807-946	08/26/2018 12:50	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: W182402AA	Sample number(s): 9766878		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/kg	ug/kg	ug/kg
Batch number: Q182392AA	Sample number(s): 9766876		
Acetone	N.D.	300	1,000
Benzene	N.D.	25	250
Carbon Disulfide	N.D.	30	250
Carbon Tetrachloride	N.D.	25	250
Chlorobenzene	N.D.	25	250
Chloroethane	N.D.	50	250
Chloroform	N.D.	30	250
Dibromochloromethane	N.D.	20	250
1,1-Dichloroethane	N.D.	25	250
1,2-Dichloroethane	N.D.	30	250
1,1-Dichloroethene	N.D.	25	250
trans-1,2-Dichloroethene	N.D.	25	250
1,3-Dichloropropane	N.D.	20	250
Ethylbenzene	N.D.	20	250
4-Methyl-2-pentanone	N.D.	50	500
Methylene Chloride	N.D.	100	250
1,1,2,2-Tetrachloroethane	N.D.	20	250
Tetrachloroethene	N.D.	25	250
Toluene	N.D.	30	250
1,1,1-Trichloroethane	N.D.	30	250
1,1,2-Trichloroethane	N.D.	25	250
Trichloroethene	N.D.	25	250
1,2,3-Trichloropropane	N.D.	30	250
Vinyl Chloride	N.D.	30	250
Xylene (Total)	N.D.	50	250

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Batch number: R182401AA	Sample number(s): 9766876		
2-Butanone	N.D.	50	500
Batch number: 18235SLC026	Sample number(s): 9766876		
Acenaphthene	N.D.	3	17
Acenaphthylene	N.D.	3	17
Aniline	N.D.	170	500
Anthracene	N.D.	3	17
Benzo(a)anthracene	N.D.	3	17
Benzo(a)pyrene	N.D.	7	17
Benzo(b)fluoranthene	N.D.	3	17
Benzo(g,h,i)perylene	N.D.	7	17
Benzo(k)fluoranthene	N.D.	3	17
Butylbenzylphthalate	N.D.	67	170
Di-n-butylphthalate	N.D.	67	170
4-Chloro-3-methylphenol	N.D.	17	37
4-Chloroaniline	N.D.	33	170
2-Chlorophenol	N.D.	17	37
Chrysene	N.D.	3	17
Dibenz(a,h)anthracene	N.D.	3	17
Dibenzofuran	N.D.	17	37
1,2-Dichlorobenzene	N.D.	20	50
1,3-Dichlorobenzene	N.D.	17	37
1,4-Dichlorobenzene	N.D.	17	37
3,3'-Dichlorobenzidine	N.D.	100	330
2,4-Dichlorophenol	N.D.	17	37
Diethylphthalate	N.D.	67	170
Dimethylphthalate	N.D.	67	170
2,4-Dinitrophenol	N.D.	370	1,000
2,6-Dinitrotoluene	N.D.	20	50
bis(2-Ethylhexyl)phthalate	N.D.	67	170
Fluoranthene	N.D.	3	17
Fluorene	N.D.	3	17
Hexachlorobenzene	N.D.	3	17
Indeno(1,2,3-cd)pyrene	N.D.	7	17
Isophorone	N.D.	17	37
2-Methylnaphthalene	N.D.	10	33
2-Methylphenol	N.D.	27	67
4-Methylphenol	N.D.	20	50
Naphthalene	N.D.	7	17
2-Nitroaniline	N.D.	20	50
3-Nitroaniline	N.D.	67	170
Nitrobenzene	N.D.	27	67
2-Nitrophenol	N.D.	17	37
4-Nitrophenol	N.D.	170	500

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Di-n-octylphthalate	N.D.	67	170
Pentachlorophenol	N.D.	37	170
Phenanthrene	N.D.	3	17
Phenol	N.D.	23	50
Pyrene	N.D.	3	17
1,2,4-Trichlorobenzene	N.D.	17	37
2,4,5-Trichlorophenol	N.D.	20	50
Batch number: 182360003A	Sample number(s): 9766876		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
Batch number: 182360004A	Sample number(s): 9766876		
Aldrin	N.D.	0.17	0.83
Alpha BHC	N.D.	0.17	0.83
Beta BHC	N.D.	0.44	1.0
Gamma BHC - Lindane	N.D.	0.21	0.83
Alpha Chlordane	N.D.	0.17	0.83
Gamma Chlordane	N.D.	0.25	0.83
p,p-DDD	N.D.	0.33	1.7
p,p-DDE	N.D.	0.33	1.7
p,p-DDT	N.D.	0.79	1.7
Delta BHC	N.D.	0.45	1.0
Dieldrin	N.D.	0.33	1.7
Endosulfan I	N.D.	0.22	0.83
Endosulfan II	N.D.	1.1	2.3
Endosulfan Sulfate	N.D.	0.33	1.7
Endrin	N.D.	0.68	1.7
Endrin Ketone	N.D.	0.60	2.0
Heptachlor	N.D.	0.31	0.83
Heptachlor Epoxide	N.D.	0.17	0.83
Methoxychlor	N.D.	1.7	6.7
	mg/kg	mg/kg	mg/kg
Batch number: 182391063701	Sample number(s): 9766876		
Arsenic	N.D.	1.20	10.0
Barium	N.D.	0.150	1.00
Cadmium	N.D.	0.100	1.00

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/kg	mg/kg	mg/kg
Chromium	N.D.	0.210	3.00
Lead	N.D.	0.600	3.00
Selenium	N.D.	1.50	10.0
Silver	N.D.	0.400	2.00
Batch number: 182401063801	Sample number(s): 9766876		
Mercury	N.D.	0.0312	0.133
	mg/l	mg/l	mg/l
Batch number: 182391063601	Sample number(s): 9766875		
Arsenic	N.D.	0.0160	0.100
Barium	N.D.	0.0010	0.0100
Cadmium	N.D.	0.0010	0.0100
Chromium	N.D.	0.0053	0.0300
Lead	N.D.	0.0071	0.0300
Selenium	N.D.	0.0210	0.100
Silver	N.D.	0.0050	0.0200
Batch number: 182400571301	Sample number(s): 9766875		
Mercury	N.D.	0.000050	0.00020
	mg/kg	mg/kg	mg/kg
Batch number: 18240104201A	Sample number(s): 9766874		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18243104201A	Sample number(s): 9766876		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18240112101A	Sample number(s): 9766874		
Sulfide (Reactivity)	N.D.	53.6	160
Batch number: 18242112101A	Sample number(s): 9766876		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W182402AA	Sample number(s): 9766878								
Benzene	0.0200	0.0212	0.0200	0.0212	106	106	80-120	0	30
2-Butanone	0.150	0.150	0.150	0.147	100	98	59-135	2	30
Carbon Tetrachloride	0.0200	0.0211	0.0200	0.0207	106	104	64-134	2	30
Chlorobenzene	0.0200	0.0203	0.0200	0.0197	102	99	80-120	3	30
Chloroform	0.0200	0.0214	0.0200	0.0208	107	104	80-120	3	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	0.0200	0.0224	0.0200	0.0218	112	109	73-124	3	30
1,1-Dichloroethene	0.0200	0.0208	0.0200	0.0208	104	104	80-131	0	30
Tetrachloroethene	0.0200	0.0171	0.0200	0.0171	85	86	80-120	0	30
Trichloroethene	0.0200	0.0192	0.0200	0.0192	96	96	80-120	0	30
Vinyl Chloride	0.0200	0.0179	0.0200	0.0172	89	86	56-120	4	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: Q182392AA	Sample number(s): 9766876								
Acetone	7500	6930.58	7500	7264.41	92	97	41-150	5	30
Benzene	1000	1007.19	1000	998.27	101	100	80-120	1	30
Carbon Disulfide	1000	810.95	1000	848.08	81	85	64-133	4	30
Carbon Tetrachloride	1000	831.61	1000	844.66	83	84	64-134	2	30
Chlorobenzene	1000	910.74	1000	936.84	91	94	80-120	3	30
Chloroethane	1000	965.86	1000	950.37	97	95	43-135	2	30
Chloroform	1000	992.48	1000	1005.11	99	101	80-120	1	30
Dibromochloromethane	1000	882.55	1000	870.14	88	87	69-125	1	30
1,1-Dichloroethane	1000	974.11	1000	1023.72	97	102	79-120	5	30
1,2-Dichloroethane	1000	1038.71	1000	1026.48	104	103	71-128	1	30
1,1-Dichloroethene	1000	1013.05	1000	1026.2	101	103	73-129	1	30
trans-1,2-Dichloroethene	1000	1001.48	1000	1042.31	100	104	80-125	4	30
1,3-Dichloropropane	1000	945.82	1000	949.52	95	95	79-120	0	30
Ethylbenzene	1000	886	1000	886.4	89	89	78-120	0	30
4-Methyl-2-pentanone	5000	4989.06	5000	5038.15	100	101	67-128	1	30
Methylene Chloride	1000	974.45	1000	1007.39	97	101	76-122	3	30
1,1,2,2-Tetrachloroethane	1000	891.42	1000	915.11	89	92	69-125	3	30
Tetrachloroethene	1000	896.57	1000	902.68	90	90	73-120	1	30
Toluene	1000	925.4	1000	939.23	93	94	80-120	1	30
1,1,1-Trichloroethane	1000	868.39	1000	869.64	87	87	69-123	0	30
1,1,2-Trichloroethane	1000	930.56	1000	924.43	93	92	80-120	1	30
Trichloroethene	1000	936.77	1000	949.66	94	95	80-120	1	30
1,2,3-Trichloropropane	1000	912.7	1000	931.34	91	93	75-125	2	30
Vinyl Chloride	1000	883.21	1000	907.79	88	91	52-120	3	30
Xylene (Total)	3000	2635.08	3000	2664.68	88	89	75-120	1	30
Batch number: R182401AA	Sample number(s): 9766876								
2-Butanone	7500	6055.43	7500	6030.34	81	80	57-128	0	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 18235SLC026	Sample number(s): 9766876								
Acenaphthene	1666.67	1633.85			98		85-114		
Acenaphthylene	1666.67	1652.95			99		80-120		
Aniline	1666.67	1311.44			79		44-113		
Anthracene	1666.67	1568.83			94		82-113		
Benzo(a)anthracene	1666.67	1506.21			90		76-111		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(a)pyrene	1666.67	1478.17			89		82-114		
Benzo(b)fluoranthene	1666.67	1391.63			83		78-115		
Benzo(g,h,i)perylene	1666.67	1447.02			87		76-111		
Benzo(k)fluoranthene	1666.67	1577.12			95		78-119		
Butylbenzylphthalate	1666.67	1537.26			92		81-113		
Di-n-butylphthalate	1666.67	1582.58			95		85-115		
4-Chloro-3-methylphenol	1666.67	1560.15			94		78-127		
4-Chloroaniline	1666.67	1542.76			93		10-125		
2-Chlorophenol	1666.67	1634.92			98		85-116		
Chrysene	1666.67	1499.56			90		75-109		
Dibenz(a,h)anthracene	1666.67	1498.13			90		79-117		
Dibenzofuran	1666.67	1523.82			91		84-110		
1,2-Dichlorobenzene	1666.67	1562.68			94		82-108		
1,3-Dichlorobenzene	1666.67	1562.65			94		77-108		
1,4-Dichlorobenzene	1666.67	1571.26			94		79-112		
3,3'-Dichlorobenzidine	1666.67	1382.06			83		26-124		
2,4-Dichlorophenol	1666.67	1671.83			100		80-120		
Diethylphthalate	1666.67	1505.94			90		81-113		
Dimethylphthalate	1666.67	1496.74			90		82-110		
2,4-Dinitrophenol	3333.33	2947.25			88		41-136		
2,6-Dinitrotoluene	1666.67	1494.15			90		86-116		
bis(2-Ethylhexyl)phthalate	1666.67	1520.31			91		78-118		
Fluoranthene	1666.67	1546.33			93		76-115		
Fluorene	1666.67	1480.65			89		80-112		
Hexachlorobenzene	1666.67	1492.89			90		77-114		
Indeno(1,2,3-cd)pyrene	1666.67	1436.47			86		78-113		
Isophorone	1666.67	1400.83			84		76-115		
2-Methylnaphthalene	1666.67	1556.85			93		80-111		
2-Methylphenol	1666.67	1638.55			98		80-122		
4-Methylphenol	1666.67	1597.67			96		75-121		
Naphthalene	1666.67	1539.51			92		81-111		
2-Nitroaniline	1666.67	1497.33			90		81-126		
3-Nitroaniline	1666.67	1551.33			93		60-128		
Nitrobenzene	1666.67	1446.45			87		75-114		
2-Nitrophenol	1666.67	1601.37			96		85-118		
4-Nitrophenol	1666.67	1377.39			83		54-124		
Di-n-octylphthalate	1666.67	1654.6			99		84-128		
Pentachlorophenol	1666.67	1223.72			73		47-134		
Phenanthrene	1666.67	1552.09			93		81-109		
Phenol	1666.67	1544.64			93		74-119		
Pyrene	1666.67	1546.66			93		80-107		
1,2,4-Trichlorobenzene	1666.67	1617.96			97		79-114		
2,4,5-Trichlorophenol	1666.67	1580.17			95		80-120		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182360003A	Sample number(s): 9766876								
PCB-1016	166.73	147.19	166.73	143.76	88	86	76-121	2	50
PCB-1260	168.33	173.9	168.33	169.81	103	101	79-130	2	50
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 182360004A	Sample number(s): 9766876								
Aldrin	3.33	2.94	3.33	2.96	88	89	60-117	1	50
Alpha BHC	3.40	3.05	3.40	3.10	90	91	65-124	2	50
Beta BHC	3.33	3.07	3.33	3.21	92	96	68-129	4	50
Gamma BHC - Lindane	3.40	2.95	3.40	3.15	87	93	68-133	7	50
Alpha Chlordane	3.33	3.08	3.33	3.14	92	94	73-131	2	50
Gamma Chlordane	3.33	3.13	3.33	3.34	94	100	76-134	6	50
p,p-DDD	6.80	6.36	6.80	6.44	94	95	69-138	1	50
p,p-DDE	6.67	6.04	6.67	6.49	91	97	68-146	7	50
p,p-DDT	6.80	6.41	6.80	6.94	94	102	67-135	8	50
Delta BHC	3.33	3.03	3.33	3.08	91	92	45-151	2	50
Dieldrin	6.80	6.25	6.80	6.73	92	99	63-126	7	50
Endosulfan I	3.40	2.80	3.40	2.98	82	88	62-119	6	50
Endosulfan II	6.67	5.87	6.67	6.04	88	91	65-126	3	50
Endosulfan Sulfate	6.73	6.16	6.73	6.51	92	97	71-132	5	50
Endrin	6.73	6.32	6.73	6.69	94	99	86-135	6	50
Endrin Ketone	6.67	6.32	6.67	6.45	95	97	85-131	2	50
Heptachlor	3.40	2.89	3.40	3.05	85	90	66-118	5	50
Heptachlor Epoxide	3.33	3.07	3.33	3.11	92	93	74-128	1	50
Methoxychlor	33.87	34.22	33.87	34.5	101	102	88-145	1	50
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182391063701	Sample number(s): 9766876								
Arsenic	15	15.9			106		80-120		
Barium	200	204.33			102		80-120		
Cadmium	5.00	5.29			106		80-120		
Chromium	20	20.6			103		80-120		
Lead	15	15.4			103		80-120		
Selenium	15	15.71			105		80-120		
Silver	5.00	5.39			108		80-120		
Batch number: 182401063801	Sample number(s): 9766876								
Mercury	0.100	0.0986			99		80-110		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182391063601	Sample number(s): 9766875								
Arsenic	0.150	0.159	0.150	0.159	106	106	80-120	0	20
Barium	2.00	2.03	2.00	2.03	101	102	87-111	0	20
Cadmium	0.0500	0.0504	0.0500	0.0501	101	100	90-111	1	20

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chromium	0.200	0.195	0.200	0.194	97	97	87-110	0	20
Lead	0.150	0.148	0.150	0.147	99	98	87-113	1	20
Selenium	0.150	0.169	0.150	0.169	113	113	80-120	0	20
Silver	0.0500	0.0528	0.0500	0.0514	106	103	80-120	3	20
Batch number: 182400571301	Sample number(s): 9766875								
Mercury	0.00100	0.000918			92		80-114		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18240104201A	Sample number(s): 9766874								
Cyanide (Reactivity)	1000	1024.74			102		77-113		
Batch number: 18243104201A	Sample number(s): 9766876								
Cyanide (Reactivity)	1000	942.14			94		77-113		
Batch number: 18236039401A	Sample number(s): 9766874,9766876								
Corrosivity	7.00	6.93			99		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18240112101A	Sample number(s): 9766874								
Sulfide (Reactivity)	570	482.74			85		63-100		
Batch number: 18242112101A	Sample number(s): 9766876								
Sulfide (Reactivity)	570	563.45			99		63-100		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18236039401A	Sample number(s): 9766874,9766876								
pH	7.00	6.93			99		95-105		
	%	**%**	**%**	**%**					
Batch number: 18235820005A	Sample number(s): 9766874								
Moisture	89.5	89.41			100		99-101		
Batch number: 18236820002B	Sample number(s): 9766876								
Moisture	89.5	89.44			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W182402AA	Sample number(s): 9766878 UNSPK: 9766878									
Benzene	N.D.	0.400	0.451	0.400	0.461	113	115	80-120	2	30
2-Butanone	0.729	3.00	3.72	3.00	3.80	100	102	59-135	2	30
Carbon Tetrachloride	N.D.	0.400	0.481	0.400	0.502	120	126	64-134	4	30
Chlorobenzene	N.D.	0.400	0.411	0.400	0.429	103	107	80-120	4	30
Chloroform	N.D.	0.400	0.448	0.400	0.461	112	115	80-120	3	30
1,2-Dichloroethane	N.D.	0.400	0.448	0.400	0.458	112	115	73-124	2	30
1,1-Dichloroethene	N.D.	0.400	0.484	0.400	0.486	121	122	80-131	0	30
Tetrachloroethene	N.D.	0.400	0.371	0.400	0.402	93	100	80-120	8	30
Trichloroethene	N.D.	0.400	0.407	0.400	0.429	102	107	80-120	5	30
Vinyl Chloride	N.D.	0.400	0.397	0.400	0.403	99	101	56-120	1	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 182400571301	Sample number(s): 9766875 UNSPK: 9766875									
Mercury	0.000154	0.00100	0.00118	0.00100	0.00119	103	104	80-120	1	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 182400571301	Sample number(s): 9766875 BKG: 9766875			
Mercury	0.000154	0.000197	25* (1)	20
	%	%		
Batch number: 18235820005A	Sample number(s): 9766874 BKG: 9766874			
Moisture	9.41	10.64	12*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: Q182392AA

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2018 10:30

Group Number: 1979238

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: Q182392AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9766876	89	93	88	87
Blank	100	106	100	94
LCS	96	97	91	87
LCSD	98	97	92	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182402AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9766878	101	100	106	102
Blank	98	99	107	101
LCS	97	100	110	109
LCSD	96	100	109	109
MS	98	99	109	109
MSD	98	97	110	110
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SOM01.2
Batch number: 18235SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9766876	79	82	82	82	86	89
Blank	83	89	97	81	95	102
LCS	88	90	88	82	88	98
Limits:	47-120	51-123	19-137	49-118	57-116	55-118

Analysis Name: PCBs 8082A/3546
Batch number: 182360003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9766876	90	96	80	97
Blank	108	104	101	102
LCS	102	99	99	99
LCSD	99	99	96	100
Limits:	53-140	45-143	53-140	45-143

Analysis Name: OC Pesticides in Soils
Batch number: 182360004A

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1979238
Reported: 09/04/2018 10:30

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pesticides in Soils
Batch number: 182360004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9766876	114	303*	256*	1520*
Blank	80	112	79	107
LCS	84	111	82	111
LCSD	72	114	72	113
Limits:	26-145	39-152	26-145	45-148

*- Outside of specification
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Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 1979238 Sample # 9766874-78

COC # 579381

Client Information

Client: AECOM
Acct. #:
Project Name/#: BASF Hudson River OU-2 60323713
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: J. Denman
Quote #:
State where samples were collected: NY
For Compliance: Yes ☐ No ☒

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: fiberglass pipe / temp blank

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#: 229613

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
Cooler 1 of 2

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	TCLP Metals	Ignitability, Reactivity, Corrosivity	Total + TCLP VOC	SVOC	TCLP SVOC	Metals	Pesticides	PCB
LA-01-5 082118	8/21/18	0745	X		3	X	X						
Pipe-01-1 082018	8/20/18	1400	X		1	X	X	X	X	X	X	X	X
Temp. Blank					1								

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 3-5

E-mail address: Mike.gardner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Chelsi West	8-9-18	17:26			
Jeff Denman	8-21-18	1615			
			Mike Gardner	8/22/18	1005

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt 4.4/6.0 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 224844

Group Number(s): 1979238

Client: Aecom

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/22/2018 10:05
Number of Packages:	2	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wesley Miller (2308) at 16:42 on 08/22/2018

Samples Chilled Details: BASF Hudosn River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	4.4	DT	Wet	Y	Bagged	N
2	DT131	6.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: August 29, 2018 19:33

Project: BASF Hudson River OU-2 60323713

Account #: 04285
Group Number: 1979253
SDG: RNS03
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
T3A1063C082018 Grab Groundwater	08/20/2018 14:15	9766950
VBV8111082018 Grab Groundwater	08/20/2018 15:10	9766951
TB18214080918 Water	08/09/2018 14:50	9766952

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **T3A1063C082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:15
SDG#: RNS03-01

BASF Corporation
ELLE Sample #: WW 9766950
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	1	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14242	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14242	Aniline	62-53-3	N.D.	3	10	1
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **T3A1063C082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:15
SDG#: RNS03-01

BASF Corporation
ELLE Sample #: WW 9766950
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chlorophenol	95-57-8	N.D.	0.5	2	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	Dibenzofuran	132-64-9	N.D.	0.5	2	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.5	2	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.5	2	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	2	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	3	10	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.5	2	1
14242	Diethylphthalate	84-66-2	N.D.	2	5	1
14242	Dimethylphthalate	131-11-3	N.D.	2	5	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	15	31	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	2	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Fluorene	86-73-7	N.D.	0.1	0.5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	Isophorone	78-59-1	N.D.	0.5	2	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	2-Nitroaniline	88-74-4	N.D.	2	7	1
14242	3-Nitroaniline	99-09-2	N.D.	3	7	1
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	2-Nitrophenol	88-75-5	N.D.	3	10	1
14242	4-Nitrophenol	100-02-7	N.D.	10	31	1
14242	Di-n-octylphthalate	117-84-0	N.D.	5	11	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: **T3A1063C082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:15
SDG#: RNS03-01

BASF Corporation
ELLE Sample #: WW 9766950
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	Aroclor-1016	12674-11-2	N.D. D1	0.082	0.41	1
10591	Aroclor-1221	11104-28-2	N.D. D1	0.082	0.41	1
10591	Aroclor-1232	11141-16-5	N.D. D1	0.16	0.41	1
10591	Aroclor-1242	53469-21-9	N.D. D1	0.082	0.41	1
10591	Aroclor-1248	12672-29-6	N.D. D1	0.082	0.41	1
10591	Aroclor-1254	11097-69-1	N.D. D1	0.082	0.41	1
10591	Aroclor-1260	11096-82-5	N.D. D1	0.12	0.41	1
10591	Aroclor-1262	37324-23-5	N.D. D1	0.16	0.41	1
10591	Aroclor-1268	11100-14-4	N.D. D1	0.13	0.41	1
10591	Total PCBs	1336-36-3	N.D.	0.082	0.41	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0766 J	0.0160	0.100	1
07046	Barium	7440-39-3	0.130	0.0010	0.0100	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0100	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0300	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	457	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.07	1.00	3.00	1
		SM 2550 B-2010	**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	23.0	0.010	0.010	1
		SW-846 9040C	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.1	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **T3A1063C082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 14:15
SDG#: RNS03-01

BASF Corporation
ELLE Sample #: WW 9766950
ELLE Group #: 1979253
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182402AA	08/29/2018 02:48	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182402AA	08/29/2018 02:48	Kevin D Kelly	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18234WAF026	08/24/2018 16:18	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18234WAF026	08/23/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	182350010A	08/24/2018 22:20	Kirby B Turner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	182350010A	08/23/2018 17:21	Christine E Gleim	1
07035	Arsenic	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07046	Barium	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07049	Cadmium	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07051	Chromium	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07055	Lead	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07036	Selenium	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
07066	Silver	SW-846 6010C	1	182401063504	08/29/2018 12:20	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	182360571304	08/28/2018 07:59	Damary Valentin	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	182361063501	08/27/2018 09:14	Denise L Trimby	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	2	182401063504	08/29/2018 06:12	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	182360571304	08/27/2018 10:20	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18235964901A	08/23/2018 14:09	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18239385801A	08/27/2018 13:51	Amy L Hankins	1
12151	Temperature of pH	SM 2550 B-2010	1	18235002105A	08/24/2018 05:15	Jeremy L Bolf	1
12152	pH	SW-846 9040C	1	18235002105A	08/24/2018 05:15	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **VBV8111082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 15:10
SDG#: RNS03-02

BASF Corporation
ELLE Sample #: WW 9766951
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
14242	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
14242	Aniline	62-53-3	N.D.	3	11	1
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1

*=This limit was used in the evaluation of the final result

Sample Description: **VBV8111082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 15:10
SDG#: RNS03-02

BASF Corporation
ELLE Sample #: WW 9766951
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chlorophenol	95-57-8	N.D.	0.5	2	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	Dibenzofuran	132-64-9	N.D.	0.5	2	1
14242	1,2-Dichlorobenzene	95-50-1	N.D.	0.5	2	1
14242	1,3-Dichlorobenzene	541-73-1	N.D.	0.5	2	1
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	2	1
14242	3,3'-Dichlorobenzidine	91-94-1	N.D.	3	11	1
14242	2,4-Dichlorophenol	120-83-2	N.D.	0.5	2	1
14242	Diethylphthalate	84-66-2	N.D.	2	5	1
14242	Dimethylphthalate	131-11-3	N.D.	2	5	1
14242	2,4-Dinitrophenol	51-28-5	N.D.	15	32	1
14242	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	2	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Fluorene	86-73-7	N.D.	0.1	0.5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	Isophorone	78-59-1	N.D.	0.5	2	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	2-Nitroaniline	88-74-4	N.D.	2	7	1
14242	3-Nitroaniline	99-09-2	N.D.	3	7	1
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	2-Nitrophenol	88-75-5	N.D.	3	11	1
14242	4-Nitrophenol	100-02-7	N.D.	11	32	1
14242	Di-n-octylphthalate	117-84-0	N.D.	5	12	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: **VBV8111082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 15:10
SDG#: RNS03-02

BASF Corporation
ELLE Sample #: WW 9766951
ELLE Group #: 1979253
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	Aroclor-1016	12674-11-2	N.D. D1	0.082	0.41	1
10591	Aroclor-1221	11104-28-2	N.D. D1	0.082	0.41	1
10591	Aroclor-1232	11141-16-5	N.D. D1	0.16	0.41	1
10591	Aroclor-1242	53469-21-9	N.D. D1	0.082	0.41	1
10591	Aroclor-1248	12672-29-6	N.D. D1	0.082	0.41	1
10591	Aroclor-1254	11097-69-1	N.D. D1	0.082	0.41	1
10591	Aroclor-1260	11096-82-5	N.D. D1	0.12	0.41	1
10591	Aroclor-1262	37324-23-5	N.D. D1	0.16	0.41	1
10591	Aroclor-1268	11100-14-4	N.D. D1	0.13	0.41	1
10591	Total PCBs	1336-36-3	N.D.	0.082	0.41	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	1.47	0.0160	0.100	1
07046	Barium	7440-39-3	0.0548	0.0010	0.0100	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0100	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0300	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	405	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	1.34 J	1.00	3.00	1
		SM 2550 B-2010	**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	23.1	0.010	0.010	1
		SW-846 9040C	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.2	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **VBV8111082018 Grab Groundwater**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/20/2018 15:10
SDG#: RNS03-02

BASF Corporation
ELLE Sample #: WW 9766951
ELLE Group #: 1979253
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182402AA	08/29/2018 02:24	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182402AA	08/29/2018 02:24	Kevin D Kelly	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18234WAF026	08/24/2018 16:46	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18234WAF026	08/23/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	182350010A	08/24/2018 22:31	Kirby B Turner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	182350010A	08/23/2018 17:21	Christine E Gleim	1
07035	Arsenic	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07046	Barium	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07049	Cadmium	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07051	Chromium	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07055	Lead	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07036	Selenium	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
07066	Silver	SW-846 6010C	1	182401063504	08/29/2018 12:36	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	182360571304	08/28/2018 08:04	Damary Valentin	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	182361063501	08/27/2018 09:14	Denise L Trimby	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	2	182401063504	08/29/2018 06:12	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	182360571304	08/27/2018 10:20	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18235964901A	08/23/2018 14:09	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18239385801A	08/27/2018 13:51	Amy L Hankins	1
12151	Temperature of pH	SM 2550 B-2010	1	18235002105A	08/24/2018 05:11	Jeremy L Bolf	1
12152	pH	SW-846 9040C	1	18235002105A	08/24/2018 05:11	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18214080918 Water**
COC: 557175

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/22/2018 10:05
Collection Date/Time: 08/09/2018 14:50
SDG#: RNS03-03TB

BASF Corporation
ELLE Sample #: WW 9766952
ELLE Group #: 1979253
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182402AA	08/28/2018 23:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182402AA	08/28/2018 23:35	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 1979253
Reported: 08/29/2018 19:33

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182402AA	Sample number(s): 9766950-9766952		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Carbon Tetrachloride	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
Chloroethane	N.D.	0.2	1
Chloroform	N.D.	0.2	1
Dibromochloromethane	N.D.	0.2	1
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,3-Dichloropropane	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
4-Methyl-2-pentanone	N.D.	0.5	10
Methylene Chloride	N.D.	0.3	1
1,1,2,2-Tetrachloroethane	N.D.	0.2	1
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
1,1,2-Trichloroethane	N.D.	0.2	1
Trichloroethene	N.D.	0.2	1
1,2,3-Trichloropropane	N.D.	0.2	5
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18234WAF026	Sample number(s): 9766950-9766951		
Acenaphthene	N.D.	0.1	0.5
Acenaphthylene	N.D.	0.1	0.5
Aniline	N.D.	3	10
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(g,h,i)perylene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
4-Chloro-3-methylphenol	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chlorophenol	N.D.	0.5	2
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
Dibenzofuran	N.D.	0.5	2
1,2-Dichlorobenzene	N.D.	0.5	2
1,3-Dichlorobenzene	N.D.	0.5	2
1,4-Dichlorobenzene	N.D.	0.5	2
3,3'-Dichlorobenzidine	N.D.	3	10
2,4-Dichlorophenol	N.D.	0.5	2
Diethylphthalate	N.D.	2	5
Dimethylphthalate	N.D.	2	5
2,4-Dinitrophenol	N.D.	14	30
2,6-Dinitrotoluene	N.D.	0.5	2
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Fluorene	N.D.	0.1	0.5
Hexachlorobenzene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
Isophorone	N.D.	0.5	2
2-Methylnaphthalene	N.D.	0.1	0.5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
2-Nitroaniline	N.D.	2	7
3-Nitroaniline	N.D.	3	7
Nitrobenzene	N.D.	0.5	2
2-Nitrophenol	N.D.	3	10
4-Nitrophenol	N.D.	10	30
Di-n-octylphthalate	N.D.	5	11
Pentachlorophenol	N.D.	1	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
2,4,5-Trichlorophenol	N.D.	0.5	2
Batch number: 182350010A	Sample number(s): 9766950-9766951		
Aroclor-1016	N.D.	0.080	0.40
Aroclor-1221	N.D.	0.080	0.40
Aroclor-1232	N.D.	0.16	0.40
Aroclor-1242	N.D.	0.080	0.40
Aroclor-1248	N.D.	0.080	0.40
Aroclor-1254	N.D.	0.080	0.40

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Aroclor-1260	N.D.	0.12	0.40
Aroclor-1262	N.D.	0.16	0.40
Aroclor-1268	N.D.	0.13	0.40
Total PCBs	N.D.	0.080	0.40
	mg/l	mg/l	mg/l
Batch number: 182360571304	Sample number(s): 9766950-9766951		
Mercury	N.D.	0.000050	0.00020
Batch number: 182401063504	Sample number(s): 9766950-9766951		
Arsenic	N.D.	0.0160	0.100
Barium	N.D.	0.0010	0.0100
Cadmium	N.D.	0.0010	0.0100
Chromium	N.D.	0.0053	0.0300
Lead	N.D.	0.0071	0.0300
Selenium	N.D.	0.0210	0.100
Silver	N.D.	0.0050	0.0200
Batch number: 18235964901A	Sample number(s): 9766950-9766951		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 18239385801A	Sample number(s): 9766950-9766951		
Total Suspended Solids	N.D.	1.00	3.00

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W182402AA	Sample number(s): 9766950-9766952								
Acetone	150	115.32	150	112.2	77	75	54-157	3	30
Benzene	20	21.25	20	21.18	106	106	80-120	0	30
2-Butanone	150	149.63	150	147.11	100	98	59-135	2	30
Carbon Disulfide	20	21.45	20	20.89	107	104	65-128	3	30
Carbon Tetrachloride	20	21.14	20	20.71	106	104	64-134	2	30
Chlorobenzene	20	20.34	20	19.71	102	99	80-120	3	30
Chloroethane	20	20.19	20	19.52	101	98	55-123	3	30
Chloroform	20	21.37	20	20.84	107	104	80-120	3	30
Dibromochloromethane	20	19.08	20	18.75	95	94	71-120	2	30
1,1-Dichloroethane	20	22.86	20	22.45	114	112	80-120	2	30
1,2-Dichloroethane	20	22.4	20	21.76	112	109	73-124	3	30
1,1-Dichloroethene	20	20.78	20	20.83	104	104	80-131	0	30
trans-1,2-Dichloroethene	20	20.72	20	19.96	104	100	80-120	4	30
1,3-Dichloropropane	20	22.06	20	21.72	110	109	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ethylbenzene	20	21.82	20	21.41	109	107	80-120	2	30
4-Methyl-2-pentanone	100	104.91	100	104.55	105	105	62-133	0	30
Methylene Chloride	20	21.68	20	21.63	108	108	80-120	0	30
1,1,2,2-Tetrachloroethane	20	21.22	20	20.97	106	105	72-120	1	30
Tetrachloroethene	20	17.05	20	17.12	85	86	80-120	0	30
Toluene	20	21.61	20	21.04	108	105	80-120	3	30
1,1,1-Trichloroethane	20	19.17	20	17.89	96	89	67-126	7	30
1,1,2-Trichloroethane	20	21.27	20	20.78	106	104	80-120	2	30
Trichloroethene	20	19.19	20	19.16	96	96	80-120	0	30
1,2,3-Trichloropropane	20	20.62	20	19.87	103	99	75-124	4	30
Vinyl Chloride	20	17.85	20	17.24	89	86	56-120	4	30
Xylene (Total)	60	60.62	60	59.17	101	99	80-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18234WAF026	Sample number(s): 9766950-9766951								
Acenaphthene	50	49.22	50	49.69	98	99	62-119	1	30
Acenaphthylene	50	50.53	50	50.31	101	101	66-125	0	30
Aniline	50	32.81	50	31.14	66	62	29-101	5	30
Anthracene	50	48.6	50	50.22	97	100	70-118	3	30
Benzo(a)anthracene	50	49.51	50	50.68	99	101	70-123	2	30
Benzo(a)pyrene	50	51.62	50	51.24	103	102	71-122	1	30
Benzo(b)fluoranthene	50	50.16	50	50.6	100	101	70-120	1	30
Benzo(g,h,i)perylene	50	47.58	50	48.57	95	97	64-119	2	30
Benzo(k)fluoranthene	50	51.84	50	52.36	104	105	73-122	1	30
Butylbenzylphthalate	50	44.56	50	45.71	89	91	57-119	3	30
Di-n-butylphthalate	50	45.57	50	47.01	91	94	71-113	3	30
4-Chloro-3-methylphenol	50	50.31	50	52.05	101	104	65-122	3	30
4-Chloroaniline	50	35.15	50	36.46	70	73	42-110	4	30
2-Chlorophenol	50	45.84	50	42.51	92	85	58-108	8	30
Chrysene	50	48.17	50	49.05	96	98	71-123	2	30
Dibenz(a,h)anthracene	50	50.46	50	51.23	101	102	67-123	2	30
Dibenzofuran	50	48.34	50	47.71	97	95	63-117	1	30
1,2-Dichlorobenzene	50	41.82	50	39.77	84	80	43-108	5	30
1,3-Dichlorobenzene	50	41.22	50	38.91	82	78	31-110	6	30
1,4-Dichlorobenzene	50	40.54	50	39.01	81	78	30-109	4	30
3,3'-Dichlorobenzidine	50	41.38	50	42.24	83	84	36-116	2	30
2,4-Dichlorophenol	50	48.03	50	49.58	96	99	65-117	3	30
Diethylphthalate	50	42.15	50	43.16	84	86	61-111	2	30
Dimethylphthalate	50	38.05	50	39.23	76	78	37-116	3	30
2,4-Dinitrophenol	100	105.09	100	116.74	105	117	26-141	11	30
2,6-Dinitrotoluene	50	50.1	50	51.18	100	102	69-122	2	30
bis(2-Ethylhexyl)phthalate	50	46.71	50	48.26	93	97	68-120	3	30
Fluoranthene	50	49.96	50	51.86	100	104	70-124	4	30
Fluorene	50	48.51	50	47.96	97	96	62-116	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachlorobenzene	50	45.85	50	46.39	92	93	65-121	1	30
Indeno(1,2,3-cd)pyrene	50	47.41	50	49.7	95	99	61-121	5	30
Isophorone	50	46.83	50	47.4	94	95	65-123	1	30
2-Methylnaphthalene	50	46.06	50	46.8	92	94	51-112	2	30
2-Methylphenol	50	43.7	50	42.14	87	84	59-109	4	30
4-Methylphenol	50	42.53	50	39.84	85	80	56-108	7	30
Naphthalene	50	43.23	50	43.44	86	87	54-107	1	30
2-Nitroaniline	50	50.02	50	50.54	100	101	66-126	1	30
3-Nitroaniline	50	45.51	50	44.78	91	90	51-120	2	30
Nitrobenzene	50	43.67	50	44.37	87	89	59-117	2	30
2-Nitrophenol	50	49.88	50	51.82	100	104	63-121	4	30
4-Nitrophenol	50	29.16	50	27.62	58	55	28-88	5	30
Di-n-octylphthalate	50	49.51	50	50.89	99	102	67-120	3	30
Pentachlorophenol	50	46.94	50	51.23	94	102	64-130	9	30
Phenanthrene	50	48.45	50	49.3	97	99	68-118	2	30
Phenol	50	26.39	50	25.68	53	51	23-82	3	30
Pyrene	50	47.88	50	49.32	96	99	68-118	3	30
1,2,4-Trichlorobenzene	50	42.5	50	43.1	85	86	38-116	1	30
2,4,5-Trichlorophenol	50	50.7	50	50.77	101	102	73-124	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182350010A	Sample number(s): 9766950-9766951								
Aroclor-1016	5.00	4.61	5.00	4.60	92	92	60-117	0	30
Aroclor-1260	5.05	4.99	5.05	5.19	99	103	57-134	4	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182360571304	Sample number(s): 9766950-9766951								
Mercury	0.00100	0.000957			96		80-114		
Batch number: 182401063504	Sample number(s): 9766950-9766951								
Arsenic	0.150	0.162			108		80-120		
Barium	2.00	2.07			104		87-111		
Cadmium	0.0500	0.0521			104		90-111		
Chromium	0.200	0.204			102		87-110		
Lead	0.150	0.154			103		87-113		
Selenium	0.150	0.153			102		80-120		
Silver	0.0500	0.0546			109		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18235964901A	Sample number(s): 9766950-9766951								
Total Dissolved Solids	200	205			103		67-127		
Batch number: 18239385801A	Sample number(s): 9766950-9766951								
Total Suspended Solids	150	145.7			97		89-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

LCS/LCSD (continued)

Analysis Name	LCS Spike Added Std. Units	LCS Conc Std. Units	LCSD Spike Added Std. Units	LCSD Conc Std. Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18235002105A	Sample number(s): 9766950-9766951								
pH	7.00	7.02			100		95-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182401063504	Sample number(s): 9766950-9766951 UNSPK: 9766950									
Arsenic	0.0766	0.150	0.233	0.150	0.236	104	106	75-125	1	20
Barium	0.130	2.00	2.22	2.00	2.19	104	103	75-125	1	20
Cadmium	N.D.	0.0500	0.0513	0.0500	0.0510	103	102	75-125	1	20
Chromium	N.D.	0.200	0.206	0.200	0.204	103	102	75-125	1	20
Lead	N.D.	0.150	0.151	0.150	0.154	100	103	75-125	2	20
Selenium	N.D.	0.150	0.158	0.150	0.151	105	101	75-125	5	20
Silver	N.D.	0.0500	0.0557	0.0500	0.0548	111	110	75-125	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 182401063504	Sample number(s): 9766950-9766951 BKG: 9766950			
Arsenic	0.0766	0.0741	3 (1)	20
Barium	0.130	0.130	0	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/29/2018 19:33

Group Number: 1979253

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182402AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9766950	100	100	106	101
9766951	100	100	105	101
9766952	98	100	104	99
Blank	98	99	107	101
LCS	97	100	110	109
LCSD	96	100	109	109
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18234WAF026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9766950	37	48	82	75	81	91
9766951	37	48	79	74	79	87
Blank	35	49	89	81	85	97
LCS	50	65	92	87	89	96
LCSD	48	62	92	88	89	98
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 182350010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9766950	87	53	82	52
9766951	75	52	71	50
Blank	102	68	97	66
LCS	91	58	89	56
LCSD	91	47	90	48
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1979253 Sample # 9766950-52

COC # 557175

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Hudson River OU-2 60323713	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: J. Denman	Quote #:
State where samples were collected: N.Y.	For Compliance: Yes ☐ No ☒

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☒ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: Temp Bottle

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only: FSC: ____ SCR#: 227994

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks: Cooler 2 of 2

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Tot. Dissolved Solids	VOC 8260C	Phi-temp of PV	PCB 8082A TCL SW 846 8270D mini	TSS	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury	Selenium, Silver
T3A1063C082018	8/20/18	1415	X		10	X	X	X	X	X	X	X
VBV8111082018	8/20/18	1510	X		10	X	X	X	X	X	X	X
TB18214080918	08/09/18	1450	X		2		X					
Temp Bottle Blank	8/20/18	—			1							

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 3-5

E-mail address: Mike.gardner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Chelsi West	7-9-18	16:03			
	8-21-18	1615			
			MR	8/22/18	1005

EDD Required? Yes (No)
If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 4.4/6.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 224844

Group Number(s): 197253

Client: Aecom

BASF Hudosn River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/22/2018 10:05
Number of Packages:	2	Number of Projects:	2
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:18 on 08/22/2018

Samples Chilled Details: BASF Hudosn River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	4.4	DT	Wet	Y	Bagged	N
2	DT131	6.0	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details: BASF Hudosn River OU-2

Sample ID on COC	Date/Time on Label	Comments
TB18214080918	8/09/2018 14:15	

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 05, 2018 15:25

Project: BASF Hudson River OU-2 60323713

Account #: 04285
Group Number: 1980932
SDG: RNS04
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
PIPE-01-2 082718 Grab Solid	08/27/2018 16:00	9774975

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **PIPE-01-2 082718 Grab Solid**
TCLP NVE
COC: 579382

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/28/2018 10:00
Collection Date/Time: 08/27/2018 16:00
SDG#: RNS04-01

BASF Corporation
ELLE Sample #: TL 9774975
ELLE Group #: 1980932
Matrix: Solid

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	N.D.	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.100	1
07046	Barium	7440-39-3	0.0160	0.0010	0.0100	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0100	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0300	1
07055	Lead	7439-92-1	0.0358	0.0071	0.0300	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.100	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18242WAG026	08/31/2018 10:30	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	18242WAG026	08/30/2018 16:30	Mathias Okpo	1
07035	Arsenic	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
07046	Barium	SW-846 6010C	1	182421063602	09/04/2018 13:28	Jonathan J Allen	1

*=This limit was used in the evaluation of the final result

Sample Description: **PIPE-01-2 082718 Grab Solid**
TCLP NVE
COC: 579382

Project Name: **BASF Hudson River OU-2 60323713**

Submittal Date/Time: 08/28/2018 10:00
Collection Date/Time: 08/27/2018 16:00
SDG#: RNS04-01

BASF Corporation
ELLE Sample #: TL 9774975
ELLE Group #: 1980932
Matrix: Solid

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07049	Cadmium	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
07051	Chromium	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
07055	Lead	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
07036	Selenium	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
07066	Silver	SW-846 6010C	1	182421063602	09/02/2018 11:06	Jonathan J Allen	1
00259	Mercury	SW-846 7470A	1	182420571302	09/04/2018 09:59	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	182421063602	08/31/2018 15:55	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	182420571302	08/31/2018 18:35	Barbara A Kane	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18241-2807-947B	08/29/2018 13:20	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/05/2018 15:25

Group Number: 1980932

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 18242WAG026	Sample number(s): 9774975		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	mg/l	mg/l
Batch number: 182420571302	Sample number(s): 9774975		
Mercury	N.D.	0.000050	0.00020
Batch number: 182421063602	Sample number(s): 9774975		
Arsenic	N.D.	0.0160	0.100
Barium	N.D.	0.0010	0.0100
Cadmium	N.D.	0.0010	0.0100
Chromium	N.D.	0.0053	0.0300
Lead	N.D.	0.0071	0.0300
Selenium	N.D.	0.0210	0.100
Silver	N.D.	0.0050	0.0200

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18242WAG026	Sample number(s): 9774975								
1,4-Dichlorobenzene	50	35.5	50	28.33	71	57	30-109	22	30
2,4-Dinitrotoluene	50	46.46	50	42.38	93	85	69-117	9	30
Hexachlorobenzene	50	47.42	50	42.99	95	86	65-121	10	30
Hexachlorobutadiene	50	41.53	50	29.98	83	60	21-114	32*	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/05/2018 15:25

Group Number: 1980932

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	50	31.98	50	24.07	64	48	24-100	28	30
2-Methylphenol	50	41.9	50	40.16	84	80	59-109	4	30
4-Methylphenol	50	42.69	50	40.69	85	81	56-108	5	30
Nitrobenzene	50	47.56	50	43.21	95	86	59-117	10	30
Pentachlorophenol	50	55.37	50	50.73	111	101	64-130	9	30
Pyridine	50	22.14	50	20.4	44	41	13-83	8	30
2,4,5-Trichlorophenol	50	50.83	50	49.63	102	99	73-124	2	30
2,4,6-Trichlorophenol	50	50.62	50	48.82	101	98	69-122	4	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182420571302	Sample number(s): 9774975								
Mercury	0.00100	0.000976			98		80-114		
Batch number: 182421063602	Sample number(s): 9774975								
Arsenic	0.150	0.156			104		80-120		
Barium	2.00	1.93			97		87-111		
Cadmium	0.0500	0.0499			100		90-111		
Chromium	0.200	0.187			94		87-110		
Lead	0.150	0.147			98		87-113		
Selenium	0.150	0.162			108		80-120		
Silver	0.0500	0.0509			102		80-120		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 8270D MINI
Batch number: 18242WAG026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9774975	36	51	87	78	68	70
Blank	32	43	84	78	66	94
LCS	41	58	88	91	78	93
LCSD	40	56	85	83	72	90
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1980932 Sample # 9774975

COC # 579382

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Hudson River OU-2 60323713	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: JEFF DENMAN	Quote #:
State where samples were collected: New York	For Compliance: Yes ☐ No ☒

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐ / Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☐ / Other: Fiberglass pipe	Total # of Containers	Analysis Requested: TCLP Metals	For Lab Use Only / Remarks
PIPE-01-20827/8	08/27/18	1600	X		X	1	X	AS Requested/Additional Samples of Pipe

FSC:

SCR#: 229614

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 3-5

E-mail address: mike.gardner@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Relinquished by	Date	Time	Received by	Date	Time
1	Chelsie West	8-9-18	17:29			
2	Jeff Denman	8/27/18	1700			
3						
4						
5				Mike	8/28/18	1000

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt N/A °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 225368

Group Number(s): 1980932

Client: Aecom

BASF Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/28/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	No	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 10:45 on 08/28/2018

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

March 30, 2020

Mike Gardner
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 200325047
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF-Hudson River
Rensselaer NY

Dear Mike Gardner:

Adirondack Environmental Services, Inc received 1 sample on 3/25/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*30-Mar-20*
Project:	BASF-Hudson River		
Lab Order:	200325047		

Sample containers were supplied by Adirondack Environmental Services.

The analysis for TCLP was completed using totals analysis for the following constituents. This is allowed by method SW-846 1311 as per section 1.2.

-Semi-Volatile Organics

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *30-Mar-20*

CLIENT: AECOM Environment
Work Order: **200325047**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: Crush Stone Waste Char 200325
Collection Date: 3/25/2020
Lab Sample ID: 200325047-001
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3545A - 3/25/2020)						
Aroclor 1016	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1221	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1232	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1242	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1248	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1254	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1260	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1262	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Aroclor 1268	**ND**	34		µg/Kg-dry	1	3/25/2020 7:29:23 PM
Surr: Decachlorobiphenyl	**88.0**	48.1-152		%REC	1	3/25/2020 7:29:23 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 3/26/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	3/26/2020 5:58:52 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	3/26/2020 5:58:52 PM
Surr: Acifluorfen	**114**	52.5-128		%REC	1	3/26/2020 5:58:52 PM
Surr: DCAA	**127**	56.2-139		%REC	1	3/26/2020 5:58:52 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 3/26/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	3/26/2020 5:07:52 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	3/26/2020 5:07:52 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	3/26/2020 5:07:52 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	3/26/2020 5:07:52 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	3/26/2020 5:07:52 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	3/26/2020 5:07:52 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	3/26/2020 5:07:52 PM
Surr: Decachlorobiphenyl-TCLP	**88.0**	51.5-141		%REC	1	3/26/2020 5:07:52 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 3/26/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	3/26/2020 3:05:26 PM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 3/25/2020)						
Arsenic-TCLP	**ND**	0.050		mg/L	1	3/26/2020 2:13:32 PM
Barium-TCLP	**0.461**	0.100		mg/L	1	3/26/2020 2:13:32 PM
Cadmium-TCLP	**ND**	0.050		mg/L	1	3/26/2020 2:13:32 PM
Chromium-TCLP	**0.005**	0.050	J	mg/L	1	3/26/2020 2:13:32 PM
Lead-TCLP	**0.088**	0.050		mg/L	1	3/26/2020 2:13:32 PM

Adirondack Environmental Services, Inc

Date: *30-Mar-20*

CLIENT: AECOM Environment
Work Order: **200325047**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: Crush Stone Waste Char 200325
Collection Date: 3/25/2020
Lab Sample ID: 200325047-001
Matrix: SOLID

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 3/25/2020)						
Selenium-TCLP	**0.026**	0.050	J	mg/L	1	3/26/2020 2:13:32 PM
Silver-TCLP	**ND**	0.100		mg/L	1	3/26/2020 2:13:32 PM
TCLP SEMI-VOLATILES AS TOTALS - EPA 8270D						Analyst: **MT**
(Prep: SW3545A - 3/26/2020)						
1,4-Dichlorobenzene	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
2,4,5-Trichlorophenol	**ND**	2.50		µg/g-dry	1	3/27/2020 2:40:00 PM
2,4,6-Trichlorophenol	**ND**	2.50		µg/g-dry	1	3/27/2020 2:40:00 PM
2,4-Dinitrotoluene	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
2-Methylphenol	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
4-Methylphenol & 3-Methlyphenol	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Hexachlorobenzene	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Hexachlorobutadiene	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Hexachloroethane	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Nitrobenzene	**ND**	0.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Pentachlorophenol	**ND**	2.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Pyridine	**ND**	2.50		µg/g-dry	1	3/27/2020 2:40:00 PM
Surr: 2,4,6-Tribromophenol	**75.7**	33.2-123		%REC	1	3/27/2020 2:40:00 PM
Surr: 2-Fluorobiphenyl	**75.9**	40.6-136		%REC	1	3/27/2020 2:40:00 PM
Surr: 2-Fluorophenol	**71.4**	12.7-110		%REC	1	3/27/2020 2:40:00 PM
Surr: 4-Terphenyl-d14	**76.7**	42.7-151		%REC	1	3/27/2020 2:40:00 PM
Surr: Nitrobenzene-d5	**66.6**	41.8-113		%REC	1	3/27/2020 2:40:00 PM
Surr: Phenol-d5	**74.0**	28.3-114		%REC	1	3/27/2020 2:40:00 PM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 3/26/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
2-Butanone-TCLP	**ND**	200		µg/L	20	3/27/2020 10:52:00 AM
Benzene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Chlorobenzene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Chloroform-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Trichloroethene-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	3/27/2020 10:52:00 AM
Surr: 1,2-Dichloroethane-d4	**98.6**	84.3-123		%REC	20	3/27/2020 10:52:00 AM
Surr: 4-Bromofluorobenzene	**107**	80.6-121		%REC	20	3/27/2020 10:52:00 AM
Surr: Toluene-d8	**101**	83.6-113		%REC	20	3/27/2020 10:52:00 AM

Adirondack Environmental Services, Inc

Date: *30-Mar-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	Crush Stone Waste Char 200325
Work Order:	**200325047**	**Collection Date:**	3/25/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200325047-001
PO#:	115954	**Matrix:**	SOLID
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**8.5**	1.0		pH Units@80F	1	3/30/2020 8:50:00 AM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**3.2**	0.1		wt%	1	3/25/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	3/30/2020 8:50:00 AM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	3/30/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 12/30/1899)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	3/26/2020 3:19:09 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 3/26/2020)						Analyst: **NK**
Reactive Sulfide	**ND**	10		µg/g	1	3/27/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	3/27/2020

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 20325047

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: BASF Corp	Address: 36 Riverside Ave, Rensselaer NY 12144	
Send Report To: John.Bleiler@aecom.com	Project Name (Location) BASF Rensselaer	Samplers: (Names) Tom Quackenbush
Client Phone No: 978 905 2100	Client Email: John.Bleiler@aecom.com	PO Number: 60323713
		Samplers: (Signature) Thomas Quackenbush

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
-001	Crush Stone Waste Char 200325	3/25/20	9 (A) P	Stone	✓		2	Full TCLP, PCB Soil, pH Soil
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					

Shipment Arrived Via:

FedEx UPS Client AES Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☑ 1 Day ☐ 3 Day ☐ Normal
☐ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature) Thomas Quackenbush	Received by: (Signature)	Date/Time 3/25/20 1pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled 6°C	Y ☐ N ☐	Y N	Y N
Notes:		Notes:	Notes:

WHITE - Lab Copy

YELLOW - Sampler Copy

Adirondack Environmental Service

20325047

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

April 01, 2020

Mike Gardner
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 200327052
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF-Hudson River
Rensselaer NY

Dear Mike Gardner:

Adirondack Environmental Services, Inc received 1 sample on 3/27/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*01-Apr-20*
Project:	BASF-Hudson River		
Lab Order:	200327052		

Sample containers were supplied by Adirondack Environmental Services.

The analysis for TCLP was completed using totals analysis for the following constituents. This is allowed by method SW-846 1311 as per section 1.2.

-Semi-Volatile Organics

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *01-Apr-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	Soil Pile Waste 200327
Work Order:	**200327052**	**Collection Date:**	3/27/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200327052-001
PO#:	115954	**Matrix:**	SOIL
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **MG**
(Prep: SW3545A - 3/30/2020)						
Aroclor 1016	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1221	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1232	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1242	**1200**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1248	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1254	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1260	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1262	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Aroclor 1268	**ND**	180		µg/Kg-dry	5	3/30/2020 2:36:29 PM
Surr: Decachlorobiphenyl	**140**	48.1-152		%REC	5	3/30/2020 2:36:29 PM
TCLP HERBICIDES - EPA 8321B						Analyst: **KF**
(Prep: SW3535A - 3/30/2020)						
2,4,5-TP (Silvex)-TCLP	**ND**	0.10		mg/L	1	3/30/2020 6:34:54 PM
2,4-D-TCLP	**ND**	0.10		mg/L	1	3/30/2020 6:34:54 PM
Surr: Acifluorfen	**70.0**	52.5-128		%REC	1	3/30/2020 6:34:54 PM
Surr: DCAA	**65.3**	56.2-139		%REC	1	3/30/2020 6:34:54 PM
TCLP PESTICIDES - EPA 8081B						Analyst: **KF**
(Prep: SW3535A - 3/30/2020)						
Chlordane-TCLP	**ND**	0.010		mg/L	1	3/30/2020 5:34:19 PM
Endrin-TCLP	**ND**	0.0020		mg/L	1	3/30/2020 5:34:19 PM
gamma-BHC(Lindane)-TCLP	**ND**	0.0020		mg/L	1	3/30/2020 5:34:19 PM
Heptachlor epoxide-TCLP	**ND**	0.0020		mg/L	1	3/30/2020 5:34:19 PM
Heptachlor-TCLP	**ND**	0.0020		mg/L	1	3/30/2020 5:34:19 PM
Methoxychlor-TCLP	**ND**	0.010		mg/L	1	3/30/2020 5:34:19 PM
Toxaphene-TCLP	**ND**	0.020		mg/L	1	3/30/2020 5:34:19 PM
Surr: Decachlorobiphenyl-TCLP	**30.0**	51.5-141	S	%REC	1	3/30/2020 5:34:19 PM
TCLP MERCURY - SW1311/7470A						Analyst: **AVB**
(Prep: SW7470A - 3/30/2020)						
Mercury-TCLP	**ND**	0.002		mg/L	1	3/30/2020 11:14:56 AM
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 3/27/2020)						
Arsenic-TCLP	**ND**	0.050	N	mg/L	1	3/30/2020 4:12:02 PM
Barium-TCLP	**0.550**	0.100		mg/L	1	3/30/2020 4:12:02 PM
Cadmium-TCLP	**ND**	0.050	N	mg/L	1	3/30/2020 4:12:02 PM
Chromium-TCLP	**ND**	0.050		mg/L	1	3/30/2020 4:12:02 PM
Lead-TCLP	**0.133**	0.050		mg/L	1	3/30/2020 4:12:02 PM

Adirondack Environmental Services, Inc

Date: *01-Apr-20*

CLIENT: AECOM Environment
Work Order: **200327052**
Reference: BASF-Hudson River / Rensselaer NY
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: Soil Pile Waste 200327
Collection Date: 3/27/2020
Lab Sample ID: 200327052-001
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCLP METALS - SW1311/6010C						Analyst: **WB**
(Prep: SW1311 - 3/27/2020)						
Selenium-TCLP	**ND**	0.050	N	mg/L	1	3/30/2020 4:12:02 PM
Silver-TCLP	**0.027**	0.100	J	mg/L	1	3/30/2020 4:12:02 PM
TCLP SEMI-VOLATILES AS TOTALS - EPA 8270D						Analyst: **MT**
(Prep: SW3545A - 3/30/2020)						
2,4,5-Trichlorophenol	**ND**	2.95		µg/g-dry	1	3/31/2020 11:09:00 AM
2,4,6-Trichlorophenol	**ND**	2.95		µg/g-dry	1	3/31/2020 11:09:00 AM
2,4-Dinitrotoluene	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
2-Methylphenol	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
4-Methylphenol & 3-Methlyphenol	**0.13**	0.58	J	µg/g-dry	1	3/31/2020 11:09:00 AM
Hexachlorobenzene	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
Hexachlorobutadiene	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
Hexachloroethane	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
Nitrobenzene	**ND**	0.58		µg/g-dry	1	3/31/2020 11:09:00 AM
Pentachlorophenol	**ND**	2.95		µg/g-dry	1	3/31/2020 11:09:00 AM
Pyridine	**ND**	2.95		µg/g-dry	1	3/31/2020 11:09:00 AM
Surr: 2,4,6-Tribromophenol	**37.4**	33.2-123		%REC	1	3/31/2020 11:09:00 AM
Surr: 2-Fluorobiphenyl	**62.3**	40.6-136		%REC	1	3/31/2020 11:09:00 AM
Surr: 2-Fluorophenol	**40.4**	12.7-110		%REC	1	3/31/2020 11:09:00 AM
Surr: 4-Terphenyl-d14	**59.3**	42.7-151		%REC	1	3/31/2020 11:09:00 AM
Surr: Nitrobenzene-d5	**51.9**	41.8-113		%REC	1	3/31/2020 11:09:00 AM
Surr: Phenol-d5	**55.6**	28.3-114		%REC	1	3/31/2020 11:09:00 AM
TCLP VOLATILES - EPA 8260C						Analyst: **SMD**
(Prep: SW1311 - 3/27/2020)						
1,1-Dichloroethene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
1,2-Dichloroethane-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
1,4-Dichlorobenzene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
2-Butanone-TCLP	**ND**	200		µg/L	20	3/30/2020 11:37:00 PM
Benzene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Carbon tetrachloride-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Chlorobenzene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Chloroform-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Tetrachloroethene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Trichloroethene-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Vinyl chloride-TCLP	**ND**	100		µg/L	20	3/30/2020 11:37:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	84.3-123		%REC	20	3/30/2020 11:37:00 PM
Surr: 4-Bromofluorobenzene	**103**	80.6-121		%REC	20	3/30/2020 11:37:00 PM
Surr: Toluene-d8	**97.7**	83.6-113		%REC	20	3/30/2020 11:37:00 PM

Adirondack Environmental Services, Inc

Date: *01-Apr-20*

CLIENT:	AECOM Environment	**Client Sample ID:**	Soil Pile Waste 200327
Work Order:	**200327052**	**Collection Date:**	3/27/2020
Reference:	BASF-Hudson River / Rensselaer NY	**Lab Sample ID:**	200327052-001
PO#:	115954	**Matrix:**	SOIL
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PH- SW9045D- NOT CERTIFIABLE PARAMETER						Analyst: **DAA**
pH	**11.1**	1.0		pH Units@76F	1	3/30/2020 8:50:00 AM
MOISTURE CONTENT-ASTM D2216 (NOT ELAP CERTIFIED)						Analyst: **TSZ**
Percent Moisture	**18.6**	0.1		wt%	1	3/27/2020
CORROSIVITY - SW 9040C						Analyst: **DAA**
Corrosivity	**Non Corrosive**	1.0			1	3/30/2020 8:50:00 AM
IGNITABILITY - SW 1030						Analyst: **JW**
Ignitability	**Not Ignitable**	0			1	3/30/2020
SW 7.3.3.2, NOT ELAP CERTIFIED (Prep: E335.4 - 12/30/1899)						Analyst: **KB**
Reactive Cyanide	**ND**	1.0		µg/g	1	3/31/2020 2:36:54 PM
SW 7.3.4.2, NOT ELAP CERTIFIED (Prep: E335.4 - 12/30/1899)						Analyst: **NK**
Reactive Sulfide	**ND**	10		µg/g	1	4/1/2020
REACTIVITY - SW 7.3.4.2, NOT ELAP CERTIFIED						Analyst: **NK**
Reactivity	**Non Reactive**	0			1	4/1/2020

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, NY 12207
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EXPERIENCE IS THE SOLUTION

CHAIN OF CUSTODY RECORD

AES Work Order#: 200327052

COC Reference:

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: BASF Corp	Address: 36 Riverside Ave, Rensselaer NY 12144	
Send Report to: John Bleiler	Project Name (Location): BASF	Samplers Name: Tom Quackenbush
Client Phone #: 978 905 2100	Client PO #: 60323713	Samplers Signature: Thomas Quackenbush
Client Email: John.Bleiler@aecom.com		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Preser-vative	Analysis
001	Soil Pile Waste Char 200327	3/27/20	0935	AP	Soil	✓		2	None	Full TCLP, PCB Soil, Full Soil, Ingn. Loss, % Moisture
				AP						* Same as last time *
				AP						Thomas Quackenbush
				AP						
				AP						
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				AP						
				AP						
				AP						
				AP						

Shipment Arrived Via:
FedEx UPS (Client) AES Other:_____

Special Instructions/Remarks:

Turnaround Time Requested:
1 Day 2 Day (3 Day) 5 Day Standard
NOTE: Samples received after 3:30pm are considered next business day.

Relinquished by: (Signature) Thomas Quackenbush	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received for Laboratory by:	Date	Time
		3/27/20	3:??

Sample Temperature
Ambient ~ (Chilled) ~ Chilling Begun
Notes:
13°C

Custody Seal Intact: Y / N

Bottles AES: (Y) / N

Properly Preserved: (Y) / N

0=None
1=H_2SO_4 pH<2
2=HNO_3 pH<2
3=HCl pH<2
4=$Na_2S_2O_3$
5=NH_4Cl
6=Ascorbic Acid
7=FAS
8=ZnAc/NaOH pH>9
9=NaOH pH>10
10=Other

Received Within Holding Times: (Y) / N
Notes:

Demo
200327052

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TERMS, CONDITIONS & LIMITATIONS

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eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 17, 2018 14:07

Project: Rensselaer

Account #: 04285
Group Number: 2017297
SDG: CPT94
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B1NTSCA112818 Grab Soil	11/28/2018 14:05	9934380
B4NTSCA112818 Grab Soil	11/28/2018 14:25	9934381

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B1NTSCA112818 Grab Soil**
TCLP NVE
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 12:29
Collection Date/Time: 11/28/2018 14:05
SDG#: CPT94-01

BASF Corporation
ELLE Sample #: TL 9934380
ELLE Group #: 2017297
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. VD2	0.00020	0.00020	1
10647	Chlordane	57-74-9	N.D. D1	0.00080	0.0025	1
10647	Endrin	72-20-8	0.00011 PD2	0.000040	0.00010	1
10647	Heptachlor	76-44-8	N.D. VD1	0.00020	0.00020	1
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.000012	0.000050	1
10647	Methoxychlor	72-43-5	N.D. D1	0.00015	0.00050	1
10647	Toxaphene	8001-35-2	N.D. D1	0.0050	0.015	1

Sample Comments

State of New York Certification No. 10670
This sample was originally submitted to the laboratory on 11/29/18 at 10:30.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183470098A	12/14/2018 19:56	Andrea L Jones	1
11126	Pest Leachate Update IV	SW-846 3510C	1	183470098A	12/14/2018 08:00	Kayla A Yuditsky	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18346-2807-947A	12/12/2018 12:10	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
TCLP NVE
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 12:29
Collection Date/Time: 11/28/2018 14:25
SDG#: CPT94-02

BASF Corporation
ELLE Sample #: TL 9934381
ELLE Group #: 2017297
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. VD2	0.00020	0.00025	5
10647	Chlordane	57-74-9	N.D. D1	0.0040	0.013	5
10647	Endrin	72-20-8	N.D. D2	0.00020	0.00050	5
10647	Heptachlor	76-44-8	N.D. VD1	0.00020	0.00025	5
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.000060	0.00025	5
10647	Methoxychlor	72-43-5	N.D. D1	0.00075	0.0025	5
10647	Toxaphene	8001-35-2	N.D. D1	0.025	0.075	5

Sample Comments

State of New York Certification No. 10670
This sample was originally submitted to the laboratory on 11/29/18 at 10:30.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183470098A	12/14/2018 20:08	Andrea L Jones	5
11126	Pest Leachate Update IV	SW-846 3510C	1	183470098A	12/14/2018 08:00	Kayla A Yuditsky	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18346-2807-947A	12/12/2018 12:10	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 12/17/2018 14:07

Group Number: 2017297

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 183470098A	Sample number(s): 9934380-9934381		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183470098A	Sample number(s): 9934380-9934381								
Gamma BHC - Lindane	0.000250	0.000223	0.000250	0.000225	89	90	51-132	1	30
Endrin	0.000125	0.000123	0.000125	0.000125	98	100	60-151	2	30
Heptachlor	0.000251	0.000202	0.000251	0.000216	80	86	38-135	7	30
Heptachlor Epoxide	0.000376	0.000333	0.000376	0.000343	89	91	56-132	3	30
Methoxychlor	0.00101	0.000941	0.00101	0.00101	93	100	58-165	7	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Pesticides by 8081B
Batch number: 183470098A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9934380	71	88	61	73
9934381	67	75	67	63
Blank	68	96	73	95
LCS	66	94	68	92
LCSD	69	94	73	95

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2017297
Reported: 12/17/2018 14:07

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Pesticides by 8081B
Batch number: 183470098A

Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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2017297 9934380-81

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # ~~2013406~~ 2017297 Sample # ~~9917092-97~~ KM22123 12/2/18

COC # 569215

Client Information		Matrix	Analysis Requested	For Lab Use Only
Client: BASF	Acct. #:		Preservation and Filtration Codes	FSC:
Project Name/#: RENSSELAER	PWSID #:			SCR#:
Project Manager: John Bleiler	P.O. #:			Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other
Sampler: Jeff Denman	Quote #:			Remarks
State where samples were collected: New York	For Compliance: Yes ☒ No ☐			

Matrix: ☐ Tissue ☐ Sediment ☒ Soil ☐ Ground ☐ Potable ☐ Surface ☐ NPDES ☐ Water ☐ Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability / pH	Reactivity	OC Pesticides in Soil	Soil/Solid-TCLP Metals	Soil/Solid-TCLP Rest/Herb	Soil/Solid-TCLP SVOCs	Soil/Solid-TCLP VOAs	Remarks
B1NTSCA112818	11/28/18	1405	X		4	X	X	X	X	X	X	X	
B4NTSCA112818	11/28/18	1425	X		4	X	X	X	X	X	X	X	
Cooler Temp Bottle	11/28/18	1430			1								Water Temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 3.

E-mail address: John.Bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	11/28/18	1600			
			Mark	11/29/18	1030

EDD Required? (Yes) No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234504

Group Number(s): ~~2013406~~ 2017297

③ KMZ 2/23 12/12/18

Client: BASF

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/29/2018 10:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:19 on 11/29/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

ANALYTICAL REPORT

Lab Number:	L1902814
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	BASF
Report Date:	01/25/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1902814-01	B12-B15012219	SOIL	RENSSELAER, NY	01/22/19 16:05	01/22/19
L1902814-02	B11-B14012219	SOIL	RENSSELAER, NY	01/22/19 16:00	01/22/19

Project Name:	BASF	**Lab Number:**	L1902814
Project Number:	BASF	**Report Date:**	01/25/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

TCLP Volatiles

L1902814-01 and -02: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

L1902814-01 and -02: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compound that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound that exceeded the calibration range.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Melissa Cripps

Title: Technical Director/Representative Date: 01/25/19

ORGANICS

VOLATILES

Project Name: BASF **Lab Number:** L1902814

Project Number: BASF **Report Date:** 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-01 Date Collected: 01/22/19 16:05
Client ID: B12-B15012219 Date Received: 01/22/19
Sample Location: RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 01/24/19 10:37
Analyst: MM
Percent Solids: 62%
TCLP/SPLP Ext. Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	14000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	62		ug/l	5.0	1.3	10
Benzene	410		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	220		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	106		70-130
dibromofluoromethane	100		70-130

Project Name: BASF **Lab Number:** L1902814

Project Number: BASF **Report Date:** 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-01 D2 Date Collected: 01/22/19 16:05
Client ID: B12-B15012219 Date Received: 01/22/19
Sample Location: RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 01/25/19 07:22
Analyst: MM
Percent Solids: 62%
TCLP/SPLP Ext. Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	16000		ug/l	100	36.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	114		70-130
dibromofluoromethane	111		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-02
Client ID: B11-B14012219
Sample Location: RENSSELAER, NY

Date Collected: 01/22/19 16:00
Date Received: 01/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 01/24/19 11:38
Analyst: MKS
Percent Solids: 60%
TCLP/SPLP Ext. Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	5.1		ug/l	5.0	1.8	10
Chlorobenzene	26000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	220		ug/l	5.0	1.3	10
Benzene	1500		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	5.4		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	410		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	117		70-130
Toluene-d8	115		70-130
4-Bromofluorobenzene	101		70-130
dibromofluoromethane	104		70-130

Project Name: BASF **Lab Number:** L1902814

Project Number: BASF **Report Date:** 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-02 D2 Date Collected: 01/22/19 16:00
Client ID: B11-B14012219 Date Received: 01/22/19
Sample Location: RENSSELAER, NY Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 01/25/19 06:52
Analyst: MM
Percent Solids: 60%
TCLP/SPLP Ext. Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	30000		ug/l	250	89.	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	125		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	113		70-130
dibromofluoromethane	110		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/24/19 06:35
Analyst: MM
TCLP/SPLP Extraction Date: 01/23/19 12:12

Extraction Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-02 Batch: WG1200499-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	102		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/25/19 05:51
Analyst: MM
TCLP/SPLP Extraction Date: 01/23/19 12:12

Extraction Date: 01/23/19 12:12

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-02 Batch: WG1200951-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	117		70-130
dibromofluoromethane	107		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-02 Batch: WG1200499-3 WG1200499-4								
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	110		100		63-132	10		20
Tetrachloroethene	99		93		70-130	6		20
Chlorobenzene	99		94		75-130	5		25
1,2-Dichloroethane	110		110		70-130	0		20
Benzene	100		99		70-130	1		25
Vinyl chloride	92		86		55-140	7		20
1,1-Dichloroethene	96		91		61-145	5		25
Trichloroethene	100		96		70-130	4		25
1,4-Dichlorobenzene	91		86		70-130	6		20
2-Butanone	120		120		63-138	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		110		70-130
Toluene-d8	101		100		70-130
4-Bromofluorobenzene	108		106		70-130
Dibromofluoromethane	100		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1902814

Report Date: 01/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-02 Batch: WG1200951-3 WG1200951-4								
Chloroform	110		120		70-130	9		20
Carbon tetrachloride	120		120		63-132	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		75-130	0		25
1,2-Dichloroethane	130		130		70-130	0		20
Benzene	100		110		70-130	10		25
Vinyl chloride	100		100		55-140	0		20
1,1-Dichloroethene	99		100		61-145	1		25
Trichloroethene	100		110		70-130	10		25
1,4-Dichlorobenzene	91		91		70-130	0		20
2-Butanone	**140**	Q	**150**	Q	63-138	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	119		123		70-130
Toluene-d8	100		99		70-130
4-Bromofluorobenzene	119		105		70-130
dibromofluoromethane	106		107		70-130

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-01
Client ID: B12-B15012219
Sample Location: RENSSELAER, NY

Date Collected: 01/22/19 16:05
Date Received: 01/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	62.0		%	0.100	NA	1	-	01/23/19 11:00	121,2540G	RI

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

SAMPLE RESULTS

Lab ID: L1902814-02
Client ID: B11-B14012219
Sample Location: RENSSELAER, NY

Date Collected: 01/22/19 16:00
Date Received: 01/22/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	60.4		%	0.100	NA	1	-	01/23/19 11:00	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1200179-1 QC Sample: L1902728-01 Client ID: DUP Sample						
Solids, Total	87.8	88.8	%	1		20

Project Name: BASF
Project Number: BASF

Lab Number: L1902814
Report Date: 01/25/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1902814-01A	Vial Large Septa unpreserved (4oz)	A	NA		2.8	Y	Absent		TCLP-EXT-ZHE(14),TS(7)
L1902814-01Y	Vial unpreserved Extracts	A	NA		2.8	Y	Absent		TCLP-VOA(14)
L1902814-01Z	Vial unpreserved Extracts	A	NA		2.8	Y	Absent		TCLP-VOA(14)
L1902814-02A	Vial Large Septa unpreserved (4oz)	A	NA		2.8	Y	Absent		TCLP-EXT-ZHE(14),TS(7)
L1902814-02Y	Vial unpreserved Extracts	A	NA		2.8	Y	Absent		TCLP-VOA(14)
L1902814-02Z	Vial unpreserved Extracts	A	NA		2.8	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1902814
Project Number:	BASF	**Report Date:**	01/25/19

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1902814
Project Number:	BASF	**Report Date:**	01/25/19

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1902814
Project Number:	BASF	**Report Date:**	01/25/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 1/23/19

ALPHA Job #: L1902814

Client Information

Client: BASF Corp
Address: 36 Riverside Ave
Rensselaer, NY 12144
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information

Project Name: BASF
Project Location: Rensselaer, NY
Project #
(Use Project name as Project #) ☑
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date: 01/25/19
Rush (only if pre approved) ☑ # of Days: 3

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☑ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

- Total Solids SM 2540
- TCL PCB/Pesticides EPA 8260C/1311

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Total Solids	TCL PCB/Pesticides	Sample Specific Comments	Total Bottle
02814 -01	B12-B15012219	01/22/19	1605	S	JD	X	X		1
-02	B11-B14012219	01/22/19	1600	S	JD	X	X		1

Container Type: A A
Preservative: A A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	01/22/19 1615		1/22/19 16:15
	1/22/19 16:15		1/23/19 0045

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1905291
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	BASF
Report Date:	02/13/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1905291-01	B1 TSCA HVOC 020819	SOIL	RENSSELAER	02/08/19 11:00	02/08/19
L1905291-02	B3 TSCA HVOC 020819	SOIL	RENSSELAER	02/08/19 11:10	02/08/19
L1905291-03	B4 TSCA LVOC 020819	SOIL	RENSSELAER	02/08/19 11:20	02/08/19
L1905291-04	B5 TSCA HVOC 020819	SOIL	RENSSELAER	02/08/19 11:30	02/08/19
L1905291-05	B6 TSCA LVOC 020819	SOIL	RENSSELAER	02/08/19 11:40	02/08/19
L1905291-06	B9 TSCA HVOC 020819	SOIL	RENSSELAER	02/08/19 11:50	02/08/19
L1905291-07	B1/4 TSCA 020819	SOIL	RENSSELAER	02/08/19 12:00	02/08/19
L1905291-08	B3/6 TSCA 020819	SOIL	RENSSELAER	02/08/19 12:10	02/08/19
L1905291-09	B5/10 TSCA 020819	SOIL	RENSSELAER	02/08/19 12:20	02/08/19
L1905291-10	B9/14 TSCA 020819	SOIL	RENSSELAER	02/08/19 12:30	02/08/19

Project Name:	BASF	**Lab Number:**	L1905291
Project Number:	BASF	**Report Date:**	02/13/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

TCLP Volatiles

L1905291-01D, -02D, -04D, -05D, -06D, -07D, -08D, -09D, and -10D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.
L1905291-01, -02, -04, -05, -06, -07, -08, -09 and -10: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The results should be considered estimated, and are qualified with an E flag, for any compounds that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compounds that exceeded the calibration range.

TCLP Semivolatiles

The WG1205425-3 LCSD recovery, associated with L1905291-01 and -07, is below the acceptance criteria for pyridine (0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

PCBs

L1905291-01 through -10: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.
L1905291-01 through -10: The surrogate recoveries are below the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (0%) and decachlorobiphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

TCLP Pesticides

L1905291-01, -04, -05, -06, -07, -08, and -10: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious

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Case Narrative (continued)

interferences.

L1905291-05: The surrogate recovery is above the acceptance criteria for decachlorobiphenyl (152%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L1905291-05: The surrogate recovery is outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (21%) due to interference with the Internal Standard

L1905291-06: The surrogate recovery is above the acceptance criteria for decachlorobiphenyl (168%). Since the sample was non-detect for all target analytes, re-analysis was not required..

L1905291-06: The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (20%) and decachlorobiphenyl (28%) due to interference with the Internal Standard.

L1905291-08: The surrogate recovery is above the acceptance criteria for decachlorobiphenyl (156%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L1905291-10: The surrogate recovery is above the acceptance criteria for decachlorobiphenyl (195%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L1905291-10: The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (19%) and decachlorobiphenyl (23%) due to interference with the Internal Standard.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Melissa Cripps

Title: Technical Director/Representative Date: 02/13/19

ORGANICS

VOLATILES

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 10:26
Analyst: MM
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	2.8	J	ug/l	5.0	1.8	10
Chlorobenzene	16000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	39		ug/l	5.0	1.3	10
Benzene	650		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	530		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	100		70-130
dibromofluoromethane	103		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01 D
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 16:37
Analyst: MM
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	27000		ug/l	250	89.	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 10:52
Analyst: MKS
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	12000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	10		ug/l	5.0	1.3	10
Benzene	160		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	620		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130
dibromofluoromethane	103		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02 D
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 17:07
Analyst: MM
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	11000		ug/l	100	36.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	103		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 11:17
Analyst: MKS
Percent Solids: 64%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	1400		ug/l	5.0	1.8	10
1,2-Dichloroethane	1.7	J	ug/l	5.0	1.3	10
Benzene	43		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	43		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 11:42
Analyst: MKS
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	13000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	400		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	540		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	103		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04 D
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 17:38
Analyst: MM
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	16000		ug/l	100	36.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
dibromofluoromethane	103		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 12:08
Analyst: MKS
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	2.5	J	ug/l	5.0	1.8	10
Chlorobenzene	13000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	24		ug/l	5.0	1.3	10
Benzene	87		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	620		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	100		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05 D
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 18:08
Analyst: MM
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	14000		ug/l	100	36.	200

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	94		70-130
4-Bromofluorobenzene	100		70-130
dibromofluoromethane	102		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 12:33
Analyst: MKS
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	2.8	J	ug/l	5.0	1.8	10
Chlorobenzene	18000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	3.4	J	ug/l	5.0	1.3	10
Benzene	650		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	2600	E	ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	101		70-130
dibromofluoromethane	100		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06 D
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 18:38
Analyst: MM
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	38000		ug/l	120	44.	250
1,4-Dichlorobenzene	2600		ug/l	620	47.	250

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 12:58
Analyst: MKS
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	7000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	8.0		ug/l	5.0	1.3	10
Benzene	91		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	220		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07 D
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 19:09
Analyst: MM
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	7100		ug/l	50	18.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	102		70-130
dibromofluoromethane	102		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 13:24
Analyst: MKS
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	2.2	J	ug/l	5.0	1.8	10
Chlorobenzene	14000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	22		ug/l	5.0	1.3	10
Benzene	230		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	2.9	J	ug/l	5.0	1.8	10
1,4-Dichlorobenzene	440		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	99		70-130
dibromofluoromethane	100		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08 D
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 19:39
Analyst: MM
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	18000		ug/l	120	44.	250

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	99		70-130
dibromofluoromethane	101		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 13:49
Analyst: MKS
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	5600	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	68		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	97		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	103		70-130
dibromofluoromethane	102		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09 D
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 20:10
Analyst: MM
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	5300		ug/l	50	18.	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	103		70-130
dibromofluoromethane	102		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 14:14
Analyst: MKS
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	12000	E	ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	190		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	780		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
dibromofluoromethane	98		70-130

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10 D
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 02/12/19 20:40
Analyst: MM
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chlorobenzene	13000		ug/l	120	44.	250

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	100		70-130
dibromofluoromethane	101		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/12/19 07:54
Analyst: MM
TCLP/SPLP Extraction Date: 02/11/19 14:03

Extraction Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-10 Batch: WG1205910-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	104		70-130
dibromofluoromethane	105		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 02/12/19 15:06
Analyst: MKS
TCLP/SPLP Extraction Date: 02/11/19 14:03

Extraction Date: 02/11/19 14:03

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-02,04-10 Batch: WG1206113-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	102		70-130
dibromofluoromethane	102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-10 Batch: WG1205910-3 WG1205910-4								
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
Tetrachloroethene	98		100		70-130	2		20
Chlorobenzene	92		96		75-130	4		25
1,2-Dichloroethane	110		110		70-130	0		20
Benzene	93		100		70-130	7		25
Vinyl chloride	90		93		55-140	3		20
1,1-Dichloroethene	92		100		61-145	8		25
Trichloroethene	100		110		70-130	10		25
1,4-Dichlorobenzene	84		89		70-130	6		20
2-Butanone	88		97		63-138	10		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		108		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	99		102		70-130
dibromofluoromethane	101		101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-02,04-10 Batch: WG1206113-3 WG1206113-4								
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		110		63-132	10		20
Tetrachloroethene	110		120		70-130	9		20
Chlorobenzene	99		110		75-130	11		25
1,2-Dichloroethane	100		100		70-130	0		20
Benzene	100		100		70-130	0		25
Vinyl chloride	110		120		55-140	9		20
1,1-Dichloroethene	99		100		61-145	1		25
Trichloroethene	100		110		70-130	10		25
1,4-Dichlorobenzene	98		100		70-130	2		20
2-Butanone	100		100		63-138	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		97		70-130
Toluene-d8	96		99		70-130
4-Bromofluorobenzene	95		96		70-130
dibromofluoromethane	100		102		70-130

SEMIVOLATILES

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 06:03
Analyst: SZ
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	180		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	55		15-120
2,4,6-Tribromophenol	58		10-120
4-Terphenyl-d14	50		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 02:42
Analyst: SZ
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	130		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	47		10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	58		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 03:07
Analyst: SZ
Percent Solids: 64%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	15	J	ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	48		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	59		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 04:48
Analyst: SZ
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	50		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	60		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 03:57
Analyst: SZ
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	350		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		21-120
Phenol-d6	56		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	69		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	64		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 05:13
Analyst: SZ
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	71		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	61		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	59		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 06:29
Analyst: SZ
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	76		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	47		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	55		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 04:22
Analyst: SZ
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	220		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	57		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 03:32
Analyst: SZ
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	49		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	51		15-120
2,4,6-Tribromophenol	51		10-120
4-Terphenyl-d14	45		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 02/12/19 05:38
Analyst: SZ
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	96		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	59		10-120
4-Terphenyl-d14	52		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 02/11/19 22:01
Analyst: SZ
TCLP/SPLP Extraction Date: 02/07/19 22:51

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:14

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 02-06,08-10 Batch: WG1205424-1					
Hexachlorobenzene	ND		ug/l	10	2.9
2,4-Dinitrotoluene	ND		ug/l	25	4.2
Hexachlorobutadiene	ND		ug/l	10	3.6
Hexachloroethane	ND		ug/l	10	3.4
Nitrobenzene	ND		ug/l	10	3.8
2,4,6-Trichlorophenol	ND		ug/l	25	3.4
Pentachlorophenol	ND		ug/l	50	17.
2-Methylphenol	ND		ug/l	25	5.1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6
2,4,5-Trichlorophenol	ND		ug/l	25	3.6
Pyridine	ND		ug/l	18	9.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	46		10-120
Nitrobenzene-d5	50		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	61		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 02/11/19 23:16
Analyst: SZ
TCLP/SPLP Extraction Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 18:17

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01,07 Batch: WG1205425-1					
Hexachlorobenzene	ND		ug/l	10	2.9
2,4-Dinitrotoluene	ND		ug/l	25	4.2
Hexachlorobutadiene	ND		ug/l	10	3.6
Hexachloroethane	ND		ug/l	10	3.4
Nitrobenzene	ND		ug/l	10	3.8
2,4,6-Trichlorophenol	ND		ug/l	25	3.4
Pentachlorophenol	ND		ug/l	50	17.
2-Methylphenol	ND		ug/l	25	5.1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6
2,4,5-Trichlorophenol	ND		ug/l	25	3.6
Pyridine	ND		ug/l	18	9.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	50		23-120
2-Fluorobiphenyl	53		15-120
2,4,6-Tribromophenol	51		10-120
4-Terphenyl-d14	49		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 02-06,08-10 Batch: WG1205424-2 WG1205424-3								
Hexachlorobenzene	74		67		40-140	10		30
2,4-Dinitrotoluene	78		71		40-132	9		30
Hexachlorobutadiene	59		60		28-111	2		30
Hexachloroethane	50		51		21-105	2		30
Nitrobenzene	60		58		40-140	3		30
2,4,6-Trichlorophenol	84		79		30-130	6		30
Pentachlorophenol	69		58		9-103	17		30
2-Methylphenol	61		60		30-130	2		30
3-Methylphenol/4-Methylphenol	67		63		30-130	6		30
2,4,5-Trichlorophenol	87		76		30-130	13		30
Pyridine	39		35		10-66	11		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	54		56		21-120
Phenol-d6	54		53		10-120
Nitrobenzene-d5	59		58		23-120
2-Fluorobiphenyl	66		65		15-120
2,4,6-Tribromophenol	70		64		10-120
4-Terphenyl-d14	60		58		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01,07 Batch: WG1205425-2 WG1205425-3								
Hexachlorobenzene	52		51		40-140	2		30
2,4-Dinitrotoluene	54		55		40-132	2		30
Hexachlorobutadiene	38		41		28-111	8		30
Hexachloroethane	35		36		21-105	3		30
Nitrobenzene	46		46		40-140	0		30
2,4,6-Trichlorophenol	60		59		30-130	2		30
Pentachlorophenol	43		42		9-103	2		30
2-Methylphenol	45		49		30-130	9		30
3-Methylphenol/4-Methylphenol	48		48		30-130	0		30
2,4,5-Trichlorophenol	60		59		30-130	2		30
Pyridine	12		**0**	Q	10-66	NC		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		46		21-120
Phenol-d6	41		43		10-120
Nitrobenzene-d5	47		48		23-120
2-Fluorobiphenyl	50		50		15-120
2,4,6-Tribromophenol	51		50		10-120
4-Terphenyl-d14	45		44		33-120

PCBS

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01 D
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 00:56
Analyst: HT
Percent Solids: 52%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	6120	544.	100	A
Aroclor 1221	ND		ug/kg	6120	613.	100	A
Aroclor 1232	ND		ug/kg	6120	1300	100	A
Aroclor 1242	55200		ug/kg	6120	825.	100	B
Aroclor 1248	ND		ug/kg	6120	918.	100	A
Aroclor 1254	ND		ug/kg	6120	670.	100	A
Aroclor 1260	ND		ug/kg	6120	1130	100	A
Aroclor 1262	ND		ug/kg	6120	777.	100	A
Aroclor 1268	ND		ug/kg	6120	634.	100	A
PCBs, Total	55200		ug/kg	6120	544.	100	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02 D
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 01:08
Analyst: HT
Percent Solids: 59%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5300	470.	100	A
Aroclor 1221	ND		ug/kg	5300	531.	100	A
Aroclor 1232	ND		ug/kg	5300	1120	100	A
Aroclor 1242	44000		ug/kg	5300	714.	100	A
Aroclor 1248	ND		ug/kg	5300	795.	100	A
Aroclor 1254	ND		ug/kg	5300	580.	100	A
Aroclor 1260	ND		ug/kg	5300	979.	100	A
Aroclor 1262	ND		ug/kg	5300	673.	100	A
Aroclor 1268	ND		ug/kg	5300	549.	100	A
PCBs, Total	44000		ug/kg	5300	470.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03 D
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 03:30
Analyst: HT
Percent Solids: 64%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5090	452.	100	A
Aroclor 1221	ND		ug/kg	5090	510.	100	A
Aroclor 1232	ND		ug/kg	5090	1080	100	A
Aroclor 1242	42200		ug/kg	5090	686.	100	B
Aroclor 1248	ND		ug/kg	5090	764.	100	A
Aroclor 1254	ND		ug/kg	5090	557.	100	A
Aroclor 1260	ND		ug/kg	5090	941.	100	A
Aroclor 1262	ND		ug/kg	5090	646.	100	A
Aroclor 1268	ND		ug/kg	5090	527.	100	A
PCBs, Total	42200		ug/kg	5090	452.	100	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04 D
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 01:33
Analyst: HT
Percent Solids: 55%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	6030	536.	100	A
Aroclor 1221	ND		ug/kg	6030	604.	100	A
Aroclor 1232	ND		ug/kg	6030	1280	100	A
Aroclor 1242	56600		ug/kg	6030	813.	100	A
Aroclor 1248	ND		ug/kg	6030	905.	100	A
Aroclor 1254	ND		ug/kg	6030	660.	100	A
Aroclor 1260	ND		ug/kg	6030	1110	100	A
Aroclor 1262	ND		ug/kg	6030	766.	100	A
Aroclor 1268	ND		ug/kg	6030	625.	100	A
PCBs, Total	56600		ug/kg	6030	536.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05 D
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 01:45
Analyst: HT
Percent Solids: 58%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5380	478.	100	A
Aroclor 1221	ND		ug/kg	5380	539.	100	A
Aroclor 1232	ND		ug/kg	5380	1140	100	A
Aroclor 1242	78700		ug/kg	5380	726.	100	A
Aroclor 1248	ND		ug/kg	5380	807.	100	A
Aroclor 1254	ND		ug/kg	5380	589.	100	A
Aroclor 1260	ND		ug/kg	5380	995.	100	A
Aroclor 1262	ND		ug/kg	5380	684.	100	A
Aroclor 1268	ND		ug/kg	5380	558.	100	A
PCBs, Total	78700		ug/kg	5380	478.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06 D
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 01:57
Analyst: HT
Percent Solids: 57%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5700	506.	100	A
Aroclor 1221	ND		ug/kg	5700	571.	100	A
Aroclor 1232	ND		ug/kg	5700	1210	100	A
Aroclor 1242	36200		ug/kg	5700	768.	100	A
Aroclor 1248	ND		ug/kg	5700	855.	100	A
Aroclor 1254	ND		ug/kg	5700	624.	100	A
Aroclor 1260	ND		ug/kg	5700	1050	100	A
Aroclor 1262	ND		ug/kg	5700	724.	100	A
Aroclor 1268	ND		ug/kg	5700	590.	100	A
PCBs, Total	36200		ug/kg	5700	506.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07 D
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 02:09
Analyst: HT
Percent Solids: 56%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5840	518.	100	A
Aroclor 1221	ND		ug/kg	5840	585.	100	A
Aroclor 1232	ND		ug/kg	5840	1240	100	A
Aroclor 1242	57200		ug/kg	5840	787.	100	A
Aroclor 1248	ND		ug/kg	5840	876.	100	A
Aroclor 1254	ND		ug/kg	5840	638.	100	A
Aroclor 1260	ND		ug/kg	5840	1080	100	A
Aroclor 1262	ND		ug/kg	5840	741.	100	A
Aroclor 1268	ND		ug/kg	5840	605.	100	A
PCBs, Total	57200		ug/kg	5840	518.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08 D
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 02:22
Analyst: HT
Percent Solids: 57%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5570	495.	100	A
Aroclor 1221	ND		ug/kg	5570	558.	100	A
Aroclor 1232	ND		ug/kg	5570	1180	100	A
Aroclor 1242	59600		ug/kg	5570	751.	100	A
Aroclor 1248	ND		ug/kg	5570	836.	100	A
Aroclor 1254	ND		ug/kg	5570	609.	100	A
Aroclor 1260	ND		ug/kg	5570	1030	100	A
Aroclor 1262	ND		ug/kg	5570	707.	100	A
Aroclor 1268	ND		ug/kg	5570	577.	100	A
PCBs, Total	59600		ug/kg	5570	495.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF **Lab Number:** L1905291

Project Number: BASF **Report Date:** 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09 D
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 02:34
Analyst: HT
Percent Solids: 61%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2620	233.	50	A
Aroclor 1221	ND		ug/kg	2620	263.	50	A
Aroclor 1232	ND		ug/kg	2620	556.	50	A
Aroclor 1242	39500		ug/kg	2620	354.	50	A
Aroclor 1248	ND		ug/kg	2620	394.	50	A
Aroclor 1254	ND		ug/kg	2620	287.	50	A
Aroclor 1260	ND		ug/kg	2620	485.	50	A
Aroclor 1262	ND		ug/kg	2620	333.	50	A
Aroclor 1268	ND		ug/kg	2620	272.	50	A
PCBs, Total	39500		ug/kg	2620	233.	50	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10 D
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 02/13/19 02:46
Analyst: HT
Percent Solids: 59%

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5450	484.	100	A
Aroclor 1221	ND		ug/kg	5450	546.	100	A
Aroclor 1232	ND		ug/kg	5450	1160	100	A
Aroclor 1242	39400		ug/kg	5450	735.	100	A
Aroclor 1248	ND		ug/kg	5450	818.	100	A
Aroclor 1254	ND		ug/kg	5450	596.	100	A
Aroclor 1260	ND		ug/kg	5450	1010	100	A
Aroclor 1262	ND		ug/kg	5450	692.	100	A
Aroclor 1268	ND		ug/kg	5450	565.	100	A
PCBs, Total	39400		ug/kg	5450	484.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 02/12/19 04:33
Analyst: HT

Extraction Method: EPA 3540C
Extraction Date: 02/09/19 04:30
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/10/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-10 Batch: WG1205140-1						
Aroclor 1016	ND		ug/kg	33.0	2.93	A
Aroclor 1221	ND		ug/kg	33.0	3.31	A
Aroclor 1232	ND		ug/kg	33.0	7.00	A
Aroclor 1242	ND		ug/kg	33.0	4.45	A
Aroclor 1248	ND		ug/kg	33.0	4.95	A
Aroclor 1254	ND		ug/kg	33.0	3.61	A
Aroclor 1260	ND		ug/kg	33.0	6.10	A
Aroclor 1262	ND		ug/kg	33.0	4.19	A
Aroclor 1268	ND		ug/kg	33.0	3.42	A
PCBs, Total	ND		ug/kg	33.0	2.93	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	93		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-10 Batch: WG1205140-2 WG1205140-3									
Aroclor 1016	72		67		40-140	7		50	A
Aroclor 1260	56		52		40-140	7		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		76		30-150	A
Decachlorobiphenyl	70		66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		86		30-150	B
Decachlorobiphenyl	94		89		30-150	B

PESTICIDES

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 13:33
Analyst: KEG
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	142		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	38		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 12:44
Analyst: AMC
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/11/19 00:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	38		30-150	A
DCAA	43		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 11:13
Analyst: BM
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	103		30-150	A
2,4,5,6-Tetrachloro-m-xylene	43		30-150	B
Decachlorobiphenyl	53		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 01:45
Analyst: DGM
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	54		30-150	A
DCAA	57		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 11:26
Analyst: BM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	103		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 02:03
Analyst: DGM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	53		30-150	A
DCAA	51		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 11:39
Analyst: BM
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	127		30-150	A
2,4,5,6-Tetrachloro-m-xylene	39		30-150	B
Decachlorobiphenyl	49		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 02:41
Analyst: DGM
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	55		30-150	A
DCAA	48		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 11:52
Analyst: KEG
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	**152**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**21**	Q	30-150	B
Decachlorobiphenyl	37		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 03:00
Analyst: DGM
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	52		30-150	A
DCAA	46		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 12:04
Analyst: KEG
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	62		30-150	A
Decachlorobiphenyl	**168**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**20**	Q	30-150	B
Decachlorobiphenyl	**28**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 03:19
Analyst: DGM
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	52		30-150	A
DCAA	49		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 13:46
Analyst: KEG
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	131		30-150	A
2,4,5,6-Tetrachloro-m-xylene	46		30-150	B
Decachlorobiphenyl	44		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 13:03
Analyst: AMC
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/11/19 00:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	41		30-150	A
DCAA	46		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 12:17
Analyst: KEG
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	**156**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	30		30-150	B
Decachlorobiphenyl	44		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 03:37
Analyst: DGM
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	49		30-150	A
DCAA	54		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 12:30
Analyst: BM
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	128		30-150	A
2,4,5,6-Tetrachloro-m-xylene	54		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 03:56
Analyst: DGM
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	64		30-150	A
DCAA	57		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 02/11/19 12:42
Analyst: KEG
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	**195**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**19**	Q	30-150	B
Decachlorobiphenyl	**23**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 02/12/19 04:15
Analyst: DGM
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:01

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	53		30-150	A
DCAA	50		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 02/11/19 23:14
Analyst: DGM
TCLP/SPLP Extraction Date: 02/07/19 22:51
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/10/19 17:00

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 02-06,08-10 Batch: WG1205409-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	55		30-150	A
DCAA	58		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 02/11/19 10:35
Analyst: BM
TCLP/SPLP Extraction Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:23

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 02-06,08-10 Batch: WG1205435-1						
Lindane	ND		ug/l	0.100	0.022	A
Heptachlor	ND		ug/l	0.100	0.016	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	A
Endrin	ND		ug/l	0.200	0.021	A
Methoxychlor	ND		ug/l	1.00	0.034	A
Toxaphene	ND		ug/l	1.00	0.314	A
Chlordane	ND		ug/l	1.00	0.232	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	104		30-150	A
2,4,5,6-Tetrachloro-m-xylene	84		30-150	B
Decachlorobiphenyl	99		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 02/11/19 12:55
Analyst: KEG
TCLP/SPLP Extraction Date: 02/09/19 18:45

Extraction Method: EPA 3510C
Extraction Date: 02/10/19 23:25

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01,07 Batch: WG1205436-1						
Lindane	ND		ug/l	0.100	0.022	A
Heptachlor	ND		ug/l	0.100	0.016	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	A
Endrin	ND		ug/l	0.200	0.021	A
Methoxychlor	ND		ug/l	1.00	0.034	A
Toxaphene	ND		ug/l	1.00	0.314	A
Chlordane	ND		ug/l	1.00	0.232	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	95		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	87		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 02/12/19 11:48
Analyst: AMC
TCLP/SPLP Extraction Date: 02/09/19 18:45
Methylation Date: 02/11/19 10:51

Extraction Method: EPA 8151A
Extraction Date: 02/11/19 00:22

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01,07 Batch: WG1205439-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	42		30-150	A
DCAA	48		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 02-06,08-10 Batch: WG1205409-2 WG1205409-3									
2,4-D	114		123		30-150	8		25	A
2,4,5-TP (Silvex)	51		46		30-150	10		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	68		59		30-150	A
DCAA	52		45		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 02-06,08-10 Batch: WG1205435-2 WG1205435-3									
Lindane	99		88		30-150	12		20	A
Heptachlor	97		81		30-150	18		20	A
Heptachlor epoxide	104		90		30-150	14		20	A
Endrin	106		93		30-150	13		20	A
Methoxychlor	100		89		30-150	11		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		68		30-150	A
Decachlorobiphenyl	108		98		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		61		30-150	B
Decachlorobiphenyl	104		95		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01,07 Batch: WG1205436-2 WG1205436-3									
Lindane	79		75		30-150	5		20	A
Heptachlor	79		75		30-150	5		20	A
Heptachlor epoxide	83		79		30-150	5		20	A
Endrin	84		80		30-150	6		20	A
Methoxychlor	81		74		30-150	8		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		74		30-150	A
Decachlorobiphenyl	94		83		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		67		30-150	B
Decachlorobiphenyl	85		75		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01,07 Batch: WG1205439-2 WG1205439-3									
2,4-D	123		118		30-150	4		25	A
2,4,5-TP (Silvex)	50		49		30-150	2		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	57		57		30-150	A
DCAA	49		52		30-150	B

METALS

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 52%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Barium, TCLP	2.40		mg/l	0.500	0.021	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.064	J	mg/l	0.100	0.010	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Chromium, TCLP	0.164	J	mg/l	0.200	0.021	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Lead, TCLP	0.401	J	mg/l	0.500	0.027	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:10	02/12/19 15:23	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 09:32	02/12/19 11:25	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.073	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Barium, TCLP	0.892		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.074	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Chromium, TCLP	0.024	J	mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Lead, TCLP	0.562		mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:33	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 14:22	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 64%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.035	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Barium, TCLP	1.19		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.046	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Chromium, TCLP	0.024	J	mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Lead, TCLP	0.271	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:34	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 14:27	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 55%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.065	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Barium, TCLP	0.764		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.046	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Lead, TCLP	0.321	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:36	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 14:32	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 58%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.054	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Barium, TCLP	0.790		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.054	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Lead, TCLP	0.376	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:38	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 14:51	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 57%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.069	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Barium, TCLP	0.869		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.046	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Lead, TCLP	0.344	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:40	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 14:56	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 56%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Barium, TCLP	2.24		mg/l	0.500	0.021	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.117		mg/l	0.100	0.010	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Chromium, TCLP	0.267		mg/l	0.200	0.021	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Lead, TCLP	0.689		mg/l	0.500	0.027	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:10	02/12/19 15:28	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 09:32	02/12/19 11:43	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 57%

TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.062	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Barium, TCLP	1.06		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.056	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Chromium, TCLP	0.029	J	mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Lead, TCLP	0.293	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:41	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 15:01	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 61%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.031	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Barium, TCLP	1.17		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.048	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Lead, TCLP	0.075	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:48	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 15:06	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF
Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER
Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 59%
TCLP/SPLP Ext. Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.059	J	mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Barium, TCLP	1.28		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Cadmium, TCLP	0.038	J	mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Chromium, TCLP	0.033	J	mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Lead, TCLP	0.258	J	mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Mercury, TCLP	0.0005	J	mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:50	EPA 7470A	1,7470A	GD
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 15:11	EPA 3015	1,6010D	LC

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01,07 Batch: WG1205840-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Barium, TCLP	ND		mg/l	0.500	0.021	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 09:32	02/12/19 11:16	1,6010D	LC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01,07 Batch: WG1205935-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:10	02/12/19 15:19	1,7470A	GD

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 02/09/19 18:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02-06,08-10 Batch: WG1205937-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	02/12/19 11:49	02/12/19 16:19	1,7470A	GD

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 02/07/19 22:51

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02-06,08-10 Batch: WG1205959-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Barium, TCLP	ND		mg/l	0.500	0.021	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Selenium, TCLP	ND		mg/l	0.500	0.035	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	02/12/19 11:49	02/12/19 13:54	1,6010D	LC

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 02/07/19 22:51

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 Batch: WG1205840-2								
Arsenic, TCLP	98		-		75-125	-		20
Barium, TCLP	94		-		75-125	-		20
Cadmium, TCLP	95		-		75-125	-		20
Chromium, TCLP	92		-		75-125	-		20
Lead, TCLP	95		-		75-125	-		20
Selenium, TCLP	99		-		75-125	-		20
Silver, TCLP	95		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 Batch: WG1205935-2								
Mercury, TCLP	109		-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 Batch: WG1205937-2								
Mercury, TCLP	110		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1905291

Report Date: 02/13/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 Batch: WG1205959-2					
Arsenic, TCLP	105	-	75-125	-	20
Barium, TCLP	95	-	75-125	-	20
Cadmium, TCLP	98	-	75-125	-	20
Chromium, TCLP	92	-	75-125	-	20
Lead, TCLP	99	-	75-125	-	20
Selenium, TCLP	107	-	75-125	-	20
Silver, TCLP	96	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 QC Batch ID: WG1205840-3 QC Sample: L1905291-01 Client ID: B1 TSCA HVOC 020819												
Arsenic, TCLP	ND	1.2	1.29	108		-	-		75-125	-		20
Barium, TCLP	2.40	20	21.4	95		-	-		75-125	-		20
Cadmium, TCLP	0.064J	0.51	0.553	108		-	-		75-125	-		20
Chromium, TCLP	0.164J	2	2.03	102		-	-		75-125	-		20
Lead, TCLP	0.401J	5.1	5.27	103		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.26	105		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.496	99		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 QC Batch ID: WG1205935-3 QC Sample: L1905291-01 Client ID: B1 TSCA HVOC 020819												
Mercury, TCLP	ND	0.025	0.0238	95		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 QC Batch ID: WG1205937-3 QC Sample: L1904886-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0254	101		-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 QC Batch ID: WG1205959-3 QC Sample: L1904886-01 Client ID: MS Sample									
Arsenic, TCLP	0.023J	1.2	1.27	106	-	-	75-125	-	20
Barium, TCLP	0.790	20	19.6	94	-	-	75-125	-	20
Cadmium, TCLP	0.012J	0.51	0.500	98	-	-	75-125	-	20
Chromium, TCLP	ND	2	1.86	93	-	-	75-125	-	20
Lead, TCLP	2.18	5.1	7.14	97	-	-	75-125	-	20
Selenium, TCLP	ND	1.2	1.28	107	-	-	75-125	-	20
Silver, TCLP	ND	0.5	0.490	98	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 QC Batch ID: WG1205840-4 QC Sample: L1905291-01 Client ID: B1 TSCA HVOC 020819						
Arsenic, TCLP	ND	ND	mg/l	NC		20
Barium, TCLP	2.40	2.27	mg/l	6		20
Cadmium, TCLP	0.064J	0.061J	mg/l	NC		20
Chromium, TCLP	0.164J	0.162J	mg/l	NC		20
Lead, TCLP	0.401J	0.379J	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,07 QC Batch ID: WG1205935-4 QC Sample: L1905291-01 Client ID: B1 TSCA HVOC 020819						
Mercury, TCLP	ND	0.0005J	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 QC Batch ID: WG1205937-4 QC Sample: L1904886-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02-06,08-10 QC Batch ID: WG1205959-4 QC Sample: L1904886-01 Client ID: DUP Sample					
Arsenic, TCLP	0.023J	ND	mg/l	NC	20
Barium, TCLP	0.790	0.791	mg/l	0	20
Cadmium, TCLP	0.012J	0.012J	mg/l	NC	20
Chromium, TCLP	ND	ND	mg/l	NC	20
Lead, TCLP	2.18	2.16	mg/l	1	20
Selenium, TCLP	ND	ND	mg/l	NC	20
Silver, TCLP	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Soil
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	02/11/19 05:38	1,1030	GD

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-01
Client ID: B1 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	51.9		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	11.7		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:21	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:12	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-02
Client ID: B3 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	59.4		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	7.5		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:21	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:12	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-03
Client ID: B4 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	63.9		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	10.2		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:21	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:12	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-04
Client ID: B5 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	54.6		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	9.1		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:21	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:13	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-05
Client ID: B6 TSCA LVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:40
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	58.2		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	8.2		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:21	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:13	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-06
Client ID: B9 TSCA HVOC 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 11:50
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	56.7		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	7.6		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:22	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:13	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-07
Client ID: B1/4 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:00
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	56.1		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	11.5		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:22	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:13	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-08
Client ID: B3/6 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:10
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	57.1		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	9.3		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:23	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:14	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-09
Client ID: B5/10 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:20
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.2		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	9.1		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:23	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:14	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

SAMPLE RESULTS

Lab ID: L1905291-10
Client ID: B9/14 TSCA 020819
Sample Location: RENSSELAER

Date Collected: 02/08/19 12:30
Date Received: 02/08/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	59.1		%	0.100	NA	1	-	02/09/19 09:59	121,2540G	RI
pH (H)	9.7		SU	-	NA	1	-	02/09/19 07:20	1,9045D	MA
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:23	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:14	125,7.3	KF

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-10 Batch: WG1205451-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:09	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 01-10 Batch: WG1205452-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	02/11/19 02:56	02/11/19 04:18	125,7.3	KF

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1205191-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1205451-2								
Sulfide, Reactive	67		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1205452-2								
Cyanide, Reactive	69		-		30-125	-		40

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1205191-2 QC Sample: L1905284-01 Client ID: DUP Sample						
pH	7.5	7.8	SU	4		5
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1205195-1 QC Sample: L1905291-01 Client ID: B1 TSCA HVOC 020819						
Solids, Total	51.9	52.4	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1205451-3 QC Sample: L1905291-10 Client ID: B9/14 TSCA 020819						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1205452-3 QC Sample: L1905291-10 Client ID: B9/14 TSCA 020819						
Cyanide, Reactive	ND	ND	mg/kg	NC		40

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1905291-01A	Vial Large Septa unpreserved (4oz)	B	NA		5.7	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-01B	Plastic 2oz unpreserved for TS	B	NA		5.7	Y	Absent		TS(7)
L1905291-01C	Glass 500ml/16oz unpreserved	B	NA		5.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-01W	Amber 1000ml unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-01X	Plastic 120ml HNO3 preserved Extracts	B	NA		5.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-01X9	Tumble Vessel	B	NA		5.7	Y	Absent		-
L1905291-01Y	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-01Z	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-02A	Vial Large Septa unpreserved (4oz)	B	NA		5.7	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-02B	Plastic 2oz unpreserved for TS	B	NA		5.7	Y	Absent		TS(7)
L1905291-02C	Glass 500ml/16oz unpreserved	B	NA		5.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-02W	Amber 1000ml unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-02X	Plastic 120ml HNO3 preserved Extracts	B	NA		5.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-02X9	Tumble Vessel	B	NA		5.7	Y	Absent		-
L1905291-02Y	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-02Z	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-03A	Vial Large Septa unpreserved (4oz)	B	NA		5.7	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-03B	Plastic 2oz unpreserved for TS	B	NA		5.7	Y	Absent		TS(7)
L1905291-03C	Glass 500ml/16oz unpreserved	B	NA		5.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1905291-03W	Amber 1000ml unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-03X	Plastic 120ml HNO3 preserved Extracts	B	NA		5.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-03X9	Tumble Vessel	B	NA		5.7	Y	Absent		-
L1905291-03Y	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-03Z	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-04A	Vial Large Septa unpreserved (4oz)	B	NA		5.7	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-04B	Plastic 2oz unpreserved for TS	B	NA		5.7	Y	Absent		TS(7)
L1905291-04C	Glass 500ml/16oz unpreserved	B	NA		5.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-04W	Amber 1000ml unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-04X	Plastic 120ml HNO3 preserved Extracts	B	NA		5.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-04X9	Tumble Vessel	B	NA		5.7	Y	Absent		-
L1905291-04Y	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-04Z	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-05A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-05B	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1905291-05C	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-05W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-05X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-05X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1905291-05Y	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-05Z	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-06A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-06B	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1905291-06C	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1905291-06W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-06X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-06X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1905291-06Y	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-06Z	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-07A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-07B	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1905291-07C	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-07W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-07X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-07X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1905291-07Y	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-07Z	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-08A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-08B	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1905291-08C	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-08W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-08X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-08X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1905291-08Y	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-08Z	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-09A	Vial Large Septa unpreserved (4oz)	B	NA		5.7	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-09B	Plastic 2oz unpreserved for TS	B	NA		5.7	Y	Absent		TS(7)
L1905291-09C	Glass 500ml/16oz unpreserved	B	NA		5.7	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)

*Values in parentheses indicate holding time in days

Project Name: BASF
Project Number: BASF

Lab Number: L1905291
Report Date: 02/13/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1905291-09W	Amber 1000ml unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-09X	Plastic 120ml HNO3 preserved Extracts	B	NA		5.7	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-09X9	Tumble Vessel	B	NA		5.7	Y	Absent		-
L1905291-09Y	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-09Z	Vial unpreserved Extracts	B	NA		5.7	Y	Absent		TCLP-VOA(14)
L1905291-10A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		TCLP-EXT-ZHE(14)
L1905291-10B	Plastic 2oz unpreserved for TS	A	NA		3.6	Y	Absent		TS(7)
L1905291-10C	Glass 500ml/16oz unpreserved	A	NA		3.6	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),REACTCN(14),NYTCL-8082-3540C(14)
L1905291-10W	Amber 1000ml unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1905291-10X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1905291-10X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1905291-10Y	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)
L1905291-10Z	Vial unpreserved Extracts	A	NA		3.6	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1905291
Project Number:	BASF	**Report Date:**	02/13/19

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total'

Report Format: DU Report with 'J' Qualifiers

result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	BASF	**Lab Number:**	L1905291
Project Number:	BASF	**Report Date:**	02/13/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 2/9/19

ALPHA Job #: L1905291

Client Information
Client: BASF Corp
Address: 36 Riversdale Ave
Rensselaer NY 12144
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: Rensselaer
Project #
(Use Project name as Project #) ☑
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☑ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ign.tab.ility/pH	Reactivity	Corrosivity	Soil/Solid TCLP VOCs	Soil/Solid PCBs in soil	Soil/Solid TCLP metals	Soil/Solid TCLP Pest+Herb	Soil/Solid TCLP SVOCs	Sample Specific Comments	Total Bottles
05291-01	B1 TSCA HVOC 020819	2/8/19	1100	S	TQ	X	X	X	X	X	X	X	X		3
-02	B3 TSCA HVOC 020819	2/8/19	1110	S	TQ	X	X	X	X	X	X	X	X		3
-03	B4 TSCA LVOC 020819	2/8/19	1120	S	TQ	X	X	X	X	X	X	X	X		3
-04	B5 TSCA HVOC 020819	2/8/19	1130	S	TQ	X	X	X	X	X	X	X	X		3
-05	B6 TSCA LVOC 020819	2/8/19	1140	S	TQ	X	X	X	X	X	X	X	X		3
-06	B9 TSCA HVOC 020819	2/8/19	1150	S	TQ	X	X	X	X	X	X	X	X		3
-07	B1/4 TSCA 020819	2/8/19	1200	S	TQ	X	X	X	X	X	X	X	X		3
-08	B3/6 TSCA 020819	2/8/19	1210	S	TQ	X	X	X	X	X	X	X	X		3
-09	B5/10 TSCA 020819	2/8/19	1220	S	TQ	X	X	X	X	X	X	X	X		3
-10	B9/14 TSCA 020819	2/8/19	1230	S	TQ	X	X	X	X	X	X	X	X		3

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type									
Preservative									

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Onufrak	2/8/19 1600	Ralph Wetterhall AAL	2/8/19 1600
			2/9/19 0130

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab: 2/9/19

ALPHA Job #: L1905291

Client Information
Client: BASF Corp
Address: 36 Riverside Ave
Rensselaer NY 12144
Phone: 978 905 2124
Fax:
Email: john.bleiler@arcor.com

Project Information
Project Name: BASF
Project Location: Rensselaer NY
Project #
(Use Project name as Project #) ☑
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☑ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ign'tability/pH	Reactivity	Corrosivity	Soil/Solid TCLP VOAs	Soil/Solid PCBs in soil	Soil/Solid TCLP metals	Soil/Solid TCLP Pest/Herb	Soil/Solid TCLP SVOCs	Sample Specific Comments	Total Bottle
	Cooler temp bottle	2/8/19	1600											Cooler temp bottle	2

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Ambrosh	2/8/19 1600	Ralph Wetteg' ALL	2/8/19 1600
			2/9/19 0130

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1923645
Client:	AECOM 250 Apollo Dr. Chelmsford, MA 01824
ATTN:	John Bleiler
Phone:	(978) 621-7080
Project Name:	BASF
Project Number:	BASF
Report Date:	06/13/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1923645-01	B11A-B11A060419	SOIL	RENSSELAER, NY	06/04/19 07:40	06/04/19
L1923645-02	B11B-B11B060419	SOIL	RENSSELAER, NY	06/04/19 07:45	06/04/19
L1923645-03	B11C-B11C060419	SOIL	RENSSELAER, NY	06/04/19 07:50	06/04/19
L1923645-04	B11D-B11D060419	SOIL	RENSSELAER, NY	06/04/19 07:55	06/04/19
L1923645-05	B15A-B15A060419	SOIL	RENSSELAER, NY	06/04/19 08:00	06/04/19
L1923645-06	B15B-B15B060419	SOIL	RENSSELAER, NY	06/04/19 08:10	06/04/19
L1923645-07	B15C-B15C060419	SOIL	RENSSELAER, NY	06/04/19 08:15	06/04/19
L1923645-08	B15D-B15D060419	SOIL	RENSSELAER, NY	06/04/19 08:20	06/04/19

Project Name:	BASF	**Lab Number:**	L1923645
Project Number:	BASF	**Report Date:**	06/13/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: BASF **Lab Number:** L1923645
Project Number: BASF **Report Date:** 06/13/19

Case Narrative (continued)

Report Submission
All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt
The analyses performed were specified by the client.
L1923645-01 through -08: The vials received for Volatile Organics by EPA Method 5035/8260 were over-filled. The analysis was not performed at the client's request.

TCLP Volatiles
L1923645-01, -02, -03, and -04: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

TCLP Semivolatiles
L1923645-02: The surrogate recovery is outside the individual acceptance criteria for nitrobenzene-d5 (121%), but within the overall method allowances. The results of the original analysis are reported.

PCBs
L1923645-01 through -08: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.
L1923645-01 through -08: The surrogate recoveries are below the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (0%) and decachlorobiphenyl (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.
L1923645-01, -02, and -03: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.
L1923645-03: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance

Project Name: BASF **Lab Number:** L1923645
Project Number: BASF **Report Date:** 06/13/19

Case Narrative (continued)

criteria; however, the sample was not re-analyzed due to obvious interferences.

TCLP Pesticides

L1923645-01, -02, -03, -04, -05, -06, -07 and -08: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria; however, the sample was not re-analyzed due to obvious interferences.

L1923645-01: The surrogate recoveries are above the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (167%) and decachlorobiphenyl (180%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L1923645-02: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (176%), but within the overall method allowances. The results of the original analysis are reported.

L1923645-03: The surrogate recoveries are above the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (156%) and decachlorobiphenyl (196%). Since the sample was non-detect for all target analytes, re-analysis was not required.

L1923645-03: The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (27%) and decachlorobiphenyl (26%) due to interference with the Internal Standard.

L1923645-04: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (158%), but within the overall method allowances. The results of the original analysis are reported.

L1923645-05: The surrogate recovery is outside the individual acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (192%), but within the overall method allowances. The results of the original analysis are reported.

L1923645-06: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (196%), but within the overall method allowances. The results of the original analysis are reported.

L1923645-07: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (215%), but within the overall method allowances. The results of the original analysis are reported.

L1923645-08: The surrogate recoveries are above the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene (181%) and decachlorobiphenyl (208%). Since the sample was non-detect for all target analytes, re-analysis was not required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 06/13/19

ORGANICS

VOLATILES

Project Name: BASF **Lab Number:** L1923645

Project Number: BASF **Report Date:** 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01 D
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 13:38
Analyst: MM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	15	4.4	20
Carbon tetrachloride	ND		ug/l	10	2.7	20
Tetrachloroethene	ND		ug/l	10	3.6	20
Chlorobenzene	1800		ug/l	10	3.6	20
1,2-Dichloroethane	ND		ug/l	10	2.6	20
Benzene	10		ug/l	10	3.2	20
Vinyl chloride	ND		ug/l	20	1.4	20
1,1-Dichloroethene	ND		ug/l	10	3.4	20
Trichloroethene	ND		ug/l	10	3.5	20
1,4-Dichlorobenzene	85		ug/l	50	3.7	20
2-Butanone	ND		ug/l	100	39.	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	99		70-130
dibromofluoromethane	109		70-130

Project Name: BASF **Lab Number:** L1923645

Project Number: BASF **Report Date:** 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02 D
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 14:08
Analyst: MM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	19	5.6	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
Tetrachloroethene	ND		ug/l	12	4.5	25
Chlorobenzene	4000		ug/l	12	4.4	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
Benzene	14		ug/l	12	4.0	25
Vinyl chloride	ND		ug/l	25	1.8	25
1,1-Dichloroethene	ND		ug/l	12	4.2	25
Trichloroethene	ND		ug/l	12	4.4	25
1,4-Dichlorobenzene	160		ug/l	62	4.7	25
2-Butanone	ND		ug/l	120	48.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	97		70-130
dibromofluoromethane	110		70-130

Project Name: BASF **Lab Number:** L1923645

Project Number: BASF **Report Date:** 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03 D
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 14:38
Analyst: MM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	19	5.6	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
Tetrachloroethene	ND		ug/l	12	4.5	25
Chlorobenzene	2800		ug/l	12	4.4	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
Benzene	12		ug/l	12	4.0	25
Vinyl chloride	ND		ug/l	25	1.8	25
1,1-Dichloroethene	ND		ug/l	12	4.2	25
Trichloroethene	ND		ug/l	12	4.4	25
1,4-Dichlorobenzene	95		ug/l	62	4.7	25
2-Butanone	ND		ug/l	120	48.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	100		70-130
dibromofluoromethane	111		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04 D
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 15:09
Analyst: MM
Percent Solids: 63%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	19	5.6	25
Carbon tetrachloride	ND		ug/l	12	3.4	25
Tetrachloroethene	ND		ug/l	12	4.5	25
Chlorobenzene	2900		ug/l	12	4.4	25
1,2-Dichloroethane	ND		ug/l	12	3.3	25
Benzene	11	J	ug/l	12	4.0	25
Vinyl chloride	ND		ug/l	25	1.8	25
1,1-Dichloroethene	ND		ug/l	12	4.2	25
Trichloroethene	ND		ug/l	12	4.4	25
1,4-Dichlorobenzene	140		ug/l	62	4.7	25
2-Butanone	ND		ug/l	120	48.	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	88		70-130
4-Bromofluorobenzene	98		70-130
dibromofluoromethane	109		70-130

Project Name: BASF **Lab Number:** L1923645

Project Number: BASF **Report Date:** 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 13:07
Analyst: MM
Percent Solids: 65%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	170		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	6.3		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	30		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	96		70-130
dibromofluoromethane	108		70-130

Project Name: BASF **Lab Number:** L1923645

Project Number: BASF **Report Date:** 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 12:37
Analyst: MM
Percent Solids: 62%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	1800		ug/l	5.0	1.8	10
1,2-Dichloroethane	3.2	J	ug/l	5.0	1.3	10
Benzene	8.1		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	110		ug/l	25	1.9	10
2-Butanone	36	J	ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	102		70-130
dibromofluoromethane	110		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 12:07
Analyst: MM
Percent Solids: 73%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	240		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	6.4		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	20	J	ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	93		70-130
4-Bromofluorobenzene	101		70-130
dibromofluoromethane	111		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 06/10/19 11:38
Analyst: MM
Percent Solids: 66%
TCLP/SPLP Ext. Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	680		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	8.3		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	61		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	95		70-130
dibromofluoromethane	114		70-130

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/10/19 05:35
Analyst: MM
TCLP/SPLP Extraction Date: 06/05/19 12:55

Extraction Date: 06/05/19 12:55

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-08 Batch: WG1246713-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	110		70-130
dibromofluoromethane	109		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-08 Batch: WG1246713-3 WG1246713-4								
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	130		130		63-132	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	96		95		75-130	1		25
1,2-Dichloroethane	120		120		70-130	0		20
Benzene	100		100		70-130	0		25
Vinyl chloride	110		100		55-140	10		20
1,1-Dichloroethene	110		110		61-145	0		25
Trichloroethene	110		110		70-130	0		25
1,4-Dichlorobenzene	90		86		70-130	5		20
2-Butanone	100		100		63-138	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	114		116		70-130
Toluene-d8	93		95		70-130
4-Bromofluorobenzene	101		100		70-130
dibromofluoromethane	107		108		70-130

SEMIVOLATILES

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 00:30
Analyst: RC
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	310		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		21-120
Phenol-d6	73		10-120
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	79		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	81		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 00:55
Analyst: RC
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	310		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		21-120
Phenol-d6	89		10-120
Nitrobenzene-d5	**121**	Q	23-120
2-Fluorobiphenyl	95		15-120
2,4,6-Tribromophenol	110		10-120
4-Terphenyl-d14	100		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 01:21
Analyst: RC
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	330		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	95		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	81		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 01:46
Analyst: RC
Percent Solids: 63%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	280		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		21-120
Phenol-d6	71		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	80		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 02:11
Analyst: RC
Percent Solids: 65%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	260		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	88		21-120
Phenol-d6	81		10-120
Nitrobenzene-d5	111		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	103		10-120
4-Terphenyl-d14	95		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 02:37
Analyst: RC
Percent Solids: 62%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	200		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		21-120
Phenol-d6	68		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	88		10-120
4-Terphenyl-d14	80		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 03:02
Analyst: RC
Percent Solids: 73%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	18	J	ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		21-120
Phenol-d6	67		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	93		10-120
4-Terphenyl-d14	82		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 06/09/19 03:28
Analyst: RC
Percent Solids: 66%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	630		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		21-120
Phenol-d6	74		10-120
Nitrobenzene-d5	104		23-120
2-Fluorobiphenyl	83		15-120
2,4,6-Tribromophenol	101		10-120
4-Terphenyl-d14	90		33-120

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/08/19 22:49
Analyst: RC
TCLP/SPLP Extraction Date: 06/03/19 09:26

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:55

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-08 Batch: WG1245683-1					
Hexachlorobenzene	ND		ug/l	10	2.9
2,4-Dinitrotoluene	ND		ug/l	25	4.2
Hexachlorobutadiene	ND		ug/l	10	3.6
Hexachloroethane	ND		ug/l	10	3.4
Nitrobenzene	ND		ug/l	10	3.8
2,4,6-Trichlorophenol	ND		ug/l	25	3.4
Pentachlorophenol	ND		ug/l	50	17.
2-Methylphenol	ND		ug/l	25	5.1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6
2,4,5-Trichlorophenol	ND		ug/l	25	3.6
Pyridine	ND		ug/l	18	9.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	87		21-120
Phenol-d6	77		10-120
Nitrobenzene-d5	103		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	88		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-08 Batch: WG1245683-2 WG1245683-3								
Hexachlorobenzene	74		69		40-140	7		30
2,4-Dinitrotoluene	89		85		40-132	5		30
Hexachlorobutadiene	71		69		28-111	3		30
Hexachloroethane	71		70		21-105	1		30
Nitrobenzene	90		87		40-140	3		30
2,4,6-Trichlorophenol	87		82		30-130	6		30
Pentachlorophenol	77		71		9-103	8		30
2-Methylphenol	81		79		30-130	3		30
3-Methylphenol/4-Methylphenol	82		79		30-130	4		30
2,4,5-Trichlorophenol	87		85		30-130	2		30
Pyridine	59		62		10-66	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	75		73		21-120
Phenol-d6	71		68		10-120
Nitrobenzene-d5	92		91		23-120
2-Fluorobiphenyl	73		71		15-120
2,4,6-Tribromophenol	82		77		10-120
4-Terphenyl-d14	72		70		33-120

PCBS

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01 D
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 19:59
Analyst: WR
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2480	220.	50	A
Aroclor 1221	ND		ug/kg	2480	249.	50	A
Aroclor 1232	ND		ug/kg	2480	526.	50	A
Aroclor 1242	32900	P	ug/kg	2480	335.	50	A
Aroclor 1248	ND		ug/kg	2480	372.	50	A
Aroclor 1254	ND		ug/kg	2480	272.	50	A
Aroclor 1260	ND		ug/kg	2480	459.	50	A
Aroclor 1262	ND		ug/kg	2480	315.	50	A
Aroclor 1268	ND		ug/kg	2480	257.	50	A
PCBs, Total	32900		ug/kg	2480	220.	50	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02 D
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 20:10
Analyst: WR
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2460	219.	50	A
Aroclor 1221	ND		ug/kg	2460	247.	50	A
Aroclor 1232	ND		ug/kg	2460	522.	50	A
Aroclor 1242	31200	P	ug/kg	2460	332.	50	A
Aroclor 1248	ND		ug/kg	2460	370.	50	A
Aroclor 1254	ND		ug/kg	2460	270.	50	A
Aroclor 1260	ND		ug/kg	2460	455.	50	A
Aroclor 1262	ND		ug/kg	2460	313.	50	A
Aroclor 1268	ND		ug/kg	2460	255.	50	A
PCBs, Total	31200		ug/kg	2460	219.	50	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03 D
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 20:28
Analyst: WR
Percent Solids: 64%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	2560	228.	50	A
Aroclor 1221	ND		ug/kg	2560	257.	50	A
Aroclor 1232	ND		ug/kg	2560	543.	50	A
Aroclor 1242	35000	P	ug/kg	2560	345.	50	A
Aroclor 1248	ND		ug/kg	2560	384.	50	A
Aroclor 1254	ND		ug/kg	2560	280.	50	A
Aroclor 1260	ND		ug/kg	2560	474.	50	A
Aroclor 1262	ND		ug/kg	2560	325.	50	A
Aroclor 1268	ND		ug/kg	2560	265.	50	A
PCBs, Total	35000		ug/kg	2560	228.	50	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04 D
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 20:40
Analyst: WR
Percent Solids: 63%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5210	463.	100	A
Aroclor 1221	ND		ug/kg	5210	522.	100	A
Aroclor 1232	ND		ug/kg	5210	1100	100	A
Aroclor 1242	33900		ug/kg	5210	703.	100	A
Aroclor 1248	ND		ug/kg	5210	782.	100	A
Aroclor 1254	ND		ug/kg	5210	570.	100	A
Aroclor 1260	ND		ug/kg	5210	963.	100	A
Aroclor 1262	ND		ug/kg	5210	662.	100	A
Aroclor 1268	ND		ug/kg	5210	540.	100	A
PCBs, Total	33900		ug/kg	5210	463.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05 D
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 20:53
Analyst: WR
Percent Solids: 65%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5100	453.	100	A
Aroclor 1221	ND		ug/kg	5100	511.	100	A
Aroclor 1232	ND		ug/kg	5100	1080	100	A
Aroclor 1242	34000		ug/kg	5100	687.	100	A
Aroclor 1248	ND		ug/kg	5100	765.	100	A
Aroclor 1254	ND		ug/kg	5100	558.	100	A
Aroclor 1260	ND		ug/kg	5100	942.	100	A
Aroclor 1262	ND		ug/kg	5100	648.	100	A
Aroclor 1268	ND		ug/kg	5100	528.	100	A
PCBs, Total	34000		ug/kg	5100	453.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06 D
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 21:05
Analyst: WR
Percent Solids: 62%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	5280	469.	100	A
Aroclor 1221	ND		ug/kg	5280	529.	100	A
Aroclor 1232	ND		ug/kg	5280	1120	100	A
Aroclor 1242	43500		ug/kg	5280	711.	100	A
Aroclor 1248	ND		ug/kg	5280	792.	100	A
Aroclor 1254	ND		ug/kg	5280	577.	100	A
Aroclor 1260	ND		ug/kg	5280	975.	100	A
Aroclor 1262	ND		ug/kg	5280	670.	100	A
Aroclor 1268	ND		ug/kg	5280	547.	100	A
PCBs, Total	43500		ug/kg	5280	469.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07 D
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 21:17
Analyst: WR
Percent Solids: 73%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4480	398.	100	A
Aroclor 1221	ND		ug/kg	4480	449.	100	A
Aroclor 1232	ND		ug/kg	4480	951.	100	A
Aroclor 1242	41400		ug/kg	4480	604.	100	A
Aroclor 1248	ND		ug/kg	4480	673.	100	A
Aroclor 1254	ND		ug/kg	4480	490.	100	A
Aroclor 1260	ND		ug/kg	4480	829.	100	A
Aroclor 1262	ND		ug/kg	4480	569.	100	A
Aroclor 1268	ND		ug/kg	4480	464.	100	A
PCBs, Total	41400		ug/kg	4480	398.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08 D
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 06/11/19 21:30
Analyst: WR
Percent Solids: 66%

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	4900	435.	100	A
Aroclor 1221	ND		ug/kg	4900	490.	100	A
Aroclor 1232	ND		ug/kg	4900	1040	100	A
Aroclor 1242	45400		ug/kg	4900	660.	100	A
Aroclor 1248	ND		ug/kg	4900	734.	100	A
Aroclor 1254	ND		ug/kg	4900	536.	100	A
Aroclor 1260	ND		ug/kg	4900	905.	100	A
Aroclor 1262	ND		ug/kg	4900	622.	100	A
Aroclor 1268	ND		ug/kg	4900	507.	100	A
PCBs, Total	45400		ug/kg	4900	435.	100	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	A
Decachlorobiphenyl	**0**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**0**	Q	30-150	B
Decachlorobiphenyl	**0**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 06/08/19 12:00
Analyst: JM

Extraction Method: EPA 3546
Extraction Date: 06/07/19 09:45
Cleanup Method: EPA 3665A
Cleanup Date: 06/07/19
Cleanup Method: EPA 3660B
Cleanup Date: 06/07/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-08 Batch: WG1245750-1						
Aroclor 1016	ND		ug/kg	32.4	2.88	A
Aroclor 1221	ND		ug/kg	32.4	3.25	A
Aroclor 1232	ND		ug/kg	32.4	6.87	A
Aroclor 1242	ND		ug/kg	32.4	4.37	A
Aroclor 1248	ND		ug/kg	32.4	4.86	A
Aroclor 1254	ND		ug/kg	32.4	3.55	A
Aroclor 1260	ND		ug/kg	32.4	5.99	A
Aroclor 1262	ND		ug/kg	32.4	4.12	A
Aroclor 1268	ND		ug/kg	32.4	3.36	A
PCBs, Total	ND		ug/kg	32.4	2.88	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	67		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-08 Batch: WG1245750-2 WG1245750-3									
Aroclor 1016	78		76		40-140	3		50	A
Aroclor 1260	68		64		40-140	6		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		77		30-150	A
Decachlorobiphenyl	70		71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		77		30-150	B
Decachlorobiphenyl	88		85		30-150	B

PESTICIDES

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 04:50
Analyst: KEG
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**167**	Q	30-150	A
Decachlorobiphenyl	**180**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	31		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 11:47
Analyst: DGM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/03/19 09:26
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	54		30-150	A
DCAA	46		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 05:53
Analyst: AMC
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	129		30-150	A
Decachlorobiphenyl	**176**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	31		30-150	B
Decachlorobiphenyl	42		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 12:06
Analyst: DGM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	64		30-150	A
DCAA	51		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 06:06
Analyst: AMC
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**156**	Q	30-150	A
Decachlorobiphenyl	**196**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**27**	Q	30-150	B
Decachlorobiphenyl	**26**	Q	30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 12:24
Analyst: DGM
Percent Solids: 64%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	64		30-150	A
DCAA	45		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 06:18
Analyst: AMC
Percent Solids: 63%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	127		30-150	A
Decachlorobiphenyl	**158**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	33		30-150	B
Decachlorobiphenyl	36		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 12:43
Analyst: DGM
Percent Solids: 63%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	54		30-150	A
DCAA	51		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 06:31
Analyst: AMC
Percent Solids: 65%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	**192**	Q	30-150	A
Decachlorobiphenyl	79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	47		30-150	B
Decachlorobiphenyl	32		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 13:02
Analyst: DGM
Percent Solids: 65%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	46		30-150	A
DCAA	108		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 06:44
Analyst: AMC
Percent Solids: 62%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	133		30-150	A
Decachlorobiphenyl	**196**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	30		30-150	B
Decachlorobiphenyl	31		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 13:21
Analyst: DGM
Percent Solids: 62%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	48		30-150	A
DCAA	54		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 06:56
Analyst: AMC
Percent Solids: 73%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	101		30-150	A
Decachlorobiphenyl	**215**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	44		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 13:40
Analyst: DGM
Percent Solids: 73%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	108		30-150	A
DCAA	58		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 06/08/19 07:09
Analyst: AMC
Percent Solids: 66%
TCLP/SPLP Ext. Date: 06/05/19 19:33

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Pesticides by EPA 1311 - Westborough Lab							
Lindane	ND		ug/l	0.100	0.022	1	A
Heptachlor	ND		ug/l	0.100	0.016	1	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	1	A
Endrin	ND		ug/l	0.200	0.021	1	A
Methoxychlor	ND		ug/l	1.00	0.034	1	A
Toxaphene	ND		ug/l	1.00	0.314	1	A
Chlordane	ND		ug/l	1.00	0.232	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	146		30-150	A
Decachlorobiphenyl	**208**	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	**181**	Q	30-150	B
Decachlorobiphenyl	30		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 06/09/19 15:14
Analyst: DGM
Percent Solids: 66%
TCLP/SPLP Ext. Date: 06/05/19 19:33
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
TCLP Herbicides by EPA 1311 - Westborough Lab							
2,4-D	ND		mg/l	0.025	0.001	1	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	51		30-150	A
DCAA	45		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 06/08/19 02:39
Analyst: BM
TCLP/SPLP Extraction Date: 06/03/19 09:26

Extraction Method: EPA 3510C
Extraction Date: 06/07/19 07:54

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Pesticides by EPA 1311 - Westborough Lab for sample(s): 01-08 Batch: WG1245682-1						
Lindane	ND		ug/l	0.100	0.022	A
Heptachlor	ND		ug/l	0.100	0.016	A
Heptachlor epoxide	ND		ug/l	0.100	0.021	A
Endrin	ND		ug/l	0.200	0.021	A
Methoxychlor	ND		ug/l	1.00	0.034	A
Toxaphene	ND		ug/l	1.00	0.314	A
Chlordane	ND		ug/l	1.00	0.232	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		30-150	B
Decachlorobiphenyl	132		30-150	B

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 06/09/19 13:59
Analyst: DGM
TCLP/SPLP Extraction Date: 06/03/19 09:26
Methylation Date: 06/07/19 23:14

Extraction Method: EPA 8151A
Extraction Date: 06/07/19 13:42

Parameter	Result	Qualifier	Units	RL	MDL	Column
TCLP Herbicides by EPA 1311 - Westborough Lab for sample(s): 01-08 Batch: WG1245858-1						
2,4-D	ND		mg/l	0.025	0.001	A
2,4,5-TP (Silvex)	ND		mg/l	0.005	0.001	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	60		30-150	A
DCAA	52		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Pesticides by EPA 1311 - Westborough Lab Associated sample(s): 01-08 Batch: WG1245682-2 WG1245682-3									
Lindane	90		92		30-150	2		20	A
Heptachlor	84		86		30-150	2		20	A
Heptachlor epoxide	88		89		30-150	1		20	A
Endrin	88		90		30-150	3		20	A
Methoxychlor	80		84		30-150	5		20	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		93		30-150	A
Decachlorobiphenyl	95		99		30-150	A
2,4,5,6-Tetrachloro-m-xylene	105		104		30-150	B
Decachlorobiphenyl	140		138		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
TCLP Herbicides by EPA 1311 - Westborough Lab Associated sample(s): 01-08 Batch: WG1245858-2 WG1245858-3									
2,4-D	121		120		30-150	1		25	A
2,4,5-TP (Silvex)	62		63		30-150	2		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	65		66		30-150	A
DCAA	53		50		30-150	B

METALS

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 64%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.046	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Barium, TCLP	0.498	J	mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:49	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 20:57	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 64%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.031	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Barium, TCLP	0.577		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Chromium, TCLP	0.022	J	mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:51	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 21:40	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 64%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.027	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Barium, TCLP	0.489	J	mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:53	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 21:45	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 63%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.031	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Barium, TCLP	0.510		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:54	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 21:50	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 65%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.035	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Barium, TCLP	0.520		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Chromium, TCLP	0.055	J	mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:56	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 21:55	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 62%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.041	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Barium, TCLP	0.538		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Chromium, TCLP	0.030	J	mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 21:01	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 22:00	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 73%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.040	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Barium, TCLP	0.557		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Chromium, TCLP	0.025	J	mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 21:03	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 22:05	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 66%

TCLP/SPLP Ext. Date: 06/05/19 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.036	J	mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Barium, TCLP	0.525		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Chromium, TCLP	0.031	J	mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 21:05	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 22:25	EPA 3015	1,6010D	AB

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-08 Batch: WG1246585-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	06/10/19 16:49	06/10/19 20:41	1,7470A	EA

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 06/03/19 09:26

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-08 Batch: WG1247065-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Barium, TCLP	ND		mg/l	0.500	0.021	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Chromium, TCLP	ND		mg/l	0.200	0.021	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Lead, TCLP	ND		mg/l	0.500	0.027	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Selenium, TCLP	ND		mg/l	0.500	0.035	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB
Silver, TCLP	ND		mg/l	0.100	0.028	1	06/11/19 17:21	06/11/19 20:43	1,6010D	AB

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 06/03/19 09:26

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 Batch: WG1246585-2								
Mercury, TCLP	93		-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 Batch: WG1247065-2								
Arsenic, TCLP	107		-		75-125	-		20
Barium, TCLP	92		-		75-125	-		20
Cadmium, TCLP	102		-		75-125	-		20
Chromium, TCLP	96		-		75-125	-		20
Lead, TCLP	96		-		75-125	-		20
Selenium, TCLP	104		-		75-125	-		20
Silver, TCLP	95		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1246585-3 QC Sample: L1922752-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0239	95		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1247065-3 QC Sample: L1923645-01 Client ID: B11A-B11A060419												
Arsenic, TCLP	0.046J	1.2	1.32	110		-	-		75-125	-		20
Barium, TCLP	0.498J	20	18.8	94		-	-		75-125	-		20
Cadmium, TCLP	ND	0.51	0.507	99		-	-		75-125	-		20
Chromium, TCLP	ND	2	1.89	94		-	-		75-125	-		20
Lead, TCLP	ND	5.1	4.80	94		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.25	104		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.468	94		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1246585-4 QC Sample: L1922752-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1247065-4 QC Sample: L1923645-01 Client ID: B11A-B11A060419						
Arsenic, TCLP	0.046J	0.042J	mg/l	NC		20
Barium, TCLP	0.498J	0.505	mg/l	NC		20
Cadmium, TCLP	ND	ND	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	ND	ND	mg/l	NC		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Test Material Information

Source of Material:	Unknown
Description of Material:	Non-Metallic - Damp Paste
Particle Size:	Medium
Preliminary Burning Time (sec):	120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids - Westborough Lab				
Ignitability	NI	06/05/19 17:22	1,1030	BR

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-01
Client ID: B11A-B11A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:40
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.3		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.6		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:07	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:15	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-02
Client ID: B11B-B11B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:45
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.2		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.6		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:08	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:15	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-03
Client ID: B11C-B11C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:50
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	63.6		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.7		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:08	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:15	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-04
Client ID: B11D-B11D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 07:55
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	62.6		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.5		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:08	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:15	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-05
Client ID: B15A-B15A060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:00
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	64.8		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.7		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:08	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:16	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-06
Client ID: B15B-B15B060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:10
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.6		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	11.4		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:08	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:16	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-07
Client ID: B15C-B15C060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:15
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.5		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	10.0		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:09	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:16	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

SAMPLE RESULTS

Lab ID: L1923645-08
Client ID: B15D-B15D060419
Sample Location: RENSSELAER, NY

Date Collected: 06/04/19 08:20
Date Received: 06/04/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	66.1		%	0.100	NA	1	-	06/05/19 12:04	121,2540G	RI
pH (H)	10.1		SU	-	NA	1	-	06/05/19 20:39	1,9045D	AS
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:09	125,7.3	TL
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:16	125,7.3	TL

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG1244981-1										
Sulfide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:12	125,7.3	TL
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG1244982-1										
Cyanide, Reactive	ND		mg/kg	10	10.	1	06/05/19 19:30	06/05/19 22:03	125,7.3	TL

Lab Control Sample Analysis

Batch Quality Control

Project Name: BASF

Project Number: BASF

Lab Number: L1923645

Report Date: 06/13/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG1244981-2								
Sulfide, Reactive	81		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG1244982-2								
Cyanide, Reactive	88		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG1244999-1								
pH	100		-		99-101	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1244828-1 QC Sample: L1923598-01 Client ID: DUP Sample						
Solids, Total	92.0	92.7	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1244981-3 QC Sample: L1923645-01 Client ID: B11A-B11A060419						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1244982-3 QC Sample: L1923645-01 Client ID: B11A-B11A060419						
Cyanide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1244999-2 QC Sample: L1922642-01 Client ID: DUP Sample						
pH	7.8	7.7	SU	1		5

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1923645-01A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-01B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-01C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-01D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-01E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-01F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-01Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-01S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-01T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-01U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-01W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-01X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-02A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-02B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-02C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-02D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-02E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-02F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-02Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-02S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-02T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1923645-02U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-02W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-02X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-03A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-03B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-03C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-03D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-03E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-03F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-03Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-03S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-03T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-03U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-03W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-03X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-04A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-04B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-04C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-04D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-04E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-04F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-04Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-04S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-04T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1923645-04U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-04W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-04X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-05A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-05B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-05C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-05D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-05E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-05F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-05Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-05S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-05T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-05U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-05W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-05X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-06A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-06B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-06C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-06D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-06E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-06F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-06Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-06S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-06T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1923645-06U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-06W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-06X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-07A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-07B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-07C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-07D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-07E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-07F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-07Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-07S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-07T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-07U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-07W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-07X9	Tumble Vessel	A	NA		3.5	Y	Absent		-
L1923645-08A	Vial MeOH preserved	A	NA		3.5	Y	Absent		HOLD-8260HLW(14)
L1923645-08B	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-08C	Vial water preserved	A	NA		3.5	Y	Absent	05-JUN-19 07:04	HOLD-8260HLW(14)
L1923645-08D	Plastic 2oz unpreserved for TS	A	NA		3.5	Y	Absent		TS(7)
L1923645-08E	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		TCLP-EXT-ZHE(14)
L1923645-08F	Glass 500ml/16oz unpreserved	A	NA		3.5	Y	Absent		IGNIT-1030(14),REACTS(14),PH-9045(1),NYTCL-8082(14),REACTCN(14)
L1923645-08Q	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-08S	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)
L1923645-08T	Vial unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-VOA(14)

*Values in parentheses indicate holding time in days

Project Name: BASF
Project Number: BASF

Lab Number: L1923645
Report Date: 06/13/19

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L1923645-08U	Plastic 120ml HNO3 preserved Extracts	A	NA		3.5	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1923645-08W	Amber 1000ml unpreserved Extracts	A	NA		3.5	Y	Absent		TCLP-8270(14),HERB-TCLP*(14),PEST-TCLP*(14)
L1923645-08X9	Tumble Vessel	A	NA		3.5	Y	Absent		-

Container Comments

L1923645-01B	overfilled
L1923645-01C	overfilled
L1923645-02B	overfilled
L1923645-02C	overfilled
L1923645-03B	overfilled
L1923645-03C	overfilled
L1923645-04B	overfilled
L1923645-04C	overfilled
L1923645-05B	overfilled
L1923645-05C	overfilled
L1923645-06B	overfilled
L1923645-06C	overfilled
L1923645-07B	overfilled
L1923645-07C	overfilled
L1923645-08B	overfilled
L1923645-08C	overfilled

*Values in parentheses indicate holding time in days

Project Name:	BASF	**Lab Number:**	L1923645
Project Number:	BASF	**Report Date:**	06/13/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1923645
Project Number:	BASF	**Report Date:**	06/13/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	BASF	**Lab Number:**	L1923645
Project Number:	BASF	**Report Date:**	06/13/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 6/05/19

ALPHA Job #: L1923645

Client Information
Client: BASF CORP
Address: 36 Riverside Ave
Rensselaer NY 12144
Phone: 978-905-2124
Fax:
Email: john.bleiler@aecom.com

Project Information
Project Name: BASF
Project Location: Rensselaer, NY
Project #
(Use Project name as Project #) ☑
Project Manager: John Bleiler
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 5

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☑ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Reacts FM TCLP Metals 1IERB-TCLP NYTCL-8082	Total Solids SM 2540	NYTCL-8260HLW	TCLP-VOA TCLP-EXTZHE	NYTCL-8260 HLW				Sample Specific Comments	Total Bottle
23645-01	B11A-B11A060419	6/4/19	0740	S	TQ	X	X	X	X	X				Hold NYTCL 8260HLW	6
02	B11B-B11B060419	6/4/19	0745	S	TQ	X	X	X	X	X					6
03	B11C-B11C060419	6/4/19	0750	S	TQ	X	X	X	X	X					6
04	B11D-B11D060419	6/4/19	0755	S	TQ	X	X	X	X	X					6
05	B15A-B15A060419	6/4/19	0800	S	TQ	X	X	X	X	X					6
06	B15B-B15B060419	6/4/19	0810	S	TQ	X	X	X	X	X					6
07	B15C-B15C060419	6/4/19	0815	S	TQ	X	X	X	X	X					6
08	B15D-B15D060419	6/4/19	0820	S	TQ	X	X	X	X	X					6

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	G	P	V	V	V			
Preservative	A	A	W	A	F			

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Gaffney AECOM	6/4/19 1530		6/4/19 1530
	6/4/19 1630		6/05/19 0045

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 06, 2018 16:18

Project: Rensselaer

Account #: 04285
Group Number: 2013406
SDG: RNS57
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B1NTSCA112818 Grab Soil	11/28/2018 14:05	9917092
B1NTSCA112818 Grab Soil	11/28/2018 14:05	9917093
B1NTSCA112818 Grab Soil	11/28/2018 14:05	9917094
B4NTSCA112818 Grab Soil	11/28/2018 14:25	9917095
B4NTSCA112818 Grab Soil	11/28/2018 14:25	9917096
B4NTSCA112818 Grab Soil	11/28/2018 14:25	9917097

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B1NTSCA112818 Grab Soil**
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:05
SDG#: RNS57-01

BASF Corporation
ELLE Sample #: SW 9917092
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	300	1,400	50
10885	PCB-1221	11104-28-2	N.D. D1	380	1,400	50
10885	PCB-1232	11141-16-5	N.D. D1	660	1,400	50
10885	PCB-1242	53469-21-9	11,000 D2	270	1,400	50
10885	PCB-1248	12672-29-6	N.D. D1	270	1,400	50
10885	PCB-1254	11097-69-1	N.D. D1	270	1,400	50
10885	PCB-1260	11096-82-5	N.D. D1	400	1,400	50
10885	PCB-1262	37324-23-5	N.D. D1	270	1,400	50
10885	PCB-1268	11100-14-4	N.D. D1	270	1,400	50
10885	Total PCBs	1336-36-3	11,000	270	1,400	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	20.0	59.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.9 J	0.0100	0.0100	1
	The pH was measured in water at 18.9 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.88 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B1NTSCA112818 Grab Soil**
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:05
SDG#: RNS57-01

BASF Corporation
ELLE Sample #: SW 9917092
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	40.1	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183340001A	12/03/2018 21:43	Covenant Mutuku	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183340001A	11/30/2018 18:00	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18334104201A	11/30/2018 13:53	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18338054201A	12/04/2018 00:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18334112101A	11/30/2018 05:00	Kevin Litwa	1
00394	pH	SW-846 9045D Nov 2004	1	18338039403A	12/04/2018 19:55	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18338039403A	12/04/2018 19:55	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18334112101A	11/30/2018 05:00	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18337820001A	12/03/2018 09:38	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B1NTSCA112818 Grab Soil**
TCLP NV
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:05
SDG#: RNS57-02

BASF Corporation
ELLE Sample #: TL 9917093
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	35	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	87	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	42	160	200
10590	Chlordane	57-74-9	N.D. D1	790	3,400	200
10590	Endrin	72-20-8	N.D. D1	130	340	200
10590	Heptachlor	76-44-8	N.D. D2	61	160	200
10590	Heptachlor Epoxide	1024-57-3	100 JD1	34	160	200
10590	Methoxychlor	72-43-5	N.D. D1	360	1,300	200
10590	Toxaphene	8001-35-2	N.D. D1	2,800	6,500	200
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0319 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.785	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0013 J	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0091 J	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B1NTSCA112818 Grab Soil**
TCLP NV
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:05
SDG#: RNS57-02

BASF Corporation
ELLE Sample #: TL 9917093
ELLE Group #: 2013406
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18337WAD026	12/04/2018 09:47	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	18337WAD026	12/03/2018 16:45	Osvaldo R Sanchez	1
00952	TCLP Herbicides	SW-846 8151A	1	183370030A	12/05/2018 00:54	Rachel Umberger	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183340099A	12/06/2018 03:45	Andrea L Jones	200
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183340099A	12/01/2018 02:00	Michelle A Newswanger	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183370030A	12/03/2018 21:05	Karen L Beyer	1
07035	Arsenic	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183371063601	12/04/2018 17:36	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183370571302	12/05/2018 08:46	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183371063601	12/04/2018 07:15	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183370571302	12/04/2018 10:10	Denise L Trimby	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18334-2807-947	11/30/2018 17:19	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B1NTSCA112818 Grab Soil**
TCLP ZHE
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:05
SDG#: RNS57-03

BASF Corporation
ELLE Sample #: TL 9917094
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.45	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	13.E	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.072	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

The concentration reported for Chlorobenzene is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and confirms the initial analysis.

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/05/2018 05:10	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183382AA	12/05/2018 05:09	Patrick T Herres	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18334-12245-946	11/30/2018 17:19	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:25
SDG#: RNS57-04

BASF Corporation
ELLE Sample #: SW 9917095
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	290	1,400	50
10885	PCB-1221	11104-28-2	N.D. D1	370	1,400	50
10885	PCB-1232	11141-16-5	N.D. D1	650	1,400	50
10885	PCB-1242	53469-21-9	16,000 D2	270	1,400	50
10885	PCB-1248	12672-29-6	N.D. D1	270	1,400	50
10885	PCB-1254	11097-69-1	N.D. D1	270	1,400	50
10885	PCB-1260	11096-82-5	N.D. D1	400	1,400	50
10885	PCB-1262	37324-23-5	N.D. D1	270	1,400	50
10885	PCB-1268	11100-14-4	N.D. D1	270	1,400	50
10885	Total PCBs	1336-36-3	16,000	270	1,400	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.2	57.6	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.3 J	0.0100	0.0100	1
	The pH was measured in water at 18.9 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.29 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:25
SDG#: RNS57-04

BASF Corporation
ELLE Sample #: SW 9917095
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	39.0	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183340001A	12/03/2018 21:53	Covenant Mutuku	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183340001A	11/30/2018 18:00	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18334104201A	11/30/2018 13:54	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18338054201A	12/04/2018 00:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18334112101A	11/30/2018 05:00	Kevin Litwa	1
00394	pH	SW-846 9045D Nov 2004	1	18338039403A	12/04/2018 19:55	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18338039403A	12/04/2018 19:55	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18334112101A	11/30/2018 05:00	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18337820001A	12/03/2018 09:38	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
TCLP NV
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:25
SDG#: RNS57-05

BASF Corporation
ELLE Sample #: TL 9917096
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	46	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	88	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	N.D. D2	10	41	50
10590	Chlordane	57-74-9	N.D. D1	200	840	50
10590	Endrin	72-20-8	N.D. D1	33	84	50
10590	Heptachlor	76-44-8	N.D. VD2	20	41	50
10590	Heptachlor Epoxide	1024-57-3	100 D1	8.4	41	50
10590	Methoxychlor	72-43-5	N.D. D1	89	330	50
10590	Toxaphene	8001-35-2	N.D. D1	690	1,600	50
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0384 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.818	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0018 J	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0099 J	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0116 J	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
TCLP NV
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:25
SDG#: RNS57-05

BASF Corporation
ELLE Sample #: TL 9917096
ELLE Group #: 2013406
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18337WAD026	12/04/2018 10:16	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	18337WAD026	12/03/2018 16:45	Osvaldo R Sanchez	1
00952	TCLP Herbicides	SW-846 8151A	1	183370030A	12/05/2018 01:27	Rachel Umberger	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183340099A	12/06/2018 04:09	Andrea L Jones	50
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183340099A	12/01/2018 02:00	Michelle A Newswanger	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183370030A	12/03/2018 21:05	Karen L Beyer	1
07035	Arsenic	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183371063601	12/04/2018 17:56	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183370571302	12/05/2018 08:48	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183371063601	12/04/2018 07:15	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183370571302	12/04/2018 10:10	Denise L Trimby	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18334-2807-947	11/30/2018 17:19	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B4NTSCA112818 Grab Soil**
TCLP ZHE
COC: 569215

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 14:25
SDG#: RNS57-06

BASF Corporation
ELLE Sample #: TL 9917097
ELLE Group #: 2013406
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.41	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	9.6	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.080	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/05/2018 05:53	Patrick T Herres	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183392AA	12/05/2018 18:42	Abigail Roselli	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183382AA	12/05/2018 05:52	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	5183392AA	12/05/2018 18:41	Abigail Roselli	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18334-12245-946	11/30/2018 17:19	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: 5183382AA	Sample number(s): 9917094,9917097		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
Batch number: 5183392AA	Sample number(s): 9917097		
Chlorobenzene	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 18337WAD026	Sample number(s): 9917093,9917096		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	**mg/l**	**mg/l**
Batch number: 183370030A	Sample number(s): 9917093,9917096		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 183340001A	Sample number(s): 9917092,9917095		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
Batch number: 183340099A	Sample number(s): 9917093,9917096		
Gamma BHC - Lindane	N.D.	0.21	0.83
Chlordane	N.D.	4.0	17
Endrin	N.D.	0.68	1.7
Heptachlor	N.D.	0.31	0.83
Heptachlor Epoxide	N.D.	0.17	0.83
Methoxychlor	N.D.	1.8	6.7
Toxaphene	N.D.	14	33
	mg/l	mg/l	mg/l
Batch number: 183370571302	Sample number(s): 9917093,9917096		
Mercury	N.D.	0.000050	0.00020
Batch number: 183371063601	Sample number(s): 9917093,9917096		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 18334104201A	Sample number(s): 9917092,9917095		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18334112101A	Sample number(s): 9917092,9917095		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5183382AA	Sample number(s): 9917094,9917097								
Benzene	0.0200	0.0211	0.0200	0.0213	105	107	80-120	1	30
2-Butanone	0.150	0.140	0.150	0.141	93	94	59-135	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	0.0200	0.0210	0.0200	0.0213	105	107	64-134	1	30
Chlorobenzene	0.0200	0.0212	0.0200	0.0210	106	105	80-120	1	30
Chloroform	0.0200	0.0211	0.0200	0.0212	105	106	80-120	1	30
1,2-Dichloroethane	0.0200	0.0212	0.0200	0.0212	106	106	73-124	0	30
1,1-Dichloroethene	0.0200	0.0221	0.0200	0.0225	110	112	80-131	2	30
Tetrachloroethene	0.0200	0.0206	0.0200	0.0206	103	103	80-120	0	30
Trichloroethene	0.0200	0.0215	0.0200	0.0217	107	108	80-120	1	30
Vinyl Chloride	0.0200	0.0190	0.0200	0.0196	95	98	56-120	3	30
Batch number: 5183392AA	Sample number(s): 9917097								
Chlorobenzene	0.0200	0.0204	0.0200	0.0202	102	101	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18337WAD026	Sample number(s): 9917093,9917096								
1,4-Dichlorobenzene	50	30.09	50	32.06	60	64	30-109	6	30
2,4-Dinitrotoluene	50	38.3	50	39.41	77	79	69-117	3	30
Hexachlorobenzene	50	39.9	50	41.57	80	83	65-121	4	30
Hexachlorobutadiene	50	30.79	50	29.02	62	58	21-114	6	30
Hexachloroethane	50	26.41	50	27.63	53	55	24-100	5	30
2-Methylphenol	50	34.9	50	38.69	70	77	59-109	10	30
4-Methylphenol	50	34.21	50	36.64	68	73	56-108	7	30
Nitrobenzene	50	37.92	50	40.38	76	81	59-117	6	30
Pentachlorophenol	50	41.57	50	45.06	83	90	64-130	8	30
Pyridine	50	21.45	50	22.62	43	45	13-83	5	30
2,4,5-Trichlorophenol	50	43.12	50	42.98	86	86	73-124	0	30
2,4,6-Trichlorophenol	50	41.93	50	44.3	84	89	69-122	6	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183370030A	Sample number(s): 9917093,9917096								
2,4-D	0.0250	0.0284	0.0250	0.0278	114	111	42-147	2	30
2,4,5-TP	0.0250	0.0208	0.0250	0.0232	83	93	58-148	11	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183340001A	Sample number(s): 9917092,9917095								
PCB-1016	166.88	159.35			95		76-121		
PCB-1260	166.67	151.35			91		79-130		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183340099A	Sample number(s): 9917093,9917096								
Gamma BHC - Lindane	3.40	2.99			88		68-133		
Endrin	6.73	6.40			95		86-135		
Heptachlor	3.40	2.99			88		66-118		
Heptachlor Epoxide	3.33	3.09			93		74-128		
Methoxychlor	33.87	35.45			105		88-145		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183370571302	Sample number(s): 9917093,9917096								
Mercury	0.00100	0.000818			82		80-114		
Batch number: 183371063601	Sample number(s): 9917093,9917096								
Arsenic	0.150	0.164			110		80-120		
Barium	2.00	1.87			93		87-111		
Cadmium	0.0500	0.0493			99		90-111		
Chromium	0.200	0.200			100		87-110		
Lead	0.150	0.141			94		87-113		
Selenium	0.150	0.161			108		80-120		
Silver	0.0500	0.0581			116		80-120		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18334104201A	Sample number(s): 9917092,9917095								
Cyanide (Reactivity)	1000	1008.8			101		77-113		
Batch number: 18338039403A	Sample number(s): 9917092,9917095								
Corrosivity	7.00	6.99			100		89-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18334112101A	Sample number(s): 9917092,9917095								
Sulfide (Reactivity)	570	541.01			95		63-101		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 18338039403A	Sample number(s): 9917092,9917095								
pH	7.00	6.99			100		95-105		
	%	%	%	%					
Batch number: 18337820001A	Sample number(s): 9917092,9917095								
Moisture	89.5	89.41			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183371063601	Sample number(s): 9917093,9917096 UNSPK: 9917093									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Arsenic	0.0319	0.150	0.192	0.150	0.202	107	114	75-125	5	20
Barium	0.785	2.00	2.60	2.00	2.63	91	92	75-125	1	20
Cadmium	0.00128	0.0500	0.0489	0.0500	0.0495	95	96	75-125	1	20
Chromium	0.00911	0.200	0.202	0.200	0.204	97	97	75-125	1	20
Lead	N.D.	0.150	0.141	0.150	0.146	94	97	75-125	3	20
Selenium	N.D.	0.150	0.160	0.150	0.165	107	110	75-125	3	20
Silver	N.D.	0.0500	0.0571	0.0500	0.0592	114	118	75-125	3	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 183371063601	Sample number(s): 9917093,9917096 BKG: 9917093			
Arsenic	0.0319	0.0307	4 (1)	20
Barium	0.785	0.775	1	20
Cadmium	0.00128	0.00138	8 (1)	20
Chromium	0.00911	0.00964	6 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183382AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9917094	100	101	96	94
9917097	100	101	97	95
Blank	100	101	96	97
LCS	100	99	96	104
LCSD	100	98	95	101

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/06/2018 16:18

Group Number: 2013406

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183382AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18337WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9917093	29	34	60	69	71	67
9917096	27	34	59	63	64	51
Blank	33	44	84	67	68	94
LCS	39	52	77	72	71	87
LCSD	41	56	78	75	74	85
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs 8082A/3546
Batch number: 183340001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9917092	279*	118	72	132
9917095	295*	151*	85	143
Blank	114	96	109	94
LCS	109	94	105	90
Limits:	53-140	45-143	53-140	45-143

Analysis Name: OC Pesticides in Soils
Batch number: 183340099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9917093	0*	1593*	558*	340*
9917096	74	855*	176*	268*
Blank	52	108	56	124
LCS	46	107	48	121
Limits:	10-121	46-152	10-121	46-152

Analysis Name: TCLP Herbicides
Batch number: 183370030A

	2,4-DCAA-D1	2,4-DCAA-D2
9917093	81	82
9917096	85	85
Blank	95	90
LCS	87	91
LCSD	89	89

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2013406
Reported: 12/06/2018 16:18

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Herbicides
Batch number: 183370030A

Limits:	26-136	26-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2013406 Sample # 9917092-97

COC # 569215

Client Information

Client: BASF
Acct. #:
Project Name/#: RENSSELAER
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: Jeff Denman
Quote #:
State where samples were collected: New York
For Compliance: Yes ☒ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐
Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐
Other: ☐

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability / pH	Reactivity	OC Pesticides in Soil	Soil/Solid-TCLP Metals	Soil/Solid-TCLP Rest/Herb	Soil/Solid-TCLP SVOCs	Soil/Solid-TCLP VOAs
B1NTSCA112818	11/28/18	1405	X		4	X	X	X	X	X	X	X
B4NTSCA112818	11/28/18	1425	X		4	X	X	X	X	X	X	X
Cooler Temp Bottle	11/28/18	1430			1							

Remarks: Water Temp Bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 3

E-mail address: John.Bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	11/28/18	1600			
				11/29/18	1030

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234504

Group Number(s): 2013406

Client: BASF

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/29/2018 10:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:19 on 11/29/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 14, 2018 16:30

Project: Rensselaer

Account #: 04285
Group Number: 2016347
SDG: RNS65
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B5NTSCA120618 Grab Soil	12/06/2018 15:10	9929749
B5NTSCA120618 Grab Soil	12/06/2018 15:10	9929750
B5NTSCA120618 Grab Soil	12/06/2018 15:10	9929751
B6NTSCA120618 Grab Soil	12/06/2018 15:25	9929752
B6NTSCA120618 Grab Soil	12/06/2018 15:25	9929753
B6NTSCA120618 Grab Soil	12/06/2018 15:25	9929754
B2NTSCA120618 Grab Soil	12/06/2018 15:40	9929755
B2NTSCA120618 Grab Soil	12/06/2018 15:40	9929756
B2NTSCA120618 Grab Soil	12/06/2018 15:40	9929757
B3WTSCA120618 Grab Soil	12/06/2018 15:50	9929758
B3WTSCA120618 Grab Soil	12/06/2018 15:50	9929759
B3WTSCA120618 Grab Soil	12/06/2018 15:50	9929760

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B5NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:10
SDG#: RNS65-01

BASF Corporation
ELLE Sample #: SW 9929749
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	110	540	20
10885	PCB-1221	11104-28-2	N.D. D1	150	540	20
10885	PCB-1232	11141-16-5	N.D. D1	250	540	20
10885	PCB-1242	53469-21-9	3,600 D1	110	540	20
10885	PCB-1248	12672-29-6	N.D. D1	110	540	20
10885	PCB-1254	11097-69-1	N.D. D1	110	540	20
10885	PCB-1260	11096-82-5	N.D. D1	160	540	20
10885	PCB-1262	37324-23-5	N.D. D1	110	540	20
10885	PCB-1268	11100-14-4	N.D. D1	110	540	20
10885	Total PCBs	1336-36-3	3,600	110	540	20
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.3	57.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.3 J	0.0100	0.0100	1
	The pH was measured in water at 19.3 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.34 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B5NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:10
SDG#: RNS65-01

BASF Corporation
ELLE Sample #: SW 9929749
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	37.6	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183440099A	12/12/2018 18:45	Kirby B Turner	20
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183440099A	12/11/2018 07:00	Joshua S Ruth	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18345104201A	12/11/2018 12:51	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18344054201A	12/10/2018 22:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18344820003A	12/10/2018 11:35	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B5NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:10
SDG#: RNS65-02

BASF Corporation
ELLE Sample #: TL 9929750
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	48	3	13	5
14242	2,4-Dinitrotoluene	121-14-2	N.D.	6	32	5
14242	Hexachlorobenzene	118-74-1	N.D.	0.6	3	5
14242	Hexachlorobutadiene	87-68-3	N.D.	3	13	5
14242	Hexachloroethane	67-72-1	N.D.	6	32	5
14242	2-Methylphenol	95-48-7	N.D.	3	13	5
14242	4-Methylphenol	106-44-5	80	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	3	13	5
14242	Pentachlorophenol	87-86-5	N.D.	6	32	5
14242	Pyridine	110-86-1	N.D.	13	32	5
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	3	13	5
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	3	13	5
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	69 D1	10	41	50
10590	Chlordane	57-74-9	N.D. D1	200	840	50
10590	Endrin	72-20-8	N.D. D1	34	84	50
10590	Heptachlor	76-44-8	N.D. VD2	30	41	50
10590	Heptachlor Epoxide	1024-57-3	N.D. VD2	20	41	50
10590	Methoxychlor	72-43-5	N.D. D1	89	330	50
10590	Toxaphene	8001-35-2	N.D. D1	690	1,600	50
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.496	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0299	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B5NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:10
SDG#: RNS65-02

BASF Corporation
ELLE Sample #: TL 9929750
ELLE Group #: 2016347
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18344WAJ026	12/12/2018 05:42	Ashley R Transue	5
00813	BNA Water Extraction	SW-846 3510C	1	18344WAJ026	12/11/2018 08:00	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	183440033A	12/11/2018 22:05	Richard A Shober	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183450099A	12/13/2018 20:11	Andrea L Jones	50
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183450099A	12/12/2018 07:00	Joshua S Ruth	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183440033A	12/10/2018 20:00	Bradley W VanLeuven	1
07035	Arsenic	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183441063601	12/12/2018 17:17	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183440571301	12/12/2018 09:44	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183441063601	12/11/2018 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183440571301	12/11/2018 15:55	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18343-27642-947	12/09/2018 14:53	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B5NTSCA120618 Grab Soil**
TCLP ZHE
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:10
SDG#: RNS65-03

BASF Corporation
ELLE Sample #: TL 9929751
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.13	0.004	0.020	20
11997	2-Butanone	78-93-3	0.009 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	4.7	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 15:52	Don V Viray	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 15:51	Don V Viray	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18342-27642-946	12/08/2018 17:29	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B6NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:25
SDG#: RNS65-04

BASF Corporation
ELLE Sample #: SW 9929752
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	270	1,300	50
10885	PCB-1221	11104-28-2	N.D. D1	350	1,300	50
10885	PCB-1232	11141-16-5	N.D. D1	610	1,300	50
10885	PCB-1242	53469-21-9	5,300 D2	250	1,300	50
10885	PCB-1248	12672-29-6	N.D. D1	250	1,300	50
10885	PCB-1254	11097-69-1	N.D. D1	250	1,300	50
10885	PCB-1260	11096-82-5	N.D. D1	370	1,300	50
10885	PCB-1262	37324-23-5	N.D. D1	250	1,300	50
10885	PCB-1268	11100-14-4	N.D. D1	250	1,300	50
10885	Total PCBs	1336-36-3	5,300	250	1,300	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.5	58.5	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.5 J	0.0100	0.0100	1
	The pH was measured in water at 19.6 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.48 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B6NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:25
SDG#: RNS65-04

BASF Corporation
ELLE Sample #: SW 9929752
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	34.5	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183440099A	12/12/2018 18:55	Kirby B Turner	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183440099A	12/11/2018 07:00	Joshua S Ruth	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18345104201A	12/11/2018 12:53	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18344054201A	12/10/2018 22:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18344820003A	12/10/2018 11:35	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B6NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:25
SDG#: RNS65-05

BASF Corporation
ELLE Sample #: TL 9929753
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	31	3	13	5
14242	2,4-Dinitrotoluene	121-14-2	N.D.	6	31	5
14242	Hexachlorobenzene	118-74-1	N.D.	0.6	3	5
14242	Hexachlorobutadiene	87-68-3	N.D.	3	13	5
14242	Hexachloroethane	67-72-1	N.D.	6	31	5
14242	2-Methylphenol	95-48-7	N.D.	3	13	5
14242	4-Methylphenol	106-44-5	77	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	3	13	5
14242	Pentachlorophenol	87-86-5	N.D.	6	31	5
14242	Pyridine	110-86-1	N.D.	13	31	5
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	3	13	5
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	3	13	5
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	58 JD1	21	83	100
10590	Chlordane	57-74-9	N.D. D1	400	1,700	100
10590	Endrin	72-20-8	N.D. D2	68	170	100
10590	Heptachlor	76-44-8	N.D. D2	31	83	100
10590	Heptachlor Epoxide	1024-57-3	54 JD1	17	83	100
10590	Methoxychlor	72-43-5	N.D. D1	180	670	100
10590	Toxaphene	8001-35-2	N.D. D1	1,400	3,300	100
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.773	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0215	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0568	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B6NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:25
SDG#: RNS65-05

BASF Corporation
ELLE Sample #: TL 9929753
ELLE Group #: 2016347
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18344WAJ026	12/12/2018 06:10	Ashley R Transue	5
00813	BNA Water Extraction	SW-846 3510C	1	18344WAJ026	12/11/2018 08:00	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	183440033A	12/11/2018 22:38	Richard A Shober	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183450099A	12/13/2018 20:23	Andrea L Jones	100
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183450099A	12/12/2018 07:00	Joshua S Ruth	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183440033A	12/10/2018 20:00	Bradley W VanLeuven	1
07035	Arsenic	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183441063601	12/12/2018 17:50	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183440571301	12/12/2018 09:46	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183441063601	12/11/2018 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183440571301	12/11/2018 15:55	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18343-27642-947	12/09/2018 14:53	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B6NTSCA120618 Grab Soil**
TCLP ZHE
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:25
SDG#: RNS65-06

BASF Corporation
ELLE Sample #: TL 9929754
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.13	0.004	0.020	20
11997	2-Butanone	78-93-3	0.015 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	6.2	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 16:40	Don V Viray	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183473AA	12/14/2018 07:26	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 16:39	Don V Viray	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W183473AA	12/14/2018 07:25	Kevin D Kelly	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18342-27642-946	12/08/2018 17:29	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B2NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:40
SDG#: RNS65-07

BASF Corporation
ELLE Sample #: SW 9929755
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	110	510	20
10885	PCB-1221	11104-28-2	N.D. D1	140	510	20
10885	PCB-1232	11141-16-5	N.D. D1	240	510	20
10885	PCB-1242	53469-21-9	3,200 D1	100	510	20
10885	PCB-1248	12672-29-6	N.D. D1	100	510	20
10885	PCB-1254	11097-69-1	N.D. D1	100	510	20
10885	PCB-1260	11096-82-5	N.D. D1	150	510	20
10885	PCB-1262	37324-23-5	N.D. D1	100	510	20
10885	PCB-1268	11100-14-4	N.D. D1	100	510	20
10885	Total PCBs	1336-36-3	3,200	100	510	20
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.3	57.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.5 J	0.0100	0.0100	1
	The pH was measured in water at 19.4 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.46 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B2NTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:40
SDG#: RNS65-07

BASF Corporation
ELLE Sample #: SW 9929755
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	34.0	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183440099A	12/12/2018 19:06	Kirby B Turner	20
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183440099A	12/11/2018 07:00	Joshua S Ruth	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18345104201A	12/11/2018 12:54	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18344054201A	12/10/2018 22:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18344820003A	12/10/2018 11:35	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B2NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:40
SDG#: RNS65-08

BASF Corporation
ELLE Sample #: TL 9929756
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	38	3	13	5
14242	2,4-Dinitrotoluene	121-14-2	N.D.	7	33	5
14242	Hexachlorobenzene	118-74-1	N.D.	0.7	3	5
14242	Hexachlorobutadiene	87-68-3	N.D.	3	13	5
14242	Hexachloroethane	67-72-1	N.D.	7	33	5
14242	2-Methylphenol	95-48-7	N.D.	3	13	5
14242	4-Methylphenol	106-44-5	95	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	3	13	5
14242	Pentachlorophenol	87-86-5	N.D.	7	33	5
14242	Pyridine	110-86-1	N.D.	13	33	5
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	3	13	5
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	3	13	5
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	67 JPD1	21	82	100
10590	Chlordane	57-74-9	N.D. D1	400	1,700	100
10590	Endrin	72-20-8	N.D. D2	67	170	100
10590	Heptachlor	76-44-8	N.D. VD2	40	82	100
10590	Heptachlor Epoxide	1024-57-3	61 JD1	17	82	100
10590	Methoxychlor	72-43-5	N.D. D1	180	660	100
10590	Toxaphene	8001-35-2	N.D. D1	1,400	3,300	100
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0204 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.671	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0238	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0364	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B2NTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:40
SDG#: RNS65-08

BASF Corporation
ELLE Sample #: TL 9929756
ELLE Group #: 2016347
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18344WAJ026	12/12/2018 11:51	Edward C Monborne	5
00813	BNA Water Extraction	SW-846 3510C	1	18344WAJ026	12/11/2018 08:00	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	183440033A	12/12/2018 00:18	Richard A Shober	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183450099A	12/13/2018 20:35	Andrea L Jones	100
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183450099A	12/12/2018 07:00	Joshua S Ruth	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183440033A	12/10/2018 20:00	Bradley W VanLeuven	1
07035	Arsenic	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183441063601	12/12/2018 17:54	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183440571301	12/12/2018 09:52	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183441063601	12/11/2018 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183440571301	12/11/2018 15:55	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18343-27642-947	12/09/2018 14:53	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B2NTSCA120618 Grab Soil**
TCLP ZHE
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:40
SDG#: RNS65-09

BASF Corporation
ELLE Sample #: TL 9929757
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.21	0.004	0.020	20
11997	2-Butanone	78-93-3	0.007 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	6.5	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.023	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 17:04	Don V Viray	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183473AA	12/14/2018 07:49	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 17:03	Don V Viray	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W183473AA	12/14/2018 07:48	Kevin D Kelly	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18342-27642-946	12/08/2018 17:29	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B3WTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:50
SDG#: RNS65-10

BASF Corporation
ELLE Sample #: SW 9929758
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	270	1,300	50
10885	PCB-1221	11104-28-2	N.D. D1	350	1,300	50
10885	PCB-1232	11141-16-5	N.D. D1	600	1,300	50
10885	PCB-1242	53469-21-9	5,900 D1	250	1,300	50
10885	PCB-1248	12672-29-6	N.D. D1	250	1,300	50
10885	PCB-1254	11097-69-1	N.D. D1	250	1,300	50
10885	PCB-1260	11096-82-5	N.D. D1	370	1,300	50
10885	PCB-1262	37324-23-5	N.D. D1	250	1,300	50
10885	PCB-1268	11100-14-4	N.D. D1	250	1,300	50
10885	Total PCBs	1336-36-3	5,900	250	1,300	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.5	58.5	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.6 J	0.0100	0.0100	1
	The pH was measured in water at 19.1 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.58 indicating that the sample is corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3WTSCA120618 Grab Soil**
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:50
SDG#: RNS65-10

BASF Corporation
ELLE Sample #: SW 9929758
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	34.1	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183440099A	12/12/2018 19:16	Kirby B Turner	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183440099A	12/11/2018 07:00	Joshua S Ruth	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18345104201A	12/11/2018 12:55	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18344054201A	12/10/2018 22:55	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18345039401A	12/11/2018 19:15	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18345112101A	12/11/2018 07:30	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18344820003A	12/10/2018 11:35	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3WTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:50
SDG#: RNS65-11

BASF Corporation
ELLE Sample #: TL 9929759
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	59	3	13	5
14242	2,4-Dinitrotoluene	121-14-2	N.D.	6	31	5
14242	Hexachlorobenzene	118-74-1	N.D.	0.6	3	5
14242	Hexachlorobutadiene	87-68-3	N.D.	3	13	5
14242	Hexachloroethane	67-72-1	N.D.	6	31	5
14242	2-Methylphenol	95-48-7	N.D.	3	13	5
14242	4-Methylphenol	106-44-5	110	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	3	13	5
14242	Pentachlorophenol	87-86-5	N.D.	6	31	5
14242	Pyridine	110-86-1	N.D.	13	31	5
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	3	13	5
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	3	13	5
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**ug/kg**	**ug/kg**	**ug/kg**	
10590	Gamma BHC - Lindane	58-89-9	64 JD1	21	83	100
10590	Chlordane	57-74-9	N.D. D1	400	1,700	100
10590	Endrin	72-20-8	N.D. D2	68	170	100
10590	Heptachlor	76-44-8	N.D. D2	31	83	100
10590	Heptachlor Epoxide	1024-57-3	55 JD1	17	83	100
10590	Methoxychlor	72-43-5	N.D. D1	180	670	100
10590	Toxaphene	8001-35-2	N.D. D1	1,400	3,300	100
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0162 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.686	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0290	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0254	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3WTSCA120618 Grab Soil**
TCLP NV
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:50
SDG#: RNS65-11

BASF Corporation
ELLE Sample #: TL 9929759
ELLE Group #: 2016347
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18344WAJ026	12/12/2018 12:19	Edward C Monborne	5
00813	BNA Water Extraction	SW-846 3510C	1	18344WAJ026	12/11/2018 08:00	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	183440033A	12/12/2018 00:51	Richard A Shober	1
10590	OC Pesticides in Soils	SW-846 8081B	1	183450099A	12/13/2018 21:00	Andrea L Jones	100
10496	PPL Pest. Microwave Extraction	SW-846 3546	1	183450099A	12/12/2018 07:00	Joshua S Ruth	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183440033A	12/10/2018 20:00	Bradley W VanLeuven	1
07035	Arsenic	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	183441063601	12/12/2018 17:57	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183440571301	12/12/2018 09:54	Damary Valentin	1
10636	ICP-WW/TL, 3010A (tot) - U4	SW-846 3010A	1	183441063601	12/11/2018 15:00	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183440571301	12/11/2018 15:55	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18343-27642-947	12/09/2018 14:53	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B3WTSCA120618 Grab Soil**
TCLP ZHE
COC: 567689

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:50
SDG#: RNS65-12

BASF Corporation
ELLE Sample #: TL 9929760
ELLE Group #: 2016347
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.38	0.004	0.020	20
11997	2-Butanone	78-93-3	0.008 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	10	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.060	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 17:28	Don V Viray	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 17:51	Don V Viray	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 17:27	Don V Viray	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W183472AA	12/13/2018 17:50	Don V Viray	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18342-27642-946	12/08/2018 17:29	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 2016347
Reported: 12/14/2018 16:30

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: W183472AA	Sample number(s): 9929751,9929754,9929757,9929760		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
Batch number: W183473AA	Sample number(s): 9929754,9929757		
Chlorobenzene	N.D.	0.0002	0.001
	ug/l	ug/l	ug/l
Batch number: 18344WAJ026	Sample number(s): 9929750,9929753,9929756,9929759		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	3	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	mg/l	mg/l
Batch number: 183440033A	Sample number(s): 9929750,9929753,9929756,9929759		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	ug/kg	ug/kg
Batch number: 183440099A	Sample number(s): 9929749,9929752,9929755,9929758		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
Batch number: 183450099A	Sample number(s): 9929750,9929753,9929756,9929759		
Gamma BHC - Lindane	N.D.	0.21	0.83
Chlordane	N.D.	4.0	17
Endrin	N.D.	0.68	1.7
Heptachlor	N.D.	0.31	0.83
Heptachlor Epoxide	N.D.	0.17	0.83
Methoxychlor	N.D.	1.8	6.7
Toxaphene	N.D.	14	33
	mg/l	mg/l	mg/l
Batch number: 183440571301	Sample number(s): 9929750,9929753,9929756,9929759		
Mercury	N.D.	0.000050	0.00020
Batch number: 183441063601	Sample number(s): 9929750,9929753,9929756,9929759		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 18345104201A	Sample number(s): 9929749,9929752,9929755,9929758		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18345112101A	Sample number(s): 9929749,9929752,9929755,9929758		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W183472AA	Sample number(s): 9929751,9929754,9929757,9929760								
Benzene	0.0200	0.0211	0.0200	0.0213	106	107	80-120	1	30
2-Butanone	0.150	0.160	0.150	0.158	107	105	59-135	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	0.0200	0.0247	0.0200	0.0246	124	123	64-134	1	30
Chlorobenzene	0.0200	0.0218	0.0200	0.0219	109	109	80-120	0	30
Chloroform	0.0200	0.0216	0.0200	0.0218	108	109	80-120	1	30
1,2-Dichloroethane	0.0200	0.0222	0.0200	0.0222	111	111	73-124	0	30
1,1-Dichloroethene	0.0200	0.0211	0.0200	0.0214	105	107	80-131	1	30
Tetrachloroethene	0.0200	0.0220	0.0200	0.0220	110	110	80-120	0	30
Trichloroethene	0.0200	0.0212	0.0200	0.0213	106	106	80-120	0	30
Vinyl Chloride	0.0200	0.0196	0.0200	0.0198	98	99	56-120	1	30
Batch number: W183473AA	Sample number(s): 9929754,9929757								
Chlorobenzene	0.0200	0.0222	0.0200	0.0221	111	111	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18344WAJ026	Sample number(s): 9929750,9929753,9929756,9929759								
1,4-Dichlorobenzene	50	38.23			76		30-109		
2,4-Dinitrotoluene	50	46.4			93		69-117		
Hexachlorobenzene	50	48.81			98		65-121		
Hexachlorobutadiene	50	43.23			86		21-114		
Hexachloroethane	50	36.1			72		24-100		
2-Methylphenol	50	41.8			84		59-109		
4-Methylphenol	50	39.17			78		56-108		
Nitrobenzene	50	40.72			81		59-117		
Pentachlorophenol	50	55.99			112		64-130		
Pyridine	50	21.95			44		13-83		
2,4,5-Trichlorophenol	50	48.69			97		73-124		
2,4,6-Trichlorophenol	50	46.79			94		69-122		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183440033A	Sample number(s): 9929750,9929753,9929756,9929759								
2,4-D	0.0250	0.0261	0.0250	0.0268	104	107	42-147	3	30
2,4,5-TP	0.0250	0.0227	0.0250	0.0241	91	96	58-148	6	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183440099A	Sample number(s): 9929749,9929752,9929755,9929758								
PCB-1016	166.88	171.93			103		76-121		
PCB-1260	166.67	165.38			99		79-130		
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183450099A	Sample number(s): 9929750,9929753,9929756,9929759								
Gamma BHC - Lindane	3.40	3.22			95		68-133		
Endrin	6.73	6.80			101		86-135		
Heptachlor	3.40	3.07			90		66-118		
Heptachlor Epoxide	3.33	3.08			92		74-128		
Methoxychlor	33.87	38.29			113		88-145		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183440571301	Sample number(s): 9929750,9929753,9929756,9929759								
Mercury	0.00100	0.000916			92		80-114		
Batch number: 183441063601	Sample number(s): 9929750,9929753,9929756,9929759								
Arsenic	0.150	0.157			105		80-120		
Barium	2.00	1.93			97		87-111		
Cadmium	0.0500	0.0504			101		90-111		
Chromium	0.200	0.205			102		87-110		
Lead	0.150	0.146			98		87-113		
Selenium	0.150	0.165			110		80-120		
Silver	0.0500	0.0569			114		80-120		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18345104201A	Sample number(s): 9929749,9929752,9929755,9929758								
Cyanide (Reactivity)	1000	1084.64			108		77-113		
Batch number: 18345039401A	Sample number(s): 9929749,9929752,9929755,9929758								
Corrosivity	7.00	6.95			99		89-110		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18345112101A	Sample number(s): 9929749,9929752,9929755,9929758								
Sulfide (Reactivity)	570	435.29			76		63-101		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 18345039401A	Sample number(s): 9929749,9929752,9929755,9929758								
pH	7.00	6.95			99		95-105		
	%	%	%	%					
Batch number: 18344820003A	Sample number(s): 9929749,9929752,9929755,9929758								
Moisture	89.5	89.38			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183441063601	Sample number(s): 9929750,9929753,9929756,9929759 UNSPK: 9929750									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Arsenic	N.D.	0.150	0.179	0.150	0.174	119	116	75-125	3	20
Barium	0.496	2.00	2.43	2.00	2.42	97	96	75-125	0	20
Cadmium	N.D.	0.0500	0.0481	0.0500	0.0478	96	96	75-125	1	20
Chromium	0.0299	0.200	0.231	0.200	0.228	100	99	75-125	1	20
Lead	N.D.	0.150	0.143	0.150	0.138	95	92	75-125	3	20
Selenium	N.D.	0.150	0.163	0.150	0.164	109	109	75-125	0	20
Silver	N.D.	0.0500	0.0606	0.0500	0.0596	121	119	75-125	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 183441063601	Sample number(s): 9929750,9929753,9929756,9929759 BKG: 9929750			
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.496	0.519	5	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.0299	0.0310	4 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 18345039401A	Sample number(s): 9929749,9929752,9929755,9929758 BKG: 9929749			
Corrosivity	12.34	12.36	0	2
	Std. Units	Std. Units		
Batch number: 18345039401A	Sample number(s): 9929749,9929752,9929755,9929758 BKG: 9929749			
pH	12.34	12.36	0	3

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183472AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183472AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9929751	98	100	97	95
9929754	96	101	96	95
9929757	95	103	96	94
9929760	101	104	97	96
Blank	101	103	98	93
LCS	101	105	100	100
LCSD	101	99	100	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18344WAJ026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9929750	33	42	95	62	67	83
9929753	29	34	80	61	64	74
9929756	28	30	85	52	58	78
9929759	36	46	90	72	70	84
Blank	34	50	97	80	75	92
LCS	45	59	106	82	82	94
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: TCLP Herbicides
Batch number: 183440033A

	2,4-DCAA-D1	2,4-DCAA-D2
9929750	93	89
9929753	84	84
9929756	87	89
9929759	85	86
Blank	81	81
LCS	85	84
LCSD	88	85
Limits:	26-136	26-136

Analysis Name: PCBs 8082A/3546
Batch number: 183440099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9929749	121	102	76	95
9929752	219*	155*	96	128
9929755	224*	109	76	95
9929758	144*	201*	104	141

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:30

Group Number: 2016347

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs 8082A/3546
Batch number: 183440099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	121	119	119	108
LCS	118	121	118	108
Limits:	53-140	45-143	53-140	45-143

Analysis Name: OC Pesticides in Soils
Batch number: 183450099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9929750	0*	2702*	234*	303*
9929753	0*	709*	337*	155*
9929756	0*	1080*	339*	241*
9929759	0*	859*	296*	209*
Blank	27	109	28	102
LCS	13	115	13	108
Limits:	10-121	46-152	10-121	46-152

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 42185 Group # 2016347 Sample # 9929749-60

COC # 567689

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: J. Demand	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix: Soil ☒ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☒ Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability / pH	Reactivity	RCRA iN Soil	Soil/Solid TCLP metals	Soil/Solid TCLP Pest Herb	Soil/Solid TCLP SVOCs	Soil/Solid TCLP VOAs
BSNTSCA120618	12/6/18	1510	X		4	X	X	X	X	X	X	X
B6NTSCA120618	12/6/18	1525	X		4	X	X	X	X	X	X	X
B2NTSCA120618	12/6/18	1540	X		4	X	X	X	X	X	X	X
B3NTSCA120618	12/6/18	1550	X		4	X	X	X	X	X	X	X
Cooler Temp Bottle	12/6/18	1745	X									

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	12/6/18	1800			
				12/7/18	1020

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 1.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235421

Group Number(s): 2016347

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/07/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 14:02 on 12/07/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.8	DT	Wet	Y	Bagged	N
2	DT131	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 19, 2018 18:10

Project: Rensselaer

Account #: 04285
Group Number: 2017814
SDG: RNS69
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B12TSCALVOC121118 Grab Soil	12/11/2018 13:55	9936459
B12TSCALVOC121118 Grab Soil	12/11/2018 13:55	9936460
B12TSCALVOC121118 Grab Soil	12/11/2018 13:55	9936461
B14TSCALVOC121118 Grab Soil	12/11/2018 14:05	9936462
B14TSCALVOC121118 Grab Soil	12/11/2018 14:05	9936463
B14TSCALVOC121118 Grab Soil	12/11/2018 14:05	9936464

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B12TSCALVOC121118 Grab Soil**
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:55
SDG#: RNS69-01

BASF Corporation
ELLE Sample #: SW 9936459
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**		**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D.	D1	600	2,800	100
10885	PCB-1221	11104-28-2	N.D.	D1	760	2,800	100
10885	PCB-1232	11141-16-5	N.D.	D1	1,300	2,800	100
10885	PCB-1242	53469-21-9	2,600	JD2	550	2,800	100
10885	PCB-1248	12672-29-6	N.D.	D1	550	2,800	100
10885	PCB-1254	11097-69-1	N.D.	D1	550	2,800	100
10885	PCB-1260	11096-82-5	N.D.	D1	810	2,800	100
10885	PCB-1262	37324-23-5	N.D.	D1	550	2,800	100
10885	PCB-1268	11100-14-4	N.D.	D1	550	2,800	100
10885	Total PCBs	1336-36-3	2,600	J	550	2,800	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**		**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.		19.4	58.1	1
	40 CFR 261.21(a)(2)						
00542	Ignitability	n.a.	See Below		0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.						
	SW-846 9034		**mg/kg**		**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.		53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**		**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.4 J		0.0100	0.0100	1
	The pH was measured in water at 19.8 C.						
	SW-846 Chapter 7						
00496	Corrosivity	n.a.	See Below		0	0	1
	The pH of the sample is 12.38 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.						
	SW-846 Chapter 7.3		**see below**		**see below**	**see below**	
01121	Reactivity	n.a.	See Below		0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B12TSCALVOC121118 Grab Soil**
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:55
SDG#: RNS69-01

BASF Corporation
ELLE Sample #: SW 9936459
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	39.9	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183470099A	12/16/2018 18:06	Covenant Mutuku	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183470099A	12/13/2018 17:05	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18349104201A	12/15/2018 12:04	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18351054201A	12/17/2018 23:40	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18348112101A	12/14/2018 04:38	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18347039403A	12/13/2018 19:00	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18347039403A	12/13/2018 19:00	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18348112101A	12/14/2018 04:38	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18347820001A	12/13/2018 09:12	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B12TSCALVOC121118 Grab Soil**
TCLP NVE
COC: 569214

BASF Corporation
ELLE Sample #: **TL 9936460**
ELLE Group #: **2017814**
Matrix: Soil

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:55
SDG#: RNS69-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	8	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	26	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. VD2	0.000080	0.000080	1
10647	Chlordane	57-74-9	N.D. D1	0.00080	0.0025	1
10647	Endrin	72-20-8	0.000049 JPD2	0.000040	0.00010	1
10647	Heptachlor	76-44-8	0.000081 D1	0.000020	0.000050	1
10647	Heptachlor Epoxide	1024-57-3	0.000014 JPD2	0.000012	0.000050	1
10647	Methoxychlor	72-43-5	N.D. D1	0.00015	0.00050	1
10647	Toxaphene	8001-35-2	N.D. D1	0.0050	0.015	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0399 J	0.0160	0.0500	1
07046	Barium	7440-39-3	1.23	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0030 J	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0127 J	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0127 J	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B12TSCALVOC121118 Grab Soil**
TCLP NVE
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:55
SDG#: RNS69-02

BASF Corporation
ELLE Sample #: TL 9936460
ELLE Group #: 2017814
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18348WAE026	12/15/2018 19:02	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	18348WAE026	12/14/2018 17:00	Bradley W VanLeuven	1
00952	TCLP Herbicides	SW-846 8151A	1	183480001A	12/17/2018 16:14	Rachel Umberger	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183480033A	12/17/2018 22:50	Lisa A Reinert	1
11126	Pest Leachate Update IV	SW-846 3510C	1	183480033A	12/17/2018 08:00	Kayla A Yuditsky	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183480001A	12/15/2018 09:15	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	183481404503	12/18/2018 01:26	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010C	1	183481404503	12/17/2018 18:34	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	183480571301	12/17/2018 13:47	Parker D Lindstrom	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	183481404503	12/17/2018 05:40	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183480571301	12/17/2018 07:30	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18347-2807-947	12/13/2018 10:15	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B12TSCALVOC121118 Grab Soil**
TCLP ZHE
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:55
SDG#: RNS69-03

BASF Corporation
ELLE Sample #: TL 9936461
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.008 J	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	0.28	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183522AA	12/18/2018 17:39	Kevin A Sposito	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183522AA	12/18/2018 17:38	Kevin A Sposito	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18347-12245-946	12/13/2018 11:44	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B14TSCALVOC121118 Grab Soil**
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:05
SDG#: RNS69-04

BASF Corporation
ELLE Sample #: SW 9936462
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	280	1,300	50
10885	PCB-1221	11104-28-2	N.D. D1	360	1,300	50
10885	PCB-1232	11141-16-5	N.D. D1	630	1,300	50
10885	PCB-1242	53469-21-9	1,600 D2	260	1,300	50
10885	PCB-1248	12672-29-6	N.D. D1	260	1,300	50
10885	PCB-1254	11097-69-1	N.D. D1	260	1,300	50
10885	PCB-1260	11096-82-5	N.D. D1	380	1,300	50
10885	PCB-1262	37324-23-5	N.D. D1	260	1,300	50
10885	PCB-1268	11100-14-4	N.D. D1	260	1,300	50
10885	Total PCBs	1336-36-3	1,600	260	1,300	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.9	59.6	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.2 J	0.0100	0.0100	1
	The pH was measured in water at 19.5 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.23 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B14TSCALVOC121118 Grab Soil**
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:05
SDG#: RNS69-04

BASF Corporation
ELLE Sample #: SW 9936462
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	36.9	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183470099A	12/16/2018 18:16	Covenant Mutuku	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183470099A	12/13/2018 17:05	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18349104201A	12/15/2018 12:05	Brianna A Poole	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18351054201A	12/17/2018 23:40	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18348112101A	12/14/2018 04:38	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18347039403A	12/13/2018 19:00	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18347039403A	12/13/2018 19:00	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18348112101A	12/14/2018 04:38	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18347820001A	12/13/2018 09:12	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B14TSCALVOC121118 Grab Soil**
TCLP NVE
COC: 569214

BASF Corporation
ELLE Sample #: TL 9936463
ELLE Group #: 2017814
Matrix: Soil

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:05
SDG#: RNS69-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	1 J	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	1 J	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D1	0.00010	0.00010	1
10647	Chlordane	57-74-9	N.D. D1	0.00080	0.0025	1
10647	Endrin	72-20-8	N.D. D2	0.000040	0.00010	1
10647	Heptachlor	76-44-8	N.D. D1	0.000060	0.000060	1
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.000012	0.000050	1
10647	Methoxychlor	72-43-5	N.D. D1	0.00015	0.00050	1
10647	Toxaphene	8001-35-2	N.D. D1	0.0050	0.015	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0362 J	0.0160	0.0500	1
07046	Barium	7440-39-3	1.12	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0092 J	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B14TSCALVOC121118 Grab Soil**
TCLP NVE
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:05
SDG#: RNS69-05

BASF Corporation
ELLE Sample #: TL 9936463
ELLE Group #: 2017814
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18348WAE026	12/15/2018 19:31	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	18348WAE026	12/14/2018 17:00	Bradley W VanLeuven	1
00952	TCLP Herbicides	SW-846 8151A	1	183480001A	12/17/2018 16:47	Rachel Umberger	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183480033A	12/17/2018 23:14	Lisa A Reinert	1
11126	Pest Leachate Update IV	SW-846 3510C	1	183480033A	12/17/2018 08:00	Kayla A Yuditsky	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183480001A	12/15/2018 09:15	Ryan J Dowdy	1
07035	Arsenic	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	183481404503	12/18/2018 01:30	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
07066	Silver	SW-846 6010C	1	183481404503	12/17/2018 18:37	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	183480571301	12/17/2018 13:50	Parker D Lindstrom	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	183481404503	12/17/2018 05:40	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183480571301	12/17/2018 07:30	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18347-2807-947	12/13/2018 10:15	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B14TSCALVOC121118 Grab Soil**
TCLP ZHE
COC: 569214

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:05
SDG#: RNS69-06

BASF Corporation
ELLE Sample #: TL 9936464
ELLE Group #: 2017814
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.019 J	0.004	0.020	20
11997	2-Butanone	78-93-3	0.021 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	0.27	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183522AA	12/18/2018 18:50	Kevin A Sposito	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183522AA	12/18/2018 18:49	Kevin A Sposito	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18347-12245-946	12/13/2018 11:44	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2017814
Reported: 12/19/2018 18:10

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: W183522AA	Sample number(s): 9936461,9936464		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 18348WAE026	Sample number(s): 9936460,9936463		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	**mg/l**	**mg/l**
Batch number: 183480001A	Sample number(s): 9936460,9936463		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 183470099A	Sample number(s): 9936459,9936462		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/19/2018 18:10

Group Number: 2017814

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 183480033A	Sample number(s): 9936460,9936463		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 183480571301	Sample number(s): 9936460,9936463		
Mercury	N.D.	0.000050	0.00020
Batch number: 183481404503	Sample number(s): 9936460,9936463		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 18349104201A	Sample number(s): 9936459,9936462		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18348112101A	Sample number(s): 9936459,9936462		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W183522AA	Sample number(s): 9936461,9936464								
Benzene	0.0200	0.0211	0.0200	0.0208	106	104	80-120	1	30
2-Butanone	0.150	0.146	0.150	0.146	97	97	59-135	0	30
Carbon Tetrachloride	0.0200	0.0243	0.0200	0.0241	121	120	64-134	1	30
Chlorobenzene	0.0200	0.0216	0.0200	0.0216	108	108	80-120	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/19/2018 18:10

Group Number: 2017814

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroform	0.0200	0.0208	0.0200	0.0207	104	104	80-120	1	30
1,2-Dichloroethane	0.0200	0.0206	0.0200	0.0204	103	102	73-124	1	30
1,1-Dichloroethene	0.0200	0.0227	0.0200	0.0220	113	110	80-131	3	30
Tetrachloroethene	0.0200	0.0226	0.0200	0.0229	113	115	80-120	1	30
Trichloroethene	0.0200	0.0212	0.0200	0.0207	106	104	80-120	2	30
Vinyl Chloride	0.0200	0.0178	0.0200	0.0183	89	92	56-120	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18348WAE026	Sample number(s): 9936460,9936463								
1,4-Dichlorobenzene	50	33.17			66		30-109		
2,4-Dinitrotoluene	50	44.09			88		69-117		
Hexachlorobenzene	50	48.46			97		65-121		
Hexachlorobutadiene	50	35.25			70		21-114		
Hexachloroethane	50	27.85			56		24-100		
2-Methylphenol	50	35.98			72		59-109		
4-Methylphenol	50	34.54			69		56-108		
Nitrobenzene	50	41.38			83		59-117		
Pentachlorophenol	50	57.32			115		64-130		
Pyridine	50	24.19			48		13-83		
2,4,5-Trichlorophenol	50	55.13			110		73-124		
2,4,6-Trichlorophenol	50	54.94			110		69-122		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183480001A	Sample number(s): 9936460,9936463								
2,4-D	0.0250	0.0215	0.0250	0.0217	86	87	42-147	1	30
2,4,5-TP	0.0250	0.0207	0.0250	0.0214	83	86	58-148	3	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183470099A	Sample number(s): 9936459,9936462								
PCB-1016	166.88	161.97			97		76-121		
PCB-1260	166.67	169.84			102		79-130		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183480033A	Sample number(s): 9936460,9936463								
Gamma BHC - Lindane	0.000250	0.000234	0.000250	0.000223	94	89	51-132	5	30
Endrin	0.000125	0.000127	0.000125	0.000126	102	101	60-151	1	30
Heptachlor	0.000251	0.000220	0.000251	0.000207	88	82	38-135	6	30
Heptachlor Epoxide	0.000376	0.000348	0.000376	0.000343	93	91	56-132	1	30
Methoxychlor	0.00101	0.00112	0.00101	0.00109	111	108	58-165	3	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183480571301	Sample number(s): 9936460,9936463								
Mercury	0.00100	0.000876			88		80-114		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/19/2018 18:10

Group Number: 2017814

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183481404503	Sample number(s): 9936460,9936463								
Arsenic	0.150	0.163			109		80-120		
Barium	2.00	1.95			97		87-111		
Cadmium	0.0500	0.0512			102		90-111		
Chromium	0.200	0.206			103		87-110		
Lead	0.150	0.140			93		87-113		
Selenium	0.150	0.166			111		80-120		
Silver	0.0500	0.0521			104		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18349104201A	Sample number(s): 9936459,9936462								
Cyanide (Reactivity)	1000	989.11			99		77-113		
Batch number: 18347039403A	Sample number(s): 9936459,9936462								
Corrosivity	7.00	6.99			100		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18348112101A	Sample number(s): 9936459,9936462								
Sulfide (Reactivity)	570	449.44			79		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18347039403A	Sample number(s): 9936459,9936462								
pH	7.00	6.99			100		95-105		
	%	**%**	**%**	**%**					
Batch number: 18347820001A	Sample number(s): 9936459,9936462								
Moisture	89.5	89.46			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W183522AA	Sample number(s): 9936461,9936464 UNSPK: 9936461									
Benzene	0.00842	0.400	0.436	0.400	0.431	107	106	80-120	1	30
2-Butanone	N.D.	3.00	2.97	3.00	3.00	99	100	59-135	1	30
Carbon Tetrachloride	N.D.	0.400	0.499	0.400	0.494	125	124	64-134	1	30
Chlorobenzene	0.284	0.400	0.737	0.400	0.723	113	110	80-120	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/19/2018 18:10

Group Number: 2017814

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	0.400	0.422	0.400	0.422	106	106	80-120	0	30
1,2-Dichloroethane	N.D.	0.400	0.416	0.400	0.408	104	102	73-124	2	30
1,1-Dichloroethene	N.D.	0.400	0.470	0.400	0.458	117	114	80-131	3	30
Tetrachloroethene	N.D.	0.400	0.723	0.400	0.715	181*	179*	80-120	1	30
Trichloroethene	N.D.	0.400	0.438	0.400	0.439	109	110	80-120	0	30
Vinyl Chloride	N.D.	0.400	0.376	0.400	0.372	94	93	56-120	1	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183522AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9936461	100	102	98	94
9936464	98	103	98	95
Blank	101	104	98	92
LCS	99	102	99	98
LCSD	100	104	99	97
MS	99	103	100	97
MSD	101	102	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18348WAE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9936460	27	35	86	62	67	64
9936463	36	42	90	72	70	76
Blank	32	43	103	76	91	100
LCS	38	49	106	78	95	92
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs 8082A/3546
Batch number: 183470099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9936459	20*	17*	9*	17*
9936462	10*	12*	7*	13*

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/19/2018 18:10

Group Number: 2017814

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs 8082A/3546
Batch number: 183470099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	107	91	100	96
LCS	110	99	104	103
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Herbicides
Batch number: 183480001A

	2,4-DCAA-D1	2,4-DCAA-D2
9936460	80	81
9936463	78	79
Blank	77	75
LCS	71	69
LCSD	71	71
Limits:	26-136	26-136

Analysis Name: TCLP Pesticides by 8081B
Batch number: 183480033A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9936460	71	73	61	67
9936463	74	78	64	78
Blank	92	99	93	98
LCS	90	100	94	100
LCSD	79	95	83	94
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

B1HH 7308 12/12/18

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 201784 Sample # 993659-64

COC # 569214

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Potable	Ground	NPDES	Surface	Other	Total # of Containers	Ignitability / pH	Reactivity	Corrosivity	Soil/Solid 8081 PCB's in Soil	Soil/Solid TCLP Metals	Soil/Solid TCLP Pesticides	Soil/Solid TCLP SVOCs	Soil/Solid TCLP VOAs			Remarks
B12 TSCAL VOC 121118	12/11/18	1355	X		X									4	X	X	X	X	X	X	X	X			
B14 TSCAL VOC 121118	12/11/18	1405	X		X									4	X	X	X	X	X	X	X	X			
Cooler Temp bottle	12/11/18	1600						X						1											Cooler Temp bottle

For Lab Use Only
FSC: _____
SCR#: _____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	12/11/18	1700			
				12/12/18	1015

EDD Required? Yes No
If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx ____X____ Other _____

Temperature upon receipt 1.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235891

Group Number(s): 2017814

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/12/2018 10:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:45 on 12/12/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 26, 2018 10:17

Project: Rensselaer

Account #: 04285
Group Number: 2018338
SDG: RNS71
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B10TSCALVOC121218 Grab Soil	12/12/2018 15:30	9938733
B10TSCALVOC121218 Grab Soil	12/12/2018 15:30	9938734
B10TSCALVOC121218 Grab Soil	12/12/2018 15:30	9938735
B16TSCALVOC121218 Grab Soil	12/12/2018 15:36	9938736
B16TSCALVOC121218 Grab Soil	12/12/2018 15:36	9938737
B16TSCALVOC121218 Grab Soil	12/12/2018 15:36	9938738

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B10TSCALVOC121218 Grab Soil**
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:30
SDG#: RNS71-01

BASF Corporation
ELLE Sample #: SW 9938733
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	610	2,900	100
10885	PCB-1221	11104-28-2	N.D. D1	780	2,900	100
10885	PCB-1232	11141-16-5	N.D. D1	1,400	2,900	100
10885	PCB-1242	53469-21-9	N.D. D1	560	2,900	100
10885	PCB-1248	12672-29-6	9,400 D2	560	2,900	100
10885	PCB-1254	11097-69-1	N.D. D1	560	2,900	100
10885	PCB-1260	11096-82-5	N.D. D1	840	2,900	100
10885	PCB-1262	37324-23-5	N.D. D1	560	2,900	100
10885	PCB-1268	11100-14-4	N.D. D1	560	2,900	100
10885	Total PCBs	1336-36-3	9,400	560	2,900	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.7	59.1	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.9 J	0.0100	0.0100	1
	The pH was measured in water at 19.7 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.92 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B10TSCALVOC121218 Grab Soil**
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:30
SDG#: RNS71-01

BASF Corporation
ELLE Sample #: SW 9938733
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	41.5	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183480010A	12/16/2018 18:48	Covenant Mutuku	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183480010A	12/14/2018 16:00	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18352104201A	12/18/2018 18:49	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18353054201A	12/19/2018 01:15	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18351112101A	12/17/2018 08:50	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18351039401A	12/17/2018 20:00	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18351039401A	12/17/2018 20:00	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18351112101A	12/17/2018 08:50	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18348820003B	12/14/2018 10:12	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B10TSCALVOC121218 Grab Soil**
TCLP NVE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:30
SDG#: RNS71-02

BASF Corporation
ELLE Sample #: TL 9938734
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	29	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	43	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. VD2	0.000090	0.000090	1
10647	Chlordane	57-74-9	N.D. D1	0.00080	0.0025	1
10647	Endrin	72-20-8	N.D. D2	0.000040	0.00010	1
10647	Heptachlor	76-44-8	0.000063 D2	0.000020	0.000050	1
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.000012	0.000050	1
10647	Methoxychlor	72-43-5	N.D. D1	0.00015	0.00050	1
10647	Toxaphene	8001-35-2	N.D. D1	0.0050	0.015	1
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0286 J	0.0160	0.0500	1
07046	Barium	7440-39-3	1.45	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0055	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0156	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0224	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B10TSCALVOC121218 Grab Soil**
TCLP NVE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:30
SDG#: RNS71-02

BASF Corporation
ELLE Sample #: TL 9938734
ELLE Group #: 2018338
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18351WAD026	12/19/2018 23:55	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18351WAD026	12/18/2018 08:00	Kayla A Yuditsky	1
00952	TCLP Herbicides	SW-846 8151A	1	183520021A	12/20/2018 11:36	Richard A Shober	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183510098A	12/19/2018 00:46	Andrea L Jones	1
11126	Pest Leachate Update IV	SW-846 3510C	1	183510098A	12/18/2018 08:00	Kayla A Yuditsky	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183520021A	12/19/2018 00:30	Sherry L Morrow	1
07035	Arsenic	SW-846 6010C	1	183511404502	12/20/2018 21:02	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	183511404502	12/21/2018 10:22	Lisa J Cooke	1
07049	Cadmium	SW-846 6010C	1	183511404502	12/20/2018 21:02	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183511404502	12/20/2018 21:02	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	183511404502	12/20/2018 21:02	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	183511404502	12/21/2018 16:21	Lisa J Cooke	1
07066	Silver	SW-846 6010C	1	183511404502	12/20/2018 21:02	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	183510571303	12/20/2018 14:14	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	183511404502	12/20/2018 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183510571303	12/20/2018 09:10	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18348-27642-947	12/14/2018 16:20	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B10TSCALVOC121218 Grab Soil**
TCLP ZHE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:30
SDG#: RNS71-03

BASF Corporation
ELLE Sample #: TL 9938735
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.027	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	0.85	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183532AA	12/19/2018 12:01	Kevin A Sposito	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183532AA	12/19/2018 12:00	Kevin A Sposito	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18348-27642-946	12/14/2018 16:20	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B16TSCALVOC121218 Grab Soil**
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:36
SDG#: RNS71-04

BASF Corporation
ELLE Sample #: SW 9938736
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	1,200	5,600	200
10885	PCB-1221	11104-28-2	N.D. D1	1,500	5,600	200
10885	PCB-1232	11141-16-5	N.D. D1	2,600	5,600	200
10885	PCB-1242	53469-21-9	N.D. D1	1,100	5,600	200
10885	PCB-1248	12672-29-6	12,000 D2	1,100	5,600	200
10885	PCB-1254	11097-69-1	N.D. D1	1,100	5,600	200
10885	PCB-1260	11096-82-5	N.D. D1	1,600	5,600	200
10885	PCB-1262	37324-23-5	N.D. D1	1,100	5,600	200
10885	PCB-1268	11100-14-4	N.D. D1	1,100	5,600	200
10885	Total PCBs	1336-36-3	12,000	1,100	5,600	200
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.2	57.5	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.8 J	0.0100	0.0100	1
	The pH was measured in water at 19.8 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.79 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B16TSCALVOC121218 Grab Soil**
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:36
SDG#: RNS71-04

BASF Corporation
ELLE Sample #: SW 9938736
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	39.8	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183480010A	12/16/2018 19:19	Covenant Mutuku	200
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183480010A	12/14/2018 16:00	Elizabeth E Donovan	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	18352104201A	12/18/2018 18:50	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18353054201A	12/19/2018 01:15	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	18351112101A	12/17/2018 08:50	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18351039401A	12/17/2018 20:00	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	18351039401A	12/17/2018 20:00	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	18351112101A	12/17/2018 08:50	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18348820003B	12/14/2018 10:12	Larry E Bevins	1

*=This limit was used in the evaluation of the final result

Sample Description: **B16TSCALVOC121218 Grab Soil**
TCLP NVE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:36
SDG#: RNS71-05

BASF Corporation
ELLE Sample #: TL 9938737
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	5	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	11	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. VD2	0.00020	0.00025	5
10647	Chlordane	57-74-9	N.D. D1	0.0040	0.013	5
10647	Endrin	72-20-8	N.D. D2	0.00020	0.00050	5
10647	Heptachlor	76-44-8	0.00011 JPD1	0.00010	0.00025	5
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.000060	0.00025	5
10647	Methoxychlor	72-43-5	N.D. D1	0.00075	0.0025	5
10647	Toxaphene	8001-35-2	N.D. D1	0.025	0.075	5
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0388 J	0.0160	0.0500	1
07046	Barium	7440-39-3	1.31	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0145 J	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0081 J	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B16TSCALVOC121218 Grab Soil**
TCLP NVE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:36
SDG#: RNS71-05

BASF Corporation
ELLE Sample #: TL 9938737
ELLE Group #: 2018338
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18351WAD026	12/19/2018 13:02	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	18351WAD026	12/18/2018 08:00	Kayla A Yuditsky	1
00952	TCLP Herbicides	SW-846 8151A	1	183520021A	12/20/2018 12:09	Richard A Shober	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183510098A	12/19/2018 00:22	Andrea L Jones	5
11126	Pest Leachate Update IV	SW-846 3510C	1	183510098A	12/18/2018 08:00	Kayla A Yuditsky	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	183520021A	12/19/2018 00:30	Sherry L Morrow	1
07035	Arsenic	SW-846 6010C	1	183511404502	12/20/2018 21:05	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	183511404502	12/21/2018 10:25	Lisa J Cooke	1
07049	Cadmium	SW-846 6010C	1	183511404502	12/20/2018 21:05	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183511404502	12/20/2018 21:05	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	183511404502	12/20/2018 21:05	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	183511404502	12/21/2018 16:24	Lisa J Cooke	1
07066	Silver	SW-846 6010C	1	183511404502	12/20/2018 21:05	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	183510571303	12/20/2018 14:16	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	183511404502	12/20/2018 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183510571303	12/20/2018 09:10	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18348-27642-947	12/14/2018 16:20	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B16TSCALVOC121218 Grab Soil**
TCLP ZHE
COC: 562565

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:36
SDG#: RNS71-06

BASF Corporation
ELLE Sample #: TL 9938738
ELLE Group #: 2018338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.096	0.004	0.020	20
11997	2-Butanone	78-93-3	0.020 J	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	2.2	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.010 J	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183532AA	12/19/2018 13:13	Kevin A Sposito	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183532AA	12/19/2018 13:12	Kevin A Sposito	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18348-27642-946	12/14/2018 16:20	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: W183532AA	Sample number(s): 9938735,9938738		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 18351WAD026	Sample number(s): 9938734,9938737		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	**mg/l**	**mg/l**
Batch number: 183520021A	Sample number(s): 9938734,9938737		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 183480010A	Sample number(s): 9938733,9938736		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 183510098A	Sample number(s): 9938734,9938737		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 183510571303	Sample number(s): 9938734,9938737		
Mercury	N.D.	0.000050	0.00020
Batch number: 183511404502	Sample number(s): 9938734,9938737		
Arsenic	N.D.	0.0160	0.0500
Barium	0.0011 J	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 18352104201A	Sample number(s): 9938733,9938736		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 18351112101A	Sample number(s): 9938733,9938736		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W183532AA	Sample number(s): 9938735,9938738								
Benzene	0.0200	0.0210	0.0200	0.0215	105	107	80-120	2	30
2-Butanone	0.150	0.153	0.150	0.157	102	105	59-135	3	30
Carbon Tetrachloride	0.0200	0.0248	0.0200	0.0253	124	127	64-134	2	30
Chlorobenzene	0.0200	0.0209	0.0200	0.0217	104	109	80-120	4	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Chloroform	0.0200	0.0205	0.0200	0.0209	103	105	80-120	2	30
1,2-Dichloroethane	0.0200	0.0197	0.0200	0.0208	99	104	73-124	5	30
1,1-Dichloroethene	0.0200	0.0220	0.0200	0.0229	110	114	80-131	4	30
Tetrachloroethene	0.0200	0.0217	0.0200	0.0226	109	113	80-120	4	30
Trichloroethene	0.0200	0.0206	0.0200	0.0214	103	107	80-120	4	30
Vinyl Chloride	0.0200	0.0164	0.0200	0.0171	82	85	56-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18351WAD026	Sample number(s): 9938734,9938737								
1,4-Dichlorobenzene	50	37.96			76		30-109		
2,4-Dinitrotoluene	50	54.57			109		69-117		
Hexachlorobenzene	50	46.47			93		65-121		
Hexachlorobutadiene	50	50.27			101		21-114		
Hexachloroethane	50	35.44			71		24-100		
2-Methylphenol	50	36.69			73		59-109		
4-Methylphenol	50	34.73			69		56-108		
Nitrobenzene	50	43.53			87		59-117		
Pentachlorophenol	50	50.45			101		64-130		
Pyridine	50	22.76			46		13-83		
2,4,5-Trichlorophenol	50	59.35			119		73-124		
2,4,6-Trichlorophenol	50	56.71			113		69-122		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183520021A	Sample number(s): 9938734,9938737								
2,4-D	0.0250	0.0353	0.0250	0.0270	141	108	42-147	27	30
2,4,5-TP	0.0250	0.0316	0.0250	0.0268	127	107	58-148	17	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 183480010A	Sample number(s): 9938733,9938736								
PCB-1016	166.88	153.03			92		76-121		
PCB-1260	166.67	159.83			96		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183510098A	Sample number(s): 9938734,9938737								
Gamma BHC - Lindane	0.000250	0.000252			101		51-132		
Endrin	0.000125	0.000140			112		60-151		
Heptachlor	0.000251	0.000232			92		38-135		
Heptachlor Epoxide	0.000376	0.000383			102		56-132		
Methoxychlor	0.00101	0.00123			122		58-165		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183510571303	Sample number(s): 9938734,9938737								
Mercury	0.00100	0.000959			96		80-114		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183511404502	Sample number(s): 9938734,9938737								
Arsenic	0.150	0.155			103		80-120		
Barium	2.00	2.18			109		87-111		
Cadmium	0.0500	0.0515			103		90-111		
Chromium	0.200	0.208			104		87-110		
Lead	0.150	0.145			96		87-113		
Selenium	0.150	0.173			115		80-120		
Silver	0.0500	0.0453			91		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18352104201A	Sample number(s): 9938733,9938736								
Cyanide (Reactivity)	1000	1009.85			101		77-113		
Batch number: 18351039401A	Sample number(s): 9938733,9938736								
Corrosivity	7.00	6.91			99		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18351112101A	Sample number(s): 9938733,9938736								
Sulfide (Reactivity)	570	478.9			84		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18351039401A	Sample number(s): 9938733,9938736								
pH	7.00	6.91			99		95-105		
	%	**%**	**%**	**%**					
Batch number: 18348820003B	Sample number(s): 9938733,9938736								
Moisture	89.5	89.45			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W183532AA	Sample number(s): 9938735,9938738 UNSPK: 9938735									
Benzene	0.0272	0.400	0.487	0.400	0.482	115	114	80-120	1	30
2-Butanone	N.D.	3.00	3.74	3.00	3.78	125	126	59-135	1	30
Carbon Tetrachloride	N.D.	0.400	0.563	0.400	0.575	141*	144*	64-134	2	30
Chlorobenzene	0.852	0.400	1.35	0.400	1.37	125*	129*	80-120	1	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	0.400	0.448	0.400	0.446	112	111	80-120	0	30
1,2-Dichloroethane	N.D.	0.400	0.425	0.400	0.427	106	107	73-124	0	30
1,1-Dichloroethene	N.D.	0.400	0.524	0.400	0.514	131	129	80-131	2	30
Tetrachloroethene	N.D.	0.400	0.496	0.400	0.494	124*	123*	80-120	0	30
Trichloroethene	N.D.	0.400	0.473	0.400	0.456	118	114	80-120	4	30
Vinyl Chloride	N.D.	0.400	0.370	0.400	0.379	92	95	56-120	2	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 183480010A	Sample number(s): 9938733,9938736 UNSPK: 9938733									
PCB-1016	N.D.	165.78	13122.6	165.78	11365.92	7916*	6856*	76-121	14	50
PCB-1260	N.D.	165.56	2461.88	165.56	897.78	1487*	542*	79-130	93*	50

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max
Batch number: 18348820003B	Sample number(s): 9938733,9938736 BKG: 9938733			
Moisture	41.45	42.5	3	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183532AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9938735	101	102	97	94
9938738	100	103	98	96
Blank	99	104	98	93
LCS	99	101	98	97
LCSD	100	102	99	98
MS	101	101	99	97
MSD	100	105	99	98

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:17

Group Number: 2018338

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183532AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18351WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9938734	31	34	85	70	76	74
9938737	28	33	85	77	77	74
Blank	35	40	98	78	79	98
LCS	39	52	96	75	107*	89
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs 8082A/3546
Batch number: 183480010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9938733	65	165*	101	182*
9938736	37*	190*	113	222*
Blank	105	98	98	97
LCS	104	99	99	98
MS	37*	176*	98	181*
MSD	43*	165*	91	182*
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Pesticides by 8081B
Batch number: 183510098A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9938734	58	66	50	68
9938737	76	67	79	71
Blank	81	99	86	104
LCS	87	97	92	101
Limits:	29-129	32-149	29-129	32-149

Analysis Name: TCLP Herbicides
Batch number: 183520021A

	2,4-DCAA-D1	2,4-DCAA-D2
9938734	107	106
9938737	109	104
Blank	98	95
LCS	114	111
LCSD	87	87

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation Group Number: 2018338
Reported: 12/26/2018 10:17

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Herbicides
Batch number: 183520021A

Limits:	26-136	26-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2018338 Sample # 9938733-38

COC # 562565

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jaff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix: Soil ☒ Sediment ☐ Tissue ☐ | Water: Ground ☐ Potable ☐ Surface ☐ NPDES ☐ | Other: Temp Bottle

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability /pH	Reactivity	Corrosivity	Soil/Solid PCBs in Soil	Soil/solid TCLP metals	Soil/Solid TCLP Pest/Herb	Soil/solid TCLP SVOCs	Soil/solid TCLP VOAs	Remarks
BIOTSCALVOC121218	12/12/18	1530	X		4	X	X	X	X	X	X	X	X	
B16TSCALVOC121218	12/12/18	1536	X		4	X	X	X	X	X	X	X	X	
Cooler Temp Bottle	12/12/18	1715			1									Cooler Temp Bottle

For Lab Use Only

FSC:

SCR#: 226936

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Edwin Hernandez	6/15/18	1530			
Jaff Denman	12/12/18	1800			
			Received by	Date	Time
				12/13/18	10:00

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236029

Group Number(s): 2018338

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/13/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 13:46 on 12/13/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.3	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 09, 2019 10:51

Project: Rensselaer

Account #: 04285
Group Number: 2021338
SDG: RNS80
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B8TSCALVOC122018 Grab Soil	12/20/2018 14:41	9952470
B8TSCALVOC122018 Grab Soil	12/20/2018 14:41	9952471
B8TSCALVOC122018 Grab Soil	12/20/2018 14:41	9952472

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B8TSCALVOC122018 Grab Soil**
COC: 576066

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 14:41
SDG#: RNS80-01

BASF Corporation
ELLE Sample #: SW 9952470
ELLE Group #: 2021338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	550	2,600	100
10885	PCB-1221	11104-28-2	N.D. D1	700	2,600	100
10885	PCB-1232	11141-16-5	N.D. D1	1,200	2,600	100
10885	PCB-1242	53469-21-9	N.D. D1	500	2,600	100
10885	PCB-1248	12672-29-6	7,200 D2	500	2,600	100
10885	PCB-1254	11097-69-1	N.D. D1	500	2,600	100
10885	PCB-1260	11096-82-5	N.D. D1	750	2,600	100
10885	PCB-1262	37324-23-5	N.D. D1	500	2,600	100
10885	PCB-1268	11100-14-4	N.D. D1	500	2,600	100
10885	Total PCBs	1336-36-3	7,200	500	2,600	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.4	58.1	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.7 J	0.0100	0.0100	1
	The pH was measured in water at 19.8 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.68 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B8TSCALVOC122018 Grab Soil**
COC: 576066

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 14:41
SDG#: RNS80-01

BASF Corporation
ELLE Sample #: SW 9952470
ELLE Group #: 2021338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	35.1	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183600020A	12/28/2018 09:12	Covenant Mutuku	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183600020A	12/27/2018 07:00	Joshua S Ruth	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19002104201A	01/02/2019 19:15	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	18364054201A	12/30/2018 09:05	Daniel S Smith	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19002112101A	01/02/2019 07:45	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	18002039401A	01/02/2019 12:55	Luz M Groff	1
00496	Corrosivity	SW-846 Chapter 7	1	19002039401A	01/02/2019 12:55	Luz M Groff	1
01121	Reactivity	SW-846 Chapter 7.3	1	19002112101A	01/02/2019 07:45	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18355820016B	12/26/2018 17:46	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **B8TSCALVOC122018 Grab Soil**
TCLP NVE
COC: 576066

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 14:41
SDG#: RNS80-02

BASF Corporation
ELLE Sample #: TL 9952471
ELLE Group #: 2021338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	27	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.000050	0.00025	5
10647	Chlordane	57-74-9	N.D. D1	0.0040	0.013	5
10647	Endrin	72-20-8	N.D. D2	0.00020	0.00050	5
10647	Heptachlor	76-44-8	0.00014 JD2	0.00010	0.00025	5
10647	Heptachlor Epoxide	1024-57-3	N.D. D1	0.000060	0.00025	5
10647	Methoxychlor	72-43-5	N.D. D1	0.00075	0.0025	5
10647	Toxaphene	8001-35-2	N.D. D1	0.025	0.075	5
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0343 J	0.0160	0.0500	1
07046	Barium	7440-39-3	1.13	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0018 J	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0162	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0335	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B8TSCALVOC122018 Grab Soil**
TCLP NVE
COC: 576066

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 14:41
SDG#: RNS80-02

BASF Corporation
ELLE Sample #: TL 9952471
ELLE Group #: 2021338
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18364WAD026	01/02/2019 12:40	Edward C Monborne	1
00813	BNA Water Extraction	SW-846 3510C	1	18364WAD026	12/31/2018 08:30	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	190030006A	01/05/2019 01:33	Rachel Umberger	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	183620099A	01/01/2019 03:24	Lisa A Reinert	5
11126	Pest Leachate Update IV	SW-846 3510C	1	183620099A	12/30/2018 13:09	Christine E Gleim	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	190030006A	01/03/2019 17:15	Elizabeth E Donovan	1
07035	Arsenic	SW-846 6010C	1	183621404503	01/07/2019 12:38	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	183621404503	01/07/2019 12:38	Lisa J Cooke	1
07049	Cadmium	SW-846 6010C	1	183621404503	01/08/2019 14:10	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183621404503	01/07/2019 12:38	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	183621404503	01/08/2019 14:10	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	183621404503	01/07/2019 12:38	Lisa J Cooke	1
07066	Silver	SW-846 6010C	1	183621404503	01/07/2019 12:38	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183620571303	12/31/2018 08:22	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	183621404503	12/29/2018 14:55	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183620571303	12/29/2018 16:55	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18360-12245-947	12/26/2018 15:15	Tanner E Grumbling	n.a.
00947	TCLP Non-volatile Extraction	SW-846 1311	2	18362-12245-947A	12/28/2018 17:12	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B8TSCALVOC122018 Grab Soil**
TCLP ZHE
COC: 576066

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 14:41
SDG#: RNS80-03

BASF Corporation
ELLE Sample #: TL 9952472
ELLE Group #: 2021338
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.28	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	3.2	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

The container used for this analysis was submitted with headspace.

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190031AA	01/03/2019 15:24	Corie Mellinger	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190031AA	01/03/2019 15:23	Corie Mellinger	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18356-27642-946	12/22/2018 17:18	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2021338
Reported: 01/09/2019 10:51

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: W190031AA	Sample number(s): 9952472		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 18364WAD026	Sample number(s): 9952471		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	**mg/l**	**mg/l**
Batch number: 190030006A	Sample number(s): 9952471		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 183600020A	Sample number(s): 9952470		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 10:51

Group Number: 2021338

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 183620099A	Sample number(s): 9952471		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 183620571303	Sample number(s): 9952471		
Mercury	N.D.	0.000050	0.00020
Batch number: 183621404503	Sample number(s): 9952471		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 19002104201A	Sample number(s): 9952470		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 19002112101A	Sample number(s): 9952470		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W190031AA	Sample number(s): 9952472								
Benzene	0.0200	0.0225	0.0200	0.0217	113	109	80-120	4	30
2-Butanone	0.150	0.147	0.150	0.160	98	107	59-135	9	30
Carbon Tetrachloride	0.0200	0.0248	0.0200	0.0257	124	128	64-134	3	30
Chlorobenzene	0.0200	0.0218	0.0200	0.0216	109	108	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 10:51

Group Number: 2021338

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Chloroform	0.0200	0.0220	0.0200	0.0230	110	115	80-120	4	30
1,2-Dichloroethane	0.0200	0.0232	0.0200	0.0227	116	113	73-124	2	30
1,1-Dichloroethene	0.0200	0.0240	0.0200	0.0235	120	117	80-131	2	30
Tetrachloroethene	0.0200	0.0230	0.0200	0.0223	115	111	80-120	3	30
Trichloroethene	0.0200	0.0227	0.0200	0.0222	114	111	80-120	2	30
Vinyl Chloride	0.0200	0.0205	0.0200	0.0200	102	100	56-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18364WAD026	Sample number(s): 9952471								
1,4-Dichlorobenzene	50	35.29	50	38.59	71	77	30-109	9	30
2,4-Dinitrotoluene	50	43.2	50	44.75	86	89	69-117	4	30
Hexachlorobenzene	50	43.65	50	45.26	87	91	65-121	4	30
Hexachlorobutadiene	50	37.44	50	39.68	75	79	21-114	6	30
Hexachloroethane	50	31.93	50	34.38	64	69	24-100	7	30
2-Methylphenol	50	35.38	50	37.3	71	75	59-109	5	30
4-Methylphenol	50	35.85	50	35.74	72	71	56-108	0	30
Nitrobenzene	50	34.32	50	35.73	69	71	59-117	4	30
Pentachlorophenol	50	45.17	50	47.96	90	96	64-130	6	30
Pyridine	50	19.7	50	19.88	39	40	13-83	1	30
2,4,5-Trichlorophenol	50	44.68	50	46.38	89	93	73-124	4	30
2,4,6-Trichlorophenol	50	44.88	50	45.42	90	91	69-122	1	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190030006A	Sample number(s): 9952471								
2,4-D	0.0250	0.0267	0.0250	0.0275	107	110	42-147	3	30
2,4,5-TP	0.0250	0.0220	0.0250	0.0218	88	87	58-148	1	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 183600020A	Sample number(s): 9952470								
PCB-1016	166.88	175.84			105		76-121		
PCB-1260	166.67	184.8			111		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183620099A	Sample number(s): 9952471								
Gamma BHC - Lindane	0.000250	0.000269	0.000250	0.000267	108	107	51-132	1	30
Endrin	0.000125	0.000144	0.000125	0.000140	115	112	60-151	3	30
Heptachlor	0.000251	0.000270	0.000251	0.000257	108	102	38-135	5	30
Heptachlor Epoxide	0.000376	0.000395	0.000376	0.000403	105	107	56-132	2	30
Methoxychlor	0.00101	0.00141	0.00101	0.00144	139	143	58-165	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183620571303	Sample number(s): 9952471								
Mercury	0.00100	0.000878			88		80-114		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 10:51

Group Number: 2021338

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183621404503	Sample number(s): 9952471								
Arsenic	0.150	0.165			110		80-120		
Barium	2.00	2.02			101		87-111		
Cadmium	0.0500	0.0510			102		90-111		
Chromium	0.200	0.199			100		87-110		
Lead	0.150	0.146			97		87-113		
Selenium	0.150	0.165			110		80-120		
Silver	0.0500	0.0627			125*		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19002104201A	Sample number(s): 9952470								
Cyanide (Reactivity)	1000	940.16			94		77-113		
Batch number: 19002039401A	Sample number(s): 9952470								
Corrosivity	7.00	6.96			99		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19002112101A	Sample number(s): 9952470								
Sulfide (Reactivity)	570	478.9			84		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18002039401A	Sample number(s): 9952470								
pH	7.00	6.96			99		95-105		
	%	**%**	**%**	**%**					
Batch number: 18355820016B	Sample number(s): 9952470								
Moisture	89.5	89.44			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W190031AA	Sample number(s): 9952472 UNSPK: 9952472									
Benzene	0.282	0.400	0.737	0.400	0.717	114	109	80-120	3	30
2-Butanone	N.D.	3.00	4.29	3.00	4.45	143*	148*	59-135	4	30
Carbon Tetrachloride	N.D.	0.400	0.566	0.400	0.555	142*	139*	64-134	2	30
Chlorobenzene	3.23	0.400	3.47	0.400	3.51	61 (2)	71 (2)	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 10:51

Group Number: 2021338

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	0.400	0.482	0.400	0.486	120	121*	80-120	1	30
1,2-Dichloroethane	N.D.	0.400	0.501	0.400	0.473	125*	118	73-124	6	30
1,1-Dichloroethene	N.D.	0.400	0.562	0.400	0.526	141*	132*	80-131	7	30
Tetrachloroethene	N.D.	0.400	0.522	0.400	0.504	130*	126*	80-120	3	30
Trichloroethene	N.D.	0.400	0.516	0.400	0.483	129*	121*	80-120	6	30
Vinyl Chloride	N.D.	0.400	0.481	0.400	0.471	120	118	56-120	2	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
Batch number: 19002039401A	Sample number(s): 9952470 BKG: 9952470			
Corrosivity	11.68	11.71	0	2
	Std. Units	**Std. Units**		
Batch number: 18002039401A	Sample number(s): 9952470 BKG: 9952470			
pH	11.68	11.71	0	3

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190031AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9952472	100	104	93	94
Blank	105	105	92	91
LCS	101	108	100	98
LCSD	104	107	98	99
MS	105	104	96	100
MSD	103	106	96	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 10:51

Group Number: 2021338

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 8270D MINI
Batch number: 18364WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9952471	32	46	84	67	72	64
Blank	38	50	87	73	81	93
LCS	42	54	83	71	80	88
LCSD	39	54	86	74	82	87
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs 8082A/3546
Batch number: 183600020A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9952470	256*	129	218*	139
Blank	116	98	109	97
LCS	107	99	107	98
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Pesticides by 8081B
Batch number: 183620099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9952471	61	63	58	64
Blank	59	80	62	74
LCS	94	100	95	91
LCSD	75	93	78	93
Limits:	29-129	32-149	29-129	32-149

Analysis Name: TCLP Herbicides
Batch number: 190030006A

	2,4-DCAA-D1	2,4-DCAA-D2
9952471	90	83
Blank	92	79
LCS	84	75
LCSD	81	75
Limits:	26-136	26-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2021338 Sample # 9952470-72

COC # 576066

Client Information

Client: BASF Corp
Acct. #:
Project Name/#: Rensselaer
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: Jeff Denman
Quote #:
State where samples were collected: New York
For Compliance: Yes ☒ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: Cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability/pH	Reactivity	Corrosivity	Soil/Solid PCBs in Soil	Soil/Solid TCLP metals	Soil/Solid Pest/Herb TCLP	Soil/Solid TCLP SVOCs	Soil/Solid TCLP VOAs
BSTSCAL VOC 122018	12/20/18	1441	X		4	X	X	X	X	X	X	X	X
Cooler temp bottle	12/20/18	1630			1								

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
Cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	12/20/18	1630			
			Erin Fisher	12-21-18	1120

EDD Required? Yes, No
If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt 2.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236961

Group Number(s): 2021338

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/21/2018 11:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 12:58 on 12/21/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 10, 2019 09:51

Project: Rensselaer

Account #: 04285
Group Number: 2022284
SDG: RNS82
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B13 TSCA HVOC-122718 Grab Soil	12/27/2018 13:35	9956641
B13 TSCA HVOC-122718 Grab Soil	12/27/2018 13:35	9956642
B13 TSCA HVOC-122718 Grab Soil	12/27/2018 13:35	9956643

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B13 TSCA HVOC-122718 Grab Soil**
COC: 576067

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:35
SDG#: RNS82-01

BASF Corporation
ELLE Sample #: SW 9956641
ELLE Group #: 2022284
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	610	2,900	100
10885	PCB-1221	11104-28-2	N.D. D1	780	2,900	100
10885	PCB-1232	11141-16-5	N.D. D1	1,400	2,900	100
10885	PCB-1242	53469-21-9	20,000.ED1	560	2,900	100
10885	PCB-1248	12672-29-6	N.D. D1	560	2,900	100
10885	PCB-1254	11097-69-1	N.D. D1	560	2,900	100
10885	PCB-1260	11096-82-5	N.D. D1	830	2,900	100
10885	PCB-1262	37324-23-5	N.D. D1	560	2,900	100
10885	PCB-1268	11100-14-4	N.D. D1	560	2,900	100
10885	Total PCBs	1336-36-3	20,000	560	2,900	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.2	57.5	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.8 J	0.0100	0.0100	1
	The pH was measured in water at 19 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.81 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B13 TSCA HVOC-122718 Grab Soil**
COC: 576067

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:35
SDG#: RNS82-01

BASF Corporation
ELLE Sample #: SW 9956641
ELLE Group #: 2022284
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	41.3	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	183650099A	01/03/2019 00:15	Jessica L Miller	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	183650099A	01/02/2019 08:00	Michelle A Newswanger	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19002104201A	01/02/2019 19:34	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	19005054201A	01/05/2019 08:40	Daniel S Smith	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19002112101A	01/02/2019 07:45	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	19004039401A	01/04/2019 20:35	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	19004039401A	01/04/2019 20:35	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19002112101A	01/02/2019 07:45	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18365820001C	12/31/2018 23:42	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: **B13 TSCA HVOC-122718 Grab Soil**
TCLP NV
COC: 576067

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:35
SDG#: RNS82-02

BASF Corporation
ELLE Sample #: TL 9956642
ELLE Group #: 2022284
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	70	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	0.5 J	0.5	2	1
14242	4-Methylphenol	106-44-5	350	5	20	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	2 J	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D1	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00010	0.00050	10
10647	Chlordane	57-74-9	N.D. D1	0.0080	0.025	10
10647	Endrin	72-20-8	N.D. D2	0.00040	0.0010	10
10647	Heptachlor	76-44-8	N.D. D1	0.00020	0.00050	10
10647	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00012	0.00050	10
10647	Methoxychlor	72-43-5	N.D. D1	0.0015	0.0050	10
10647	Toxaphene	8001-35-2	N.D. D1	0.050	0.15	10
	Due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0380 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.945	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0051	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0244	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B13 TSCA HVOC-122718 Grab Soil**
TCLP NV
COC: 576067

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:35
SDG#: RNS82-02

BASF Corporation
ELLE Sample #: TL 9956642
ELLE Group #: 2022284
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19002WAC026	01/04/2019 01:19	Anthony P Bauer	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19002WAC026	01/04/2019 08:47	Joseph M Gambler	10
00813	BNA Water Extraction	SW-846 3510C	1	19002WAC026	01/03/2019 09:30	Logan M Brosemer	1
00952	TCLP Herbicides	SW-846 8151A	1	190030006A	01/05/2019 02:06	Rachel Umberger	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	190020098A	01/07/2019 12:57	Dylan Schreiner	10
11126	Pest Leachate Update IV	SW-846 3510C	1	190020098A	01/03/2019 09:30	Logan M Brosemer	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	190030006A	01/03/2019 17:15	Elizabeth E Donovan	1
07035	Arsenic	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	190041404501	01/08/2019 15:15	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	190041404501	01/09/2019 20:13	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	183650571304	01/03/2019 08:39	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	190041404501	01/07/2019 05:35	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183650571304	01/02/2019 16:15	JoElla L Rice	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	18364-27642-947	12/30/2018 15:26	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B13 TSCA HVOC-122718 Grab Soil**
TCLP ZHE
COC: 576067

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:35
SDG#: RNS82-03

BASF Corporation
ELLE Sample #: TL 9956643
ELLE Group #: 2022284
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.29	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	25	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190071AA	01/07/2019 12:06	Corie Mellinger	200
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190071AA	01/07/2019 12:54	Corie Mellinger	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190071AA	01/07/2019 12:05	Corie Mellinger	200
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190071AA	01/07/2019 12:53	Corie Mellinger	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	18364-27642-946	12/30/2018 14:56	Hannah Tucci	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: W190071AA	Sample number(s): 9956643		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 19002WAC026	Sample number(s): 9956642		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	**mg/l**	**mg/l**
Batch number: 190030006A	Sample number(s): 9956642		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 183650099A	Sample number(s): 9956641		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 190020098A	Sample number(s): 9956642		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 183650571304	Sample number(s): 9956642		
Mercury	N.D.	0.000050	0.00020
Batch number: 190041404501	Sample number(s): 9956642		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 19002104201A	Sample number(s): 9956641		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 19002112101A	Sample number(s): 9956641		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W190071AA	Sample number(s): 9956643								
Benzene	0.0200	0.0199	0.0200	0.0209	100	104	80-120	5	30
2-Butanone	0.150	0.143	0.150	0.149	95	99	59-135	4	30
Carbon Tetrachloride	0.0200	0.0253	0.0200	0.0262	127	131	64-134	4	30
Chlorobenzene	0.0200	0.0206	0.0200	0.0216	103	108	80-120	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Chloroform	0.0200	0.0211	0.0200	0.0220	106	110	80-120	4	30
1,2-Dichloroethane	0.0200	0.0217	0.0200	0.0223	109	111	73-124	2	30
1,1-Dichloroethene	0.0200	0.0215	0.0200	0.0233	108	116	80-131	8	30
Tetrachloroethene	0.0200	0.0215	0.0200	0.0231	107	115	80-120	7	30
Trichloroethene	0.0200	0.0203	0.0200	0.0216	101	108	80-120	6	30
Vinyl Chloride	0.0200	0.0173	0.0200	0.0180	87	90	56-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19002WAC026	Sample number(s): 9956642								
1,4-Dichlorobenzene	50	33.91	50	32.89	68	66	30-109	3	30
2,4-Dinitrotoluene	50	41.34	50	42.98	83	86	69-117	4	30
Hexachlorobenzene	50	39.24	50	40.87	78	82	65-121	4	30
Hexachlorobutadiene	50	30.05	50	29.81	60	60	21-114	1	30
Hexachloroethane	50	32.44	50	30.84	65	62	24-100	5	30
2-Methylphenol	50	40.75	50	40.16	82	80	59-109	1	30
4-Methylphenol	50	40.23	50	41.02	80	82	56-108	2	30
Nitrobenzene	50	42.4	50	42.8	85	86	59-117	1	30
Pentachlorophenol	50	41.8	50	41.08	84	82	64-130	2	30
Pyridine	50	24.57	50	25.83	49	52	13-83	5	30
2,4,5-Trichlorophenol	50	42.59	50	42.7	85	85	73-124	0	30
2,4,6-Trichlorophenol	50	42.26	50	43	85	86	69-122	2	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190030006A	Sample number(s): 9956642								
2,4-D	0.0250	0.0267	0.0250	0.0275	107	110	42-147	3	30
2,4,5-TP	0.0250	0.0220	0.0250	0.0218	88	87	58-148	1	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 183650099A	Sample number(s): 9956641								
PCB-1016	166.88	169.32			101		76-121		
PCB-1260	166.67	178.55			107		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190020098A	Sample number(s): 9956642								
Gamma BHC - Lindane	0.000250	0.000212	0.000250	0.000234	85	94	51-132	10	30
Endrin	0.000125	0.000118	0.000125	0.000126	94	101	60-151	7	30
Heptachlor	0.000251	0.000204	0.000251	0.000220	81	88	38-135	8	30
Heptachlor Epoxide	0.000376	0.000316	0.000376	0.000346	84	92	56-132	9	30
Methoxychlor	0.00101	0.00107	0.00101	0.00116	106	115	58-165	8	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183650571304	Sample number(s): 9956642								
Mercury	0.00100	0.000877			88		80-114		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 190041404501	Sample number(s): 9956642								
Arsenic	0.150	0.160			107		80-120		
Barium	2.00	1.90			95		87-111		
Cadmium	0.0500	0.0501			100		90-111		
Chromium	0.200	0.202			101		87-110		
Lead	0.150	0.144			96		87-113		
Selenium	0.150	0.165			110		80-120		
Silver	0.0500	0.0595			119		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19002104201A	Sample number(s): 9956641								
Cyanide (Reactivity)	1000	940.16			94		77-113		
Batch number: 19004039401A	Sample number(s): 9956641								
Corrosivity	7.00	7.09	7.00	7.11	101	102	89-110	0	20
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19002112101A	Sample number(s): 9956641								
Sulfide (Reactivity)	570	478.9			84		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19004039401A	Sample number(s): 9956641								
pH	7.00	7.09	7.00	7.11	101	102	95-105	0	3
	%	**%**	**%**	**%**					
Batch number: 18365820001C	Sample number(s): 9956641								
Moisture	89.5	89.44			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W190071AA	Sample number(s): 9956643 UNSPK: 9956643									
Benzene	0.292	0.400	0.762	0.400	0.744	118	113	80-120	2	30
2-Butanone	N.D.	3.00	4.14	3.00	4.07	138*	136*	59-135	2	30
Carbon Tetrachloride	N.D.	0.400	0.634	0.400	0.618	159*	155*	64-134	3	30
Chlorobenzene	23.09	0.400	23.57	0.400	22.85	120 (2)	-59 (2)	80-120	3	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloroform	N.D.	0.400	0.484	0.400	0.478	121*	120	80-120	1	30
1,2-Dichloroethane	N.D.	0.400	0.519	0.400	0.514	130*	129*	73-124	1	30
1,1-Dichloroethene	N.D.	0.400	0.565	0.400	0.537	141*	134*	80-131	5	30
Tetrachloroethene	N.D.	0.400	0.517	0.400	0.513	129*	128*	80-120	1	30
Trichloroethene	N.D.	0.400	0.482	0.400	0.478	121*	119	80-120	1	30
Vinyl Chloride	N.D.	0.400	0.434	0.400	0.410	109	102	56-120	6	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 190041404501	Sample number(s): 9956642 UNSPK: 9956642									
Arsenic	0.0380	5.00	5.06	5.00	5.06	100	100	75-125	0	20
Barium	0.945	100	24.98	100	22.36	24*	21*	75-125	11	20
Cadmium	0.00506	1.00	0.949	1.00	0.959	94	95	75-125	1	20
Chromium	0.0244	5.00	4.74	5.00	4.78	94	95	75-125	1	20
Lead	N.D.	5.00	2.67	5.00	2.67	53*	53*	75-125	0	20
Selenium	N.D.	1.00	0.957	1.00	0.978	96	98	75-125	2	20
Silver	N.D.	5.00	4.21	5.00	3.41	84	68*	75-125	21*	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 190041404501	Sample number(s): 9956642 BKG: 9956642			
Arsenic	0.0380	0.0400	5 (1)	20
Barium	0.945	0.955	1	20
Cadmium	0.00506	0.00448	12 (1)	20
Chromium	0.0244	0.0241	1 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190071AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9956643	105	103	96	96
Blank	102	105	97	94
LCS	102	106	98	97
LCSD	103	102	99	100
MS	104	106	97	97
MSD	105	102	98	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19002WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9956642	29	36	59	72	65	69
Blank	32	45	75	77	69	88
LCS	44	58	79	81	73	88
LCSD	48	60	78	80	75	90
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs 8082A/3546
Batch number: 183650099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9956641	237*	153*	1352*	180*
Blank	106	99	101	98
LCS	105	102	105	105
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Pesticides by 8081B
Batch number: 190020098A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9956642	97	88	219*	71
Blank	87	85	89	81
LCS	77	81	77	81
LCSD	78	91	79	89
Limits:	29-129	32-149	29-129	32-149

Analysis Name: TCLP Herbicides
Batch number: 190030006A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/10/2019 09:51

Group Number: 2022284

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Herbicides
Batch number: 190030006A

	2,4-DCAA-D1	2,4-DCAA-D2
9956642	38	31
Blank	92	79
LCS	84	75
LCSD	81	75
Limits:	26-136	26-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2022284 Sample # 9956641-43

COC # 576067

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: James Sirvent	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability/pH	Reactivity	Corrosivity	Soil/solid PCBs in Soil	Soil/solid TCLP metals	Soil/solid pest/herb TCLP	Soil/solid TCLP svocs	Soil/solid TCLP vocs
B13 TSCA HVOC 12271 8	12/27/18	1335	X		4	X	X	X	X	X	X	X	X
Cooler Temp bottle	12/27/18				1								

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.Bleiler@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
James Sirvent	12/27/18	1730			
			MP	12/28/18	10:00

EDD Required? Yes No

If yes, format: AECOM Equis 4

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ X Other ____

Temperature upon receipt 1.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 237301

Group Number(s): 2022284

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/28/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:59 on 12/28/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 16, 2019 13:17

Project: Rensselaer

Account #: 04285
Group Number: 2023687
SDG: RNS84
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B11TSCAHVOC010419 Grab Soil	01/04/2019 13:45	9961484
B11TSCAHVOC010419 Grab Soil	01/04/2019 13:45	9961485
B11TSCAHVOC010419 Grab Soil	01/04/2019 13:45	9961486
B15TSCAHVOC010419 Grab Soil	01/04/2019 13:55	9961487
B15TSCAHVOC010419 Grab Soil	01/04/2019 13:55	9961488
B15TSCAHVOC010419 Grab Soil	01/04/2019 13:55	9961489

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B11TSCAHVOC010419 Grab Soil**
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS84-01

BASF Corporation
ELLE Sample #: SW 9961484
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	300	1,400	50
10885	PCB-1221	11104-28-2	N.D. D1	390	1,400	50
10885	PCB-1232	11141-16-5	N.D. D1	670	1,400	50
10885	PCB-1242	53469-21-9	13,000 D2	280	1,400	50
10885	PCB-1248	12672-29-6	N.D. D1	280	1,400	50
10885	PCB-1254	11097-69-1	N.D. D1	280	1,400	50
10885	PCB-1260	11096-82-5	N.D. D1	410	1,400	50
10885	PCB-1262	37324-23-5	N.D. D1	280	1,400	50
10885	PCB-1268	11100-14-4	N.D. D1	280	1,400	50
10885	Total PCBs	1336-36-3	13,000	280	1,400	50
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	20.0	59.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	12.1 J	0.0100	0.0100	1
	The pH was measured in water at 19.1 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 12.07 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS84-01

BASF Corporation
ELLE Sample #: SW 9961484
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	41.3	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	190080099A	01/10/2019 16:34	Covenant Mutuku	50
10497	PCB Microwave Soil Extraction	SW-846 3546	1	190080099A	01/09/2019 09:00	Michelle A Newswanger	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19010104201A	01/10/2019 12:30	Joseph E McKenzie	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	19009054201A	01/09/2019 21:25	Daniel S Smith	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19008112101A	01/08/2019 04:35	Kevin Litwa	1
00394	pH	SW-846 9045D Nov 2004	1	19014039402A	01/14/2019 11:00	Michelle L Lalli	1
00496	Corrosivity	SW-846 Chapter 7	1	19014039402A	01/14/2019 11:00	Michelle L Lalli	1
01121	Reactivity	SW-846 Chapter 7.3	1	19008112101A	01/08/2019 04:35	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19007820006B	01/09/2019 06:52	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
TCLP NVE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS84-02

BASF Corporation
ELLE Sample #: TL 9961485
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	130	0.7	3	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	7	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.7	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.7	3	1
14242	Hexachloroethane	67-72-1	N.D.	1	7	1
14242	2-Methylphenol	95-48-7	N.D.	0.7	3	1
14242	4-Methylphenol	106-44-5	260	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.7	3	1
14242	Pentachlorophenol	87-86-5	N.D.	1	7	1
14242	Pyridine	110-86-1	N.D.	3	7	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.7	3	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.7	3	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00025	0.0013	25
10647	Chlordane	57-74-9	N.D. D1	0.020	0.063	25
10647	Endrin	72-20-8	N.D. D2	0.0010	0.0025	25
10647	Heptachlor	76-44-8	N.D. D1	0.00050	0.0013	25
10647	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00030	0.0013	25
10647	Methoxychlor	72-43-5	N.D. D1	0.0038	0.013	25
10647	Toxaphene	8001-35-2	N.D. D1	0.13	0.38	25
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0433 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.943	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0154	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
TCLP NVE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS84-02

BASF Corporation
ELLE Sample #: TL 9961485
ELLE Group #: 2023687
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19008WAA026	01/09/2019 13:18	Kira N Beck	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19008WAA026	01/09/2019 16:45	Brandon K Cordova	5
00813	BNA Water Extraction	SW-846 3510C	1	19008WAA026	01/08/2019 17:00	Osvaldo R Sanchez	1
00952	TCLP Herbicides	SW-846 8151A	1	190090024A	01/11/2019 09:38	Richard A Shober	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	190080007A	01/09/2019 18:54	Anita M Dale	25
11126	Pest Leachate Update IV	SW-846 3510C	1	190080007A	01/08/2019 17:20	Christine E Gleim	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	190090024A	01/09/2019 20:15	Karen L Beyer	1
07035	Arsenic	SW-846 6010C	2	190091404504	01/13/2019 17:30	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	2	190091404504	01/13/2019 17:30	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010C	2	190091404504	01/13/2019 17:30	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	2	190091404504	01/13/2019 17:30	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	2	190091404504	01/13/2019 17:30	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	2	190091404504	01/15/2019 14:49	Cindy M Gehman	1
07066	Silver	SW-846 6010C	2	190091404504	01/15/2019 14:49	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190090571303	01/10/2019 10:53	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	190091404504	01/10/2019 07:35	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190090571303	01/10/2019 06:15	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	19007-12245-947A	01/07/2019 14:15	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
TCLP ZHE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS84-03

BASF Corporation
ELLE Sample #: TL 9961486
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	1.1	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	34	0.16	1.0	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.14	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190111AA	01/12/2019 02:51	Patrick T Herres	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L190132AA	01/13/2019 20:37	Abigail Roselli	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190111AA	01/12/2019 02:50	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L190132AA	01/13/2019 20:36	Abigail Roselli	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	19007-12245-946	01/07/2019 14:05	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS84-04

BASF Corporation
ELLE Sample #: SW 9961487
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	610	2,900	100
10885	PCB-1221	11104-28-2	N.D. D1	770	2,900	100
10885	PCB-1232	11141-16-5	N.D. D1	1,300	2,900	100
10885	PCB-1242	53469-21-9	24,000 D1	560	2,900	100
10885	PCB-1248	12672-29-6	N.D. D1	560	2,900	100
10885	PCB-1254	11097-69-1	N.D. D1	560	2,900	100
10885	PCB-1260	11096-82-5	N.D. D1	820	2,900	100
10885	PCB-1262	37324-23-5	N.D. D1	560	2,900	100
10885	PCB-1268	11100-14-4	N.D. D1	560	2,900	100
10885	Total PCBs	1336-36-3	24,000	560	2,900	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	20.0	59.9	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.7 J	0.0100	0.0100	1
	The pH was measured in water at 19.1 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.74 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS84-04

BASF Corporation
ELLE Sample #: SW 9961487
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	41.5	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	190080099A	01/10/2019 16:44	Covenant Mutuku	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	190080099A	01/09/2019 09:00	Michelle A Newswanger	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19010104201A	01/10/2019 12:31	Joseph E McKenzie	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	19009054201A	01/09/2019 21:25	Daniel S Smith	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19008112101A	01/08/2019 04:35	Kevin Litwa	1
00394	pH	SW-846 9045D Nov 2004	1	19014039402A	01/14/2019 11:00	Michelle L Lalli	1
00496	Corrosivity	SW-846 Chapter 7	1	19014039402A	01/14/2019 11:00	Michelle L Lalli	1
01121	Reactivity	SW-846 Chapter 7.3	1	19008112101A	01/08/2019 04:35	Kevin Litwa	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19007820006B	01/09/2019 06:52	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
TCLP NVE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS84-05

BASF Corporation
ELLE Sample #: TL 9961488
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	86	0.6	3	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	6	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.6	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.6	3	1
14242	Hexachloroethane	67-72-1	N.D.	1	6	1
14242	2-Methylphenol	95-48-7	N.D.	0.6	3	1
14242	4-Methylphenol	106-44-5	190	3	13	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.6	3	1
14242	Pentachlorophenol	87-86-5	N.D.	1	6	1
14242	Pyridine	110-86-1	N.D.	3	6	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.6	3	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.6	3	1
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00050	0.0025	50
10647	Chlordane	57-74-9	N.D. D1	0.040	0.13	50
10647	Endrin	72-20-8	N.D. D2	0.0020	0.0050	50
10647	Heptachlor	76-44-8	N.D. D1	0.0010	0.0025	50
10647	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00060	0.0025	50
10647	Methoxychlor	72-43-5	N.D. D1	0.0075	0.025	50
10647	Toxaphene	8001-35-2	N.D. D1	0.25	0.75	50
	Reporting limits were raised due to interference from the sample matrix.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0384 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.984	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0165	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0084 J	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
TCLP NVE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS84-05

BASF Corporation
ELLE Sample #: TL 9961488
ELLE Group #: 2023687
Matrix: Soil

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19008WAA026	01/09/2019 13:46	Kira N Beck	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19008WAA026	01/09/2019 17:13	Brandon K Cordova	5
00813	BNA Water Extraction	SW-846 3510C	1	19008WAA026	01/08/2019 17:00	Osvaldo R Sanchez	1
00952	TCLP Herbicides	SW-846 8151A	1	190090024A	01/11/2019 10:12	Richard A Shober	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	190080007A	01/09/2019 19:07	Anita M Dale	50
11126	Pest Leachate Update IV	SW-846 3510C	1	190080007A	01/08/2019 17:20	Christine E Gleim	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	190090024A	01/09/2019 20:15	Karen L Beyer	1
07035	Arsenic	SW-846 6010C	1	190091404504	01/13/2019 17:10	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	190091404504	01/13/2019 17:10	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010C	1	190091404504	01/13/2019 17:10	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	190091404504	01/13/2019 17:10	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190091404504	01/13/2019 17:10	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	190091404504	01/15/2019 14:18	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	190091404504	01/15/2019 14:18	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190090571303	01/10/2019 10:55	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	190091404504	01/10/2019 07:35	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190090571303	01/10/2019 06:15	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	19007-12245-947A	01/07/2019 14:15	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
TCLP ZHE
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/05/2019 09:30
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS84-06

BASF Corporation
ELLE Sample #: TL 9961489
ELLE Group #: 2023687
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	1.7	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	41	0.16	1.0	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.19	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	0.004 J	0.004	0.020	20
11997	Trichloroethene	79-01-6	0.005 J	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190111AA	01/12/2019 03:12	Patrick T Herres	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L190132AA	01/13/2019 20:59	Abigail Roselli	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190111AA	01/12/2019 03:11	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L190132AA	01/13/2019 20:58	Abigail Roselli	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	19007-12245-946	01/07/2019 14:05	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 5190111AA	Sample number(s): 9961486,9961489		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
Batch number: L190132AA	Sample number(s): 9961486,9961489		
Chlorobenzene	N.D.	0.0002	0.001
	ug/l	ug/l	ug/l
Batch number: 19008WAA026	Sample number(s): 9961485,9961488		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	mg/l	mg/l
Batch number: 190090024A	Sample number(s): 9961485,9961488		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	ug/kg	ug/kg
Batch number: 190080099A	Sample number(s): 9961484,9961487		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 190080007A	Sample number(s): 9961485,9961488		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 190090571303	Sample number(s): 9961485,9961488		
Mercury	N.D.	0.000050	0.00020
Batch number: 190091404504	Sample number(s): 9961485,9961488		
Arsenic	N.D.	0.0160	0.0500
Barium	0.0013 J	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 19010104201A	Sample number(s): 9961484,9961487		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 19008112101A	Sample number(s): 9961484,9961487		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5190111AA	Sample number(s): 9961486,9961489								
Benzene	0.0200	0.0202	0.0200	0.0203	101	101	80-120	1	30
2-Butanone	0.150	0.141	0.150	0.140	94	93	59-135	1	30
Carbon Tetrachloride	0.0200	0.0212	0.0200	0.0212	106	106	64-134	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Chloroform	0.0200	0.0210	0.0200	0.0212	105	106	80-120	1	30
1,2-Dichloroethane	0.0200	0.0221	0.0200	0.0220	110	110	73-124	0	30
1,1-Dichloroethene	0.0200	0.0212	0.0200	0.0215	106	108	80-131	1	30
Tetrachloroethene	0.0200	0.0201	0.0200	0.0201	101	101	80-120	0	30
Trichloroethene	0.0200	0.0214	0.0200	0.0212	107	106	80-120	1	30
Vinyl Chloride	0.0200	0.0140	0.0200	0.0142	70	71	56-120	2	30
Batch number: L190132AA	Sample number(s): 9961486,9961489								
Chlorobenzene	0.0200	0.0202	0.0200	0.0226	101	113	80-120	11	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19008WAA026	Sample number(s): 9961485,9961488								
1,4-Dichlorobenzene	50	35.31	50	33.44	71	67	30-109	5	30
2,4-Dinitrotoluene	50	52.13	50	47.81	104	96	69-117	9	30
Hexachlorobenzene	50	45.98	50	42.81	92	86	65-121	7	30
Hexachlorobutadiene	50	38.53	50	34.28	77	69	21-114	12	30
Hexachloroethane	50	31.2	50	28.97	62	58	24-100	7	30
2-Methylphenol	50	43.55	50	41.16	87	82	59-109	6	30
4-Methylphenol	50	46.78	50	43.18	94	86	56-108	8	30
Nitrobenzene	50	49.42	50	45.76	99	92	59-117	8	30
Pentachlorophenol	50	44.83	50	44.56	90	89	64-130	1	30
Pyridine	50	23.06	50	24.63	46	49	13-83	7	30
2,4,5-Trichlorophenol	50	50.14	50	51.03	100	102	73-124	2	30
2,4,6-Trichlorophenol	50	50.54	50	48.78	101	98	69-122	4	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190090024A	Sample number(s): 9961485,9961488								
2,4-D	0.0250	0.0322	0.0250	0.0275	129	110	42-147	16	30
2,4,5-TP	0.0250	0.0260	0.0250	0.0229	104	92	58-148	13	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 190080099A	Sample number(s): 9961484,9961487								
PCB-1016	166.88	174.87			105		76-121		
PCB-1260	166.67	218.69			131*		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190080007A	Sample number(s): 9961485,9961488								
Gamma BHC - Lindane	0.000250	0.000210	0.000250	0.000223	84	89	51-132	6	30
Endrin	0.000125	0.000112	0.000125	0.000115	90	92	60-151	3	30
Heptachlor	0.000251	0.000156	0.000251	0.000160	62	64	38-135	3	30
Heptachlor Epoxide	0.000376	0.000311	0.000376	0.000325	83	86	56-132	4	30
Methoxychlor	0.00101	0.000997	0.00101	0.00103	99	102	58-165	3	30
	mg/l	mg/l	mg/l	mg/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 190090571303	Sample number(s): 9961485,9961488								
Mercury	0.00100	0.000897			90		80-114		
Batch number: 190091404504	Sample number(s): 9961485,9961488								
Arsenic	0.150	0.167			111		80-120		
Barium	2.00	2.20			110		87-111		
Cadmium	0.0500	0.0496			99		90-111		
Chromium	0.200	0.201			101		87-110		
Lead	0.150	0.144			96		87-113		
Selenium	0.150	0.159			106		80-120		
Silver	0.0500	0.0554			111		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19010104201A	Sample number(s): 9961484,9961487								
Cyanide (Reactivity)	1000	1020.36			102		77-113		
Batch number: 19014039402A	Sample number(s): 9961484,9961487								
Corrosivity	7.00	7.02			100		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19008112101A	Sample number(s): 9961484,9961487								
Sulfide (Reactivity)	570	439.94			77		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19014039402A	Sample number(s): 9961484,9961487								
pH	7.00	7.02			100		95-105		
	%	**%**	**%**	**%**					
Batch number: 19007820006B	Sample number(s): 9961484,9961487								
Moisture	89.5	89.42			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 190091404504	Sample number(s): 9961485,9961488 UNSPK: 9961488									
Arsenic	0.0384	0.150	0.206	0.150	0.223	112	123	75-125	8	20
Barium	0.984	2.00	3.23	2.00	3.22	112	112	75-125	0	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Cadmium	N.D.	0.0500	0.0476	0.0500	0.0472	95	94	75-125	1	20
Chromium	0.0165	0.200	0.211	0.200	0.214	97	99	75-125	1	20
Lead	0.00842	0.150	0.143	0.150	0.144	89	90	75-125	1	20
Selenium	N.D.	0.150	0.158	0.150	0.159	105	106	75-125	1	20
Silver	N.D.	0.0500	0.0569	0.0500	0.0555	114	111	75-125	2	20
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19010104201A	Sample number(s): 9961484,9961487 UNSPK: 9961487									
Cyanide (Reactivity)	N.D.	1000	N.D.	1000	N.D.	0*	0*	77-113	0	11
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19008112101A	Sample number(s): 9961484,9961487 UNSPK: 9961487									
Sulfide (Reactivity)	N.D.	565.5	N.D.	553.4	N.D.	0*	0*	63-101	0	24

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 190091404504	Sample number(s): 9961485,9961488 BKG: 9961488			
Arsenic	0.0384	0.0637	49* (1)	20
Barium	0.984	0.991	1	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.0165	0.0182	10 (1)	20
Lead	0.00842	N.D.	200* (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 19014039402A	Sample number(s): 9961484,9961487 BKG: 9961487			
Corrosivity	11.74	11.74	0	2
	Std. Units	**Std. Units**		
Batch number: 19014039402A	Sample number(s): 9961484,9961487 BKG: 9961487			
pH	11.74	11.74	0	3

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5190111AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9961486	99	97	91	102
9961489	98	98	90	101
Blank	99	98	92	100
LCS	100	97	94	107
LCSD	100	97	93	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19008WAA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9961485	35	38	62	69	64	51
9961488	21	22	42	40	42	39
Blank	32	43	86	80	70	95
LCS	45	57	104	94	86	90
LCSD	43	57	103	86	77	86
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: TCLP Pesticides by 8081B
Batch number: 190080007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9961485	89	30*	188*	56
9961488	111	0*	251*	69
Blank	36	83	39	84
LCS	44	89	47	88
LCSD	43	91	44	86
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs 8082A/3546
Batch number: 190080099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9961484	415*	106	59	98
9961487	1142*	235*	127	201*
Blank	121	133	112	116
LCS	114	126	116	117
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Herbicides
Batch number: 190090024A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:17

Group Number: 2023687

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Herbicides
Batch number: 190090024A

	2,4-DCAA-D1	2,4-DCAA-D2
9961485	80	75
9961488	92	89
Blank	85	76
LCS	99	90
LCSD	86	81
Limits:	26-136	26-136

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2023687 Sample # 9961484-89

COC # 576164

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes [X] No [ ]

Matrix

Soil [X] Sediment [X] Tissue [ ] Water: Potable [ ] Ground [ ] Surface [ ] NPDES [ ] Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:
SCR#: 236824

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability/pH	Reactivity	Corrosivity	Soil/solid PCBs in soil	Soil/solid TCLP metals	Soil/solid TCLP Pest/Herb	Soil/solid TCLP SVOCs	Soil/solid TCLP VOAs	Remarks
B11TSCAHVOC010419	01/04/19	1345	X		4	X	X	X	X	X	X	X	X	
B15TSCAHVOC010419	01/04/19	1355	X		4	X	X	X	X	X	X	X	X	
Cooler temp bottle	01/04/19	1430			1									cooler Temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Brad Pitt	12/26/18	1:10			
Jeff Denman	01/04/19	1600			
			Mike	1/5/19	0930

EDD Required? Yes, No
If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 237766

Group Number(s): 2023687

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/05/2019 9:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:09 on 01/05/2019

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 23, 2019 15:29

Project: Rensselaer

Account #: 04285
Group Number: 2024998
SDG: RNS86
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B7TSCAHVOC011119 Grab Soil	01/11/2019 13:55	9966566
B7TSCAHVOC011119 Grab Soil	01/11/2019 13:55	9966567
B7TSCAHVOC011119 Grab Soil	01/11/2019 13:55	9966568

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B7TSCAHVOC011119 Grab Soil**
COC: 556612

Project Name: **Rensselaer**

Submittal Date/Time: 01/12/2019 09:25
Collection Date/Time: 01/11/2019 13:55
SDG#: RNS86-01

BASF Corporation
ELLE Sample #: SW 9966566
ELLE Group #: 2024998
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	600	2,800	100
10885	PCB-1221	11104-28-2	N.D. D1	770	2,800	100
10885	PCB-1232	11141-16-5	N.D. D1	1,300	2,800	100
10885	PCB-1242	53469-21-9	23,000 D2	550	2,800	100
10885	PCB-1248	12672-29-6	N.D. D1	550	2,800	100
10885	PCB-1254	11097-69-1	N.D. D1	550	2,800	100
10885	PCB-1260	11096-82-5	N.D. D1	820	2,800	100
10885	PCB-1262	37324-23-5	N.D. D1	550	2,800	100
10885	PCB-1268	11100-14-4	N.D. D1	550	2,800	100
10885	Total PCBs	1336-36-3	23,000	550	2,800	100
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.7	59.2	1
	40 CFR 261.21(a)(2)					
00542	Ignitability	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH	n.a.	11.6 J	0.0100	0.0100	1
	The pH was measured in water at 20.3 C.					
	SW-846 Chapter 7					
00496	Corrosivity	n.a.	See Below	0	0	1
	The pH of the sample is 11.61 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B7TSCAHVOC011119 Grab Soil**
COC: 556612

Project Name: **Rensselaer**

Submittal Date/Time: 01/12/2019 09:25
Collection Date/Time: 01/11/2019 13:55
SDG#: RNS86-01

BASF Corporation
ELLE Sample #: SW 9966566
ELLE Group #: 2024998
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture	n.a.	40.6	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	190160024A	01/21/2019 09:22	Kirby B Turner	100
10497	PCB Microwave Soil Extraction	SW-846 3546	1	190160024A	01/17/2019 08:00	Michelle A Newswanger	1
01123	Cyanide (Reactivity)	SW-846 9012B	2	19018104201A	01/21/2019 17:45	Gregory Baldree	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	19015054201A	01/15/2019 00:00	Hannah M Royer	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19017112101A	01/17/2019 07:10	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	19016039401A	01/16/2019 18:35	Jeremy L Bolf	1
00496	Corrosivity	SW-846 Chapter 7	1	19016039401A	01/16/2019 18:35	Jeremy L Bolf	1
01121	Reactivity	SW-846 Chapter 7.3	1	19017112101A	01/17/2019 07:10	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19015820002B	01/16/2019 06:36	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **B7TSCAHVOC011119 Grab Soil**
TCLP NVE
COC: 556612

BASF Corporation
ELLE Sample #: TL 9966567
ELLE Group #: 2024998
Matrix: Soil

Project Name: **Rensselaer**

Submittal Date/Time: 01/12/2019 09:25
Collection Date/Time: 01/11/2019 13:55
SDG#: RNS86-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	49	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	330	3	10	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: Hexachlorobenzene					
Herbicides	**SW-846 8151A**		**mg/l**	**mg/l**	**mg/l**	
00952	2,4-D	94-75-7	N.D. D2	0.016	0.050	1
00952	2,4,5-TP	93-72-1	N.D. D1	0.0010	0.0050	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00010	0.00050	10
10647	Chlordane	57-74-9	N.D. ZD1	0.0080	0.025	10
10647	Endrin	72-20-8	N.D. D2	0.00040	0.0010	10
10647	Heptachlor	76-44-8	0.00028 JPD1	0.00020	0.00050	10
10647	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00012	0.00050	10
10647	Methoxychlor	72-43-5	N.D. D1	0.0015	0.0050	10
10647	Toxaphene	8001-35-2	N.D. D1	0.050	0.15	10
	Z=The response for a target analyte(s) in the initial calibration verification standard is outside the QC acceptance limits. Since the response is high indicating increased sensitivity, and the target analyte(s) is not detected in the sample, the data is reported.					
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0453 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.743	0.0010	0.0050	1
07049	Cadmium	7440-43-9	N.D.	0.0010	0.0050	1

*=This limit was used in the evaluation of the final result

Sample Description: **B7TSCAHVOC011119 Grab Soil**
TCLP NVE
COC: 556612

Project Name: **Rensselaer**

Submittal Date/Time: 01/12/2019 09:25
Collection Date/Time: 01/11/2019 13:55
SDG#: RNS86-02

BASF Corporation
ELLE Sample #: TL 9966567
ELLE Group #: 2024998
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07051	Chromium	7440-47-3	0.0220	0.0053	0.0150	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19016WAL026	01/18/2019 09:44	Joseph M Gambler	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19016WAL026	01/21/2019 11:35	Edward C Monborne	5
00813	BNA Water Extraction	SW-846 3510C	1	19016WAL026	01/17/2019 17:00	Mathias Okpo	1
00952	TCLP Herbicides	SW-846 8151A	1	190150017A	01/16/2019 23:43	Rachel Umberger	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	190180012A	01/23/2019 03:17	Dylan Schreiner	10
11126	Pest Leachate Update IV	SW-846 3510C	1	190180012A	01/18/2019 17:15	Osvaldo R Sanchez	1
11110	Herbicide Leachates Extraction	SW-846 8151A	1	190150017A	01/16/2019 00:30	Sherry L Morrow	1
07035	Arsenic	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
07049	Cadmium	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
07036	Selenium	SW-846 6010C	1	190151404502	01/16/2019 22:03	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	190151404502	01/16/2019 15:08	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	190150571301	01/16/2019 10:06	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	190151404502	01/16/2019 03:45	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190150571301	01/16/2019 05:45	Annamaria Kuhns	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	19014-12245-947	01/14/2019 15:15	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B7TSCAHVOC011119 Grab Soil**
TCLP ZHE
COC: 556612

Project Name: **Rensselaer**

Submittal Date/Time: 01/12/2019 09:25
Collection Date/Time: 01/11/2019 13:55
SDG#: RNS86-03

BASF Corporation
ELLE Sample #: TL 9966568
ELLE Group #: 2024998
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	0.14	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	15	0.040	0.20	200
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	0.022	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190182AA	01/18/2019 15:01	Linda C Pape	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L190201AA	01/20/2019 16:44	Abigail Roselli	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190182AA	01/18/2019 15:00	Linda C Pape	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	L190201AA	01/20/2019 16:43	Abigail Roselli	200
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	19014-12245-946	01/14/2019 15:40	Tanner E Grumbling	n.a.

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2024998
Reported: 01/23/2019 15:29

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 5190182AA	Sample number(s): 9966568		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
Batch number: L190201AA	Sample number(s): 9966568		
Chlorobenzene	N.D.	0.0002	0.001
	ug/l	ug/l	ug/l
Batch number: 19016WAL026	Sample number(s): 9966567		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	mg/l	mg/l	mg/l
Batch number: 190150017A	Sample number(s): 9966567		
2,4-D	N.D.	0.016	0.050
2,4,5-TP	N.D.	0.0010	0.0050
	ug/kg	ug/kg	ug/kg
Batch number: 190160024A	Sample number(s): 9966566		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/23/2019 15:29

Group Number: 2024998

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17
	mg/l	mg/l	mg/l
Batch number: 190180012A	Sample number(s): 9966567		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 190150571301	Sample number(s): 9966567		
Mercury	N.D.	0.000050	0.00020
Batch number: 190151404502	Sample number(s): 9966567		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 19018104201A	Sample number(s): 9966566		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 19017112101A	Sample number(s): 9966566		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5190182AA	Sample number(s): 9966568								
Benzene	0.0200	0.0210	0.0200	0.0208	105	104	80-120	1	30
2-Butanone	0.150	0.143	0.150	0.142	95	95	59-135	1	30
Carbon Tetrachloride	0.0200	0.0188	0.0200	0.0188	94	94	64-134	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/23/2019 15:29

Group Number: 2024998

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Chloroform	0.0200	0.0211	0.0200	0.0208	106	104	80-120	2	30
1,2-Dichloroethane	0.0200	0.0210	0.0200	0.0205	105	103	73-124	2	30
1,1-Dichloroethene	0.0200	0.0214	0.0200	0.0217	107	108	80-131	1	30
Tetrachloroethene	0.0200	0.0196	0.0200	0.0197	98	98	80-120	0	30
Trichloroethene	0.0200	0.0212	0.0200	0.0210	106	105	80-120	1	30
Vinyl Chloride	0.0200	0.0158	0.0200	0.0160	79	80	56-120	1	30
Batch number: L190201AA	Sample number(s): 9966568								
Chlorobenzene	0.0200	0.0233	0.0200	0.0229	117	114	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19016WAL026	Sample number(s): 9966567								
1,4-Dichlorobenzene	50	28.03			56		30-109		
2,4-Dinitrotoluene	50	39.06			78		69-117		
Hexachlorobenzene	50	30.72			61*		65-121		
Hexachlorobutadiene	50	24.99			50		21-114		
Hexachloroethane	50	25.6			51		24-100		
2-Methylphenol	50	36.26			73		59-109		
4-Methylphenol	50	36.34			73		56-108		
Nitrobenzene	50	36.41			73		59-117		
Pentachlorophenol	50	37.94			76		64-130		
Pyridine	50	20.54			41		13-83		
2,4,5-Trichlorophenol	50	39.1			78		73-124		
2,4,6-Trichlorophenol	50	39.06			78		69-122		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190150017A	Sample number(s): 9966567								
2,4-D	0.0250	0.0260	0.0250	0.0267	104	107	42-147	3	30
2,4,5-TP	0.0250	0.0231	0.0250	0.0245	92	98	58-148	6	30
	ug/kg	ug/kg	ug/kg	ug/kg					
Batch number: 190160024A	Sample number(s): 9966566								
PCB-1016	166.88	165.42			99		76-121		
PCB-1260	166.67	183.05			110		79-130		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190180012A	Sample number(s): 9966567								
Gamma BHC - Lindane	0.000250	0.000169	0.000250	0.000185	68	74	51-132	9	30
Endrin	0.000125	0.0000900	0.000125	0.000104	72	83	60-151	14	30
Heptachlor	0.000251	0.000174	0.000251	0.000190	69	76	38-135	9	30
Heptachlor Epoxide	0.000376	0.000263	0.000376	0.000287	70	76	56-132	9	30
Methoxychlor	0.00101	0.00103	0.00101	0.00112	102	111	58-165	8	30
	mg/l	mg/l	mg/l	mg/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/23/2019 15:29

Group Number: 2024998

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 190150571301	Sample number(s): 9966567								
Mercury	0.00100	0.000851			85		80-114		
Batch number: 190151404502	Sample number(s): 9966567								
Arsenic	0.150	0.153			102		80-120		
Barium	2.00	2.15			107		87-111		
Cadmium	0.0500	0.0493			99		90-111		
Chromium	0.200	0.206			103		87-110		
Lead	0.150	0.141			94		87-113		
Selenium	0.150	0.165			110		80-120		
Silver	0.0500	0.0594			119		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19018104201A	Sample number(s): 9966566								
Cyanide (Reactivity)	1000	982.64			98		77-113		
Batch number: 19016039401A	Sample number(s): 9966566								
Corrosivity	7.00	6.99			100		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19017112101A	Sample number(s): 9966566								
Sulfide (Reactivity)	570	435.62			76		63-101		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19016039401A	Sample number(s): 9966566								
pH	7.00	6.99			100		95-105		
	%	**%**	**%**	**%**					
Batch number: 19015820002B	Sample number(s): 9966566								
Moisture	89.5	89.42			100		99-101		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/23/2019 15:29

Group Number: 2024998

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5190182AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9966568	94	96	91	101
Blank	95	98	92	101
LCS	97	95	93	103
LCSD	97	96	94	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19016WAL026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9966567	32	41	55	66	62	60
Blank	37	51	75	76	65	93
LCS	34	47	68	68	63	81
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: TCLP Herbicides
Batch number: 190150017A

	2,4-DCAA-D1	2,4-DCAA-D2
9966567	87	88
Blank	72	64
LCS	79	73
LCSD	84	76
Limits:	26-136	26-136

Analysis Name: PCBs 8082A/3546
Batch number: 190160024A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9966566	250*	160*	1133*	191*
Blank	108	101	101	98
LCS	108	105	105	106
Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Pesticides by 8081B
Batch number: 190180012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9966567	53	50	87	74
Blank	67	67	67	75

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/23/2019 15:29

Group Number: 2024998

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP Pesticides by 8081B
Batch number: 190180012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCS	70	69	73	72
LCSD	72	71	72	74
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2024998 Sample # 9966566-68

COC # 556612

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☒ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Ignitability / pH	Reactivity	Corrosivity	Soil/Solid TCLP VOAs	Soil/Solid PCBs in Soil	Soil/Solid TCLP Metals	Soil/Solid TCLP Resthleb	Soil/Solid TCLP SVOCs
B7TSCAHVOC01119	04/1/19	1355	X		4	X	X	X	X	X	X	X	X
Cooler Temp bottle	04/1/19	1430			1								

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks
Cooler Temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	04/1/19	1600			
				4/2/19	925

EDD Required? Yes No
If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 238491

Group Number(s): 2024998

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/12/2019 9:25
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 11:00 on 01/12/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 24, 2019 15:26

Project: Rensselaer

Account #: 04285
Group Number: 2025564
SDG: RNS87
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B11TSCAHVOC010419 Grab Soil	01/04/2019 13:45	9968908
B15TSCAHVOC010419 Grab Soil	01/04/2019 13:55	9968909

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B11TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS87-01

BASF Corporation
ELLE Sample #: SW 9968908
ELLE Group #: 2025564
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**	**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	N.D.	2,100	7,100	207.47
11995	Benzene	71-43-2	12,000	180	1,800	207.47
11995	2-Butanone	78-93-3	N.D.	350	3,500	207.47
11995	Carbon Disulfide	75-15-0	N.D.	210	1,800	207.47
11995	Carbon Tetrachloride	56-23-5	N.D.	180	1,800	207.47
11995	Chlorobenzene	108-90-7	790,000	1,800	18,000	2074.69
11995	Chloroethane	75-00-3	N.D.	350	1,800	207.47
11995	Chloroform	67-66-3	N.D.	210	1,800	207.47
11995	Dibromochloromethane	124-48-1	N.D.	140	1,800	207.47
11995	1,1-Dichloroethane	75-34-3	N.D.	180	1,800	207.47
11995	1,2-Dichloroethane	107-06-2	2,000	210	1,800	207.47
11995	1,1-Dichloroethene	75-35-4	N.D.	180	1,800	207.47
11995	trans-1,2-Dichloroethene	156-60-5	N.D.	180	1,800	207.47
11995	1,3-Dichloropropane	142-28-9	N.D.	140	1,800	207.47
11995	Ethylbenzene	100-41-4	2,100	140	1,800	207.47
11995	4-Methyl-2-pentanone	108-10-1	N.D.	350	3,500	207.47
11995	Methylene Chloride	75-09-2	N.D.	710	1,800	207.47
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	140	1,800	207.47
11995	Tetrachloroethene	127-18-4	N.D.	180	1,800	207.47
11995	Toluene	108-88-3	4,300	210	1,800	207.47
11995	1,1,1-Trichloroethane	71-55-6	N.D.	210	1,800	207.47
11995	1,1,2-Trichloroethane	79-00-5	N.D.	180	1,800	207.47
11995	Trichloroethene	79-01-6	N.D.	180	1,800	207.47
11995	1,2,3-Trichloropropane	96-18-4	N.D.	210	1,800	207.47
11995	Vinyl Chloride	75-01-4	N.D.	210	1,800	207.47
11995	Xylene (Total)	1330-20-7	6,600	350	1,800	207.47
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	240	28	140	5
10726	Acenaphthylene	208-96-8	N.D.	28	140	5
10726	Aniline	62-53-3	12,000	1,400	4,200	5
10726	Anthracene	120-12-7	2,000	28	140	5
10726	Benzo(a)anthracene	56-55-3	220	28	140	5
10726	Benzo(a)pyrene	50-32-8	280	56	140	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.	28	140	5
10726	Benzo(g,h,i)perylene	191-24-2	N.D.	56	140	5
10726	Benzo(k)fluoranthene	207-08-9	N.D.	28	140	5
10726	Butylbenzylphthalate	85-68-7	N.D.	560	1,400	5
10726	Di-n-butylphthalate	84-74-2	N.D.	560	1,400	5
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	140	310	5

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS87-01

BASF Corporation
ELLE Sample #: SW 9968908
ELLE Group #: 2025564
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	4-Chloroaniline	106-47-8	N.D.		280	1,400	5
10726	2-Chlorophenol	95-57-8	200	J	140	310	5
10726	Chrysene	218-01-9	340		28	140	5
10726	Dibenz(a,h)anthracene	53-70-3	N.D.		28	140	5
10726	Dibenzofuran	132-64-9	170	J	140	310	5
10726	1,2-Dichlorobenzene	95-50-1	160,000		1,700	4,200	50
10726	1,3-Dichlorobenzene	541-73-1	13,000		140	310	5
10726	1,4-Dichlorobenzene	106-46-7	17,000		140	310	5
10726	3,3'-Dichlorobenzidine	91-94-1	2,000	J	840	2,800	5
10726	2,4-Dichlorophenol	120-83-2	N.D.		140	310	5
10726	Diethylphthalate	84-66-2	N.D.		560	1,400	5
10726	Dimethylphthalate	131-11-3	N.D.		560	1,400	5
10726	2,4-Dinitrophenol	51-28-5	N.D.		3,100	8,400	5
10726	2,6-Dinitrotoluene	606-20-2	N.D.		170	420	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		560	1,400	5
10726	Fluoranthene	206-44-0	550		28	140	5
10726	Fluorene	86-73-7	N.D.		28	140	5
10726	Hexachlorobenzene	118-74-1	N.D.		28	140	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		56	140	5
10726	Isophorone	78-59-1	N.D.		140	310	5
10726	2-Methylnaphthalene	91-57-6	N.D.		84	280	5
10726	2-Methylphenol	95-48-7	N.D.		220	560	5
10726	4-Methylphenol	106-44-5	11,000		170	420	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10726	Naphthalene	91-20-3	7,900		56	140	5
10726	2-Nitroaniline	88-74-4	N.D.		170	420	5
10726	3-Nitroaniline	99-09-2	N.D.		560	1,400	5
10726	Nitrobenzene	98-95-3	N.D.		220	560	5
10726	2-Nitrophenol	88-75-5	N.D.		140	310	5
10726	4-Nitrophenol	100-02-7	N.D.		1,400	4,200	5
10726	Di-n-octylphthalate	117-84-0	N.D.		560	1,400	5
10726	Pentachlorophenol	87-86-5	N.D.		310	1,400	5
10726	Phenanthrene	85-01-8	530		28	140	5
10726	Phenol	108-95-2	1,700		200	420	5
10726	Pyrene	129-00-0	2,100		28	140	5
10726	1,2,4-Trichlorobenzene	120-82-1	100,000		1,400	3,100	50
10726	2,4,5-Trichlorophenol	95-95-4	N.D.		170	420	5

*=This limit was used in the evaluation of the final result

Sample Description: **B11TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:45
SDG#: RNS87-01

BASF Corporation
ELLE Sample #: SW 9968908
ELLE Group #: 2025564
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		%	%	%	
07801	Moisture (Re-Entry)	n.a.	41.3	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670
This sample was originally submitted to the laboratory on 01/05/19 at 0930. We received authorization for further testing on 01/17/19.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q190181AA	01/18/2019 11:30	Jennifer K Howe	207.47
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q190181AA	01/18/2019 11:53	Jennifer K Howe	2074.69
00374	GC/MS - Bulk Soil Prep	SW-846 5030A	1	201901752495	01/17/2019 13:16	Anastasia K Jaynes	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5030A	2	201901752495	01/17/2019 13:16	Anastasia K Jaynes	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201901752495	01/17/2019 13:08	Anastasia K Jaynes	n.a.
10726	TCL SOM01.2	SW-846 8270D	1	19017SLA026	01/22/2019 17:47	Edward C Monborne	5
10726	TCL SOM01.2	SW-846 8270D	1	19017SLA026	01/23/2019 17:39	Edward C Monborne	50
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19017SLA026	01/17/2019 21:50	Karen L Beyer	1
07801	Moisture (Re-Entry)	SM 2540 G-2011 %Moisture Calc	1	19007820006B	01/09/2019 06:52	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS87-02

BASF Corporation
ELLE Sample #: SW 9968909
ELLE Group #: 2025564
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/kg**		**ug/kg**	**ug/kg**	
11995	Acetone	67-64-1	N.D.		9,400	31,000	912.41
11995	Benzene	71-43-2	9,300		780	7,800	912.41
11995	2-Butanone	78-93-3	N.D.		1,600	16,000	912.41
11995	Carbon Disulfide	75-15-0	N.D.		940	7,800	912.41
11995	Carbon Tetrachloride	56-23-5	N.D.		780	7,800	912.41
11995	Chlorobenzene	108-90-7	490,000.E		780	7,800	912.41
11995	Chloroethane	75-00-3	N.D.		1,600	7,800	912.41
11995	Chloroform	67-66-3	N.D.		940	7,800	912.41
11995	Dibromochloromethane	124-48-1	N.D.		620	7,800	912.41
11995	1,1-Dichloroethane	75-34-3	N.D.		780	7,800	912.41
11995	1,2-Dichloroethane	107-06-2	1,600	J	940	7,800	912.41
11995	1,1-Dichloroethene	75-35-4	N.D.		780	7,800	912.41
11995	trans-1,2-Dichloroethene	156-60-5	N.D.		780	7,800	912.41
11995	1,3-Dichloropropane	142-28-9	N.D.		620	7,800	912.41
11995	Ethylbenzene	100-41-4	1,300	J	620	7,800	912.41
11995	4-Methyl-2-pentanone	108-10-1	N.D.		1,600	16,000	912.41
11995	Methylene Chloride	75-09-2	N.D.		3,100	7,800	912.41
11995	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		620	7,800	912.41
11995	Tetrachloroethene	127-18-4	N.D.		780	7,800	912.41
11995	Toluene	108-88-3	2,100	J	940	7,800	912.41
11995	1,1,1-Trichloroethane	71-55-6	N.D.		940	7,800	912.41
11995	1,1,2-Trichloroethane	79-00-5	N.D.		780	7,800	912.41
11995	Trichloroethene	79-01-6	N.D.		780	7,800	912.41
11995	1,2,3-Trichloropropane	96-18-4	N.D.		940	7,800	912.41
11995	Vinyl Chloride	75-01-4	N.D.		940	7,800	912.41
11995	Xylene (Total)	1330-20-7	3,800	J	1,600	7,800	912.41

The concentration reported for chlorobenzenen is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time and confirms the initial analysis.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**		**ug/kg**	**ug/kg**	
10726	Acenaphthene	83-32-9	200		28	140	5
10726	Acenaphthylene	208-96-8	N.D.		28	140	5
10726	Aniline	62-53-3	17,000		1,400	4,200	5
10726	Anthracene	120-12-7	6,400		28	140	5
10726	Benzo(a)anthracene	56-55-3	210		28	140	5
10726	Benzo(a)pyrene	50-32-8	330		56	140	5
10726	Benzo(b)fluoranthene	205-99-2	N.D.		28	140	5
10726	Benzo(g,h,i)perylene	191-24-2	N.D.		56	140	5

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

BASF Corporation
ELLE Sample #: SW 9968909
ELLE Group #: 2025564
Matrix: Soil

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS87-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	Benzo(k)fluoranthene	207-08-9	N.D.	28	140	5
10726	Butylbenzylphthalate	85-68-7	N.D.	560	1,400	5
10726	Di-n-butylphthalate	84-74-2	N.D.	560	1,400	5
10726	4-Chloro-3-methylphenol	59-50-7	N.D.	140	310	5
10726	4-Chloroaniline	106-47-8	1,000 J	280	1,400	5
10726	2-Chlorophenol	95-57-8	340	140	310	5
10726	Chrysene	218-01-9	250	28	140	5
10726	Dibenz(a,h)anthracene	53-70-3	62 J	28	140	5
10726	Dibenzofuran	132-64-9	N.D.	140	310	5
10726	1,2-Dichlorobenzene	95-50-1	150,000	1,700	4,200	50
10726	1,3-Dichlorobenzene	541-73-1	13,000	140	310	5
10726	1,4-Dichlorobenzene	106-46-7	17,000	140	310	5
10726	3,3'-Dichlorobenzidine	91-94-1	3,600	840	2,800	5
10726	2,4-Dichlorophenol	120-83-2	N.D.	140	310	5
10726	Diethylphthalate	84-66-2	N.D.	560	1,400	5
10726	Dimethylphthalate	131-11-3	N.D.	560	1,400	5
10726	2,4-Dinitrophenol	51-28-5	N.D.	3,100	8,400	5
10726	2,6-Dinitrotoluene	606-20-2	N.D.	170	420	5
10726	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	560	1,400	5
10726	Fluoranthene	206-44-0	570	28	140	5
10726	Fluorene	86-73-7	110 J	28	140	5
10726	Hexachlorobenzene	118-74-1	N.D.	28	140	5
10726	Indeno(1,2,3-cd)pyrene	193-39-5	160	56	140	5
10726	Isophorone	78-59-1	N.D.	140	310	5
10726	2-Methylnaphthalene	91-57-6	270 J	84	280	5
10726	2-Methylphenol	95-48-7	N.D.	220	560	5
10726	4-Methylphenol	106-44-5	13,000	170	420	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10726	Naphthalene	91-20-3	8,700	56	140	5
10726	2-Nitroaniline	88-74-4	N.D.	170	420	5
10726	3-Nitroaniline	99-09-2	N.D.	560	1,400	5
10726	Nitrobenzene	98-95-3	N.D.	220	560	5
10726	2-Nitrophenol	88-75-5	N.D.	140	310	5
10726	4-Nitrophenol	100-02-7	N.D.	1,400	4,200	5
10726	Di-n-octylphthalate	117-84-0	N.D.	560	1,400	5
10726	Pentachlorophenol	87-86-5	N.D.	310	1,400	5
10726	Phenanthrene	85-01-8	580	28	140	5
10726	Phenol	108-95-2	2,400	200	420	5
10726	Pyrene	129-00-0	1,700	28	140	5

*=This limit was used in the evaluation of the final result

Sample Description: **B15TSCAHVOC010419 Grab Soil**
Rensselaer
COC: 576164

Project Name: **Rensselaer**

Submittal Date/Time: 01/17/2019 11:21
Collection Date/Time: 01/04/2019 13:55
SDG#: RNS87-02

BASF Corporation
ELLE Sample #: SW 9968909
ELLE Group #: 2025564
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/kg**	**ug/kg**	**ug/kg**	
10726	1,2,4-Trichlorobenzene	120-82-1	81,000	1,400	3,100	50
10726	2,4,5-Trichlorophenol	95-95-4	N.D.	170	420	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
07801	Moisture (Re-Entry)	n.a.	41.5	0.50	0.50	1

Sample Comments

State of New York Certification No. 10670
This sample was originally submitted to the laboratory on 01/05/19 at 0930. We received authorization for further testing on 01/17/19.

Eurofins Lancaster Laboratories Environmental, LLC is responsible only for the certified testing of samples. We are not directly responsible for the integrity of the sample prior to laboratory receipt. Any reported concentrations less than 200 ug/kg may be biased low if they were not collected according to EPA 5035/5035A specifications.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	VOCs- Solid by 8260C	SW-846 8260C	1	Q190181AA	01/18/2019 12:38	Jennifer K Howe	912.41
00374	GC/MS - Bulk Soil Prep	SW-846 5030A	1	201901752495	01/17/2019 13:17	Anastasia K Jaynes	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5030A	2	201901752495	01/17/2019 13:17	Anastasia K Jaynes	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5030A	1	201901752495	01/17/2019 13:10	Anastasia K Jaynes	n.a.
10726	TCL SOM01.2	SW-846 8270D	1	19017SLA026	01/22/2019 18:11	Edward C Monborne	5
10726	TCL SOM01.2	SW-846 8270D	1	19017SLA026	01/23/2019 16:50	Edward C Monborne	50
10813	BNA Soil Microwave APP IX	SW-846 3546	1	19017SLA026	01/17/2019 21:50	Karen L Beyer	1
07801	Moisture (Re-Entry)	SM 2540 G-2011 %Moisture Calc	1	19007820006B	01/09/2019 06:52	William C Schwebel	1

*=This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2025564
Reported: 01/24/2019 15:26

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
Batch number: Q190181AA	Sample number(s): 9968908-9968909		
Acetone	N.D.	300	1,000
Benzene	N.D.	25	250
2-Butanone	N.D.	50	500
Carbon Disulfide	N.D.	30	250
Carbon Tetrachloride	N.D.	25	250
Chlorobenzene	N.D.	25	250
Chloroethane	N.D.	50	250
Chloroform	N.D.	30	250
Dibromochloromethane	N.D.	20	250
1,1-Dichloroethane	N.D.	25	250
1,2-Dichloroethane	N.D.	30	250
1,1-Dichloroethene	N.D.	25	250
trans-1,2-Dichloroethene	N.D.	25	250
1,3-Dichloropropane	N.D.	20	250
Ethylbenzene	N.D.	20	250
4-Methyl-2-pentanone	N.D.	50	500
Methylene Chloride	N.D.	100	250
1,1,2,2-Tetrachloroethane	N.D.	20	250
Tetrachloroethene	N.D.	25	250
Toluene	N.D.	30	250
1,1,1-Trichloroethane	N.D.	30	250
1,1,2-Trichloroethane	N.D.	25	250
Trichloroethene	N.D.	25	250
1,2,3-Trichloropropane	N.D.	30	250
Vinyl Chloride	N.D.	30	250
Xylene (Total)	N.D.	50	250
Batch number: 19017SLA026	Sample number(s): 9968908-9968909		
Acenaphthene	N.D.	3	17
Acenaphthylene	N.D.	3	17
Aniline	N.D.	170	500
Anthracene	N.D.	3	17
Benzo(a)anthracene	N.D.	3	17
Benzo(a)pyrene	N.D.	7	17
Benzo(b)fluoranthene	N.D.	3	17
Benzo(g,h,i)perylene	N.D.	7	17
Benzo(k)fluoranthene	N.D.	3	17
Butylbenzylphthalate	N.D.	67	170
Di-n-butylphthalate	N.D.	67	170

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/24/2019 15:26

Group Number: 2025564

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/kg	ug/kg	ug/kg
4-Chloro-3-methylphenol	N.D.	17	37
4-Chloroaniline	N.D.	33	170
2-Chlorophenol	N.D.	17	37
Chrysene	N.D.	3	17
Dibenz(a,h)anthracene	N.D.	3	17
Dibenzofuran	N.D.	17	37
1,2-Dichlorobenzene	N.D.	20	50
1,3-Dichlorobenzene	N.D.	17	37
1,4-Dichlorobenzene	N.D.	17	37
3,3'-Dichlorobenzidine	N.D.	100	330
2,4-Dichlorophenol	N.D.	17	37
Diethylphthalate	N.D.	67	170
Dimethylphthalate	N.D.	67	170
2,4-Dinitrophenol	N.D.	370	1,000
2,6-Dinitrotoluene	N.D.	20	50
bis(2-Ethylhexyl)phthalate	N.D.	67	170
Fluoranthene	N.D.	3	17
Fluorene	N.D.	3	17
Hexachlorobenzene	N.D.	3	17
Indeno(1,2,3-cd)pyrene	N.D.	7	17
Isophorone	N.D.	17	37
2-Methylnaphthalene	N.D.	10	33
2-Methylphenol	N.D.	27	67
4-Methylphenol	N.D.	20	50
Naphthalene	N.D.	7	17
2-Nitroaniline	N.D.	20	50
3-Nitroaniline	N.D.	67	170
Nitrobenzene	N.D.	27	67
2-Nitrophenol	N.D.	17	37
4-Nitrophenol	N.D.	170	500
Di-n-octylphthalate	N.D.	67	170
Pentachlorophenol	N.D.	37	170
Phenanthrene	N.D.	3	17
Phenol	N.D.	23	50
Pyrene	N.D.	3	17
1,2,4-Trichlorobenzene	N.D.	17	37
2,4,5-Trichlorophenol	N.D.	20	50

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/24/2019 15:26

Group Number: 2025564

LCS/LCSD

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q190181AA	Sample number(s): 9968908-9968909								
Acetone	7500	8799.8	7500	8332.35	117	111	41-150	5	30
Benzene	1000	1069.28	1000	1032.35	107	103	80-120	4	30
2-Butanone	7500	7176.65	7500	6777.9	96	90	57-128	6	30
Carbon Disulfide	1000	1076.77	1000	1042	108	104	64-133	3	30
Carbon Tetrachloride	1000	654.97	1000	676.54	65	68	64-134	3	30
Chlorobenzene	1000	962.33	1000	927.12	96	93	80-120	4	30
Chloroethane	1000	814.86	1000	820.09	81	82	43-135	1	30
Chloroform	1000	1016.73	1000	976.17	102	98	80-120	4	30
Dibromochloromethane	1000	709.37	1000	707.36	71	71	69-125	0	30
1,1-Dichloroethane	1000	1025.41	1000	1034.42	103	103	79-120	1	30
1,2-Dichloroethane	1000	1061.29	1000	1009.96	106	101	71-128	5	30
1,1-Dichloroethene	1000	1108.82	1000	1073.24	111	107	73-129	3	30
trans-1,2-Dichloroethene	1000	1068.09	1000	1051.13	107	105	80-125	2	30
1,3-Dichloropropane	1000	970.78	1000	938.54	97	94	79-120	3	30
Ethylbenzene	1000	940.85	1000	933.93	94	93	78-120	1	30
4-Methyl-2-pentanone	5000	5066.94	5000	4960.86	101	99	67-128	2	30
Methylene Chloride	1000	1088.01	1000	1075.79	109	108	76-122	1	30
1,1,2,2-Tetrachloroethane	1000	1004.75	1000	979.82	100	98	69-125	3	30
Tetrachloroethene	1000	907.95	1000	878.23	91	88	73-120	3	30
Toluene	1000	988.18	1000	961.03	99	96	80-120	3	30
1,1,1-Trichloroethane	1000	833.53	1000	873.5	83	87	69-123	5	30
1,1,2-Trichloroethane	1000	1006.3	1000	971.97	101	97	80-120	3	30
Trichloroethene	1000	1029.39	1000	1012.9	103	101	80-120	2	30
1,2,3-Trichloropropane	1000	992.92	1000	973.66	99	97	75-125	2	30
Vinyl Chloride	1000	875.87	1000	831.72	88	83	52-120	5	30
Xylene (Total)	3000	2873.45	3000	2853.37	96	95	75-120	1	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 19017SLA026	Sample number(s): 9968908-9968909								
Acenaphthene	1666.67	1596.62			96		85-114		
Acenaphthylene	1666.67	1869.13			112		80-120		
Aniline	1666.67	1487.48			89		44-113		
Anthracene	1666.67	1610.11			97		82-113		
Benzo(a)anthracene	1666.67	1477.15			89		76-111		
Benzo(a)pyrene	1666.67	1603.26			96		82-114		
Benzo(b)fluoranthene	1666.67	1658.41			100		78-115		
Benzo(g,h,i)perylene	1666.67	1606.44			96		76-111		
Benzo(k)fluoranthene	1666.67	1476.23			89		78-119		
Butylbenzylphthalate	1666.67	1560.26			94		81-113		
Di-n-butylphthalate	1666.67	1600.08			96		85-115		
4-Chloro-3-methylphenol	1666.67	1593.5			96		78-127		
4-Chloroaniline	1666.67	949.08			57		10-125		
2-Chlorophenol	1666.67	1646.94			99		85-116		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/24/2019 15:26

Group Number: 2025564

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/kg	LCS Conc ug/kg	LCSD Spike Added ug/kg	LCSD Conc ug/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chrysene	1666.67	1542.7			93		75-109		
Dibenz(a,h)anthracene	1666.67	1673.58			100		79-117		
Dibenzofuran	1666.67	1650.41			99		84-110		
1,2-Dichlorobenzene	1666.67	1558.34			94		82-108		
1,3-Dichlorobenzene	1666.67	1623.04			97		77-108		
1,4-Dichlorobenzene	1666.67	1650.64			99		79-112		
3,3'-Dichlorobenzidine	1666.67	1206.06			72		26-124		
2,4-Dichlorophenol	1666.67	1754.73			105		80-120		
Diethylphthalate	1666.67	1692.63			102		81-113		
Dimethylphthalate	1666.67	1603.53			96		82-110		
2,4-Dinitrophenol	3333.33	2926.79			88		41-136		
2,6-Dinitrotoluene	1666.67	1659.44			100		86-116		
bis(2-Ethylhexyl)phthalate	1666.67	1597.03			96		78-118		
Fluoranthene	1666.67	1490.49			89		76-115		
Fluorene	1666.67	1685.7			101		80-112		
Hexachlorobenzene	1666.67	1598.25			96		77-114		
Indeno(1,2,3-cd)pyrene	1666.67	1591.63			95		78-113		
Isophorone	1666.67	1561.55			94		76-115		
2-Methylnaphthalene	1666.67	1594.26			96		80-111		
2-Methylphenol	1666.67	1581.49			95		80-122		
4-Methylphenol	1666.67	1698.02			102		75-121		
Naphthalene	1666.67	1638.01			98		81-111		
2-Nitroaniline	1666.67	1797.37			108		81-126		
3-Nitroaniline	1666.67	1588.67			95		60-128		
Nitrobenzene	1666.67	1597.83			96		75-114		
2-Nitrophenol	1666.67	1541.09			92		85-118		
4-Nitrophenol	1666.67	1612.43			97		54-124		
Di-n-octylphthalate	1666.67	1721.99			103		84-128		
Pentachlorophenol	1666.67	1491.77			90		47-134		
Phenanthrene	1666.67	1637.48			98		81-109		
Phenol	1666.67	1509.47			91		74-119		
Pyrene	1666.67	1539.86			92		80-107		
1,2,4-Trichlorobenzene	1666.67	1651.4			99		79-114		
2,4,5-Trichlorophenol	1666.67	1686.49			101		80-120		
	%	%	%	%					
Batch number: 19007820006B	Sample number(s): 9968908-9968909								
Moisture (Re-Entry)	89.5	89.42			100		99-101		

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/24/2019 15:26

Group Number: 2025564

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- Solid by 8260C
Batch number: Q190181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9968908	8*	74	67	71
9968909	30*	60	67	71
Blank	88	94	86	85
LCS	96	98	91	90
LCSD	92	95	88	88
Limits:	50-141	54-135	52-141	50-131

Analysis Name: TCL SOM01.2
Batch number: 19017SLA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9968908	67	20*	20	89	97	97
9968909	73	30*	13*	77	87	87
Blank	88	93	106	95	104	97
LCS	91	97	98	95	98	96
Limits:	47-120	51-123	19-137	49-118	57-116	55-118

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(2) The unspiked result was more than four times the spike added.

2025564 / 9968908-09

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 4285 For Eurofins Lancaster Laboratories Environmental use only Group # 223687 Sample # 9968908-09 (3) ON 208/17/19

COC # 576164

Client Information		Matrix						Analysis Requested									For Lab Use Only
Client: BASF Corp	Acct. #:	Soil ☒ Sediment ☐ Tissue ☐	Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface	Other: cooler temp bottle	Total # of Containers	Preservation and Filtration Codes									FSC: SCR#: 236824
Project Name/#: Rensselaer	PWSID #:														
Project Manager: John Bleiler	P.O. #:														
Sampler: Jeff Denman	Quote #:														
State where samples were collected: New York	For Compliance: Yes ☒ No ☐														

Sample Identification	Collected Date	Collected Time	Grab	Composite	Ignitability/pH	Reactivity	Corrosivity	Soil/solid PCBs in Soil	Soil/solid TCLP metals	Soil/solid TCLP Rest/Herb	Soil/solid TCLP VOAs	Soil/solid TCLP VOAs	Remarks
B11TSCAHVOC010419	01/04/19	1345	X		X	X	X	X	X	X	X	X	
B15TSCAHVOC010419	01/04/19	1355	X		X	X	X	X	X	X	X	X	
Cooler temp bottle	01/04/19	1430											cooler temp bottle

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Brad Rotte	12/26/18	1:10			
Jeff Denman	01/04/19	1600			
			Mike	1/5/19	0930

EDD Required? Yes No
If yes, format: AECOM EQUIS 4
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____
Temperature upon receipt 1.4 °C

202564

Kay Hower

From: Chin, Abby <Abby.Chin@aecom.com>
Sent: Thursday, January 17, 2019 10:42 AM
To: Kay Hower
Subject: RE: BASF Rensselaer Lab Results

EXTERNAL EMAIL*

Good Morning Kay,
Based on the lab results we will need to run total VOCs and total SVOCs. Can we please run these analyses on the B11TSCAHVOC010419 and B15TSCAHVOC010419 samples? Can you let me know when we could expect to receive those results?

Thank you,

Abby Chin, PE (MA)
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From: Kay Hower [mailto:KayHower@eurofinsus.com]
Sent: Wednesday, January 16, 2019 11:53 AM
To: Chin, Abby
Subject: RE: BASF Rensselaer Lab Results

Hi Abby, the results have been sent. We are working on the soil due on Friday and some results are completed.

From: Chin, Abby [mailto:Abby.Chin@aecom.com]
Sent: Wednesday, January 16, 2019 10:54 AM
To: Kay Hower
Subject: RE: BASF Rensselaer Lab Results

EXTERNAL EMAIL*

Hi Kay,
We did not receive these results yesterday. Can we expect to get them today? Do you think that we be able to get results on Friday for the soil sample sent last Friday (B7TSCAHVOC011119)?

Abby Chin, PE (MA)
Civil Engineer, Environment
D +1-206-438-2324
M +1-603-571-0226

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Sample Administration Receipt Documentation Log

Doc Log ID: 237766

Group Number(s): ~~2023507~~ 2025964

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/05/2019 9:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:09 on 01/05/2019

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: July 31, 2019 18:48

Project: Rensselaer

Account #: 04285
Group Number: 2054588
SDG: RNS95
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams
Electronic Copy To	AECOM	Attn: Heather Wayne

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
B3TSCALVOC071919 Grab Soil	07/19/2019 10:00	1105707
B3TSCALVOC071919 Grab Soil	07/19/2019 10:00	1105708
B3TSCALVOC071919 Grab Soil	07/19/2019 10:00	1105709

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **B3TSCALVOC071919 Grab Soil**
COC: 5775

Project Name: **Rensselaer**

Submittal Date/Time: 07/20/2019 09:20
Collection Date/Time: 07/19/2019 10:00
SDG#: RNS95-01

BASF Corporation
ELLE Sample #: SW 1105707
ELLE Group #: 2054588
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A Feb 2007 Rev 1**		**ug/kg**	**ug/kg**	**ug/kg**	
10885	PCB-1016	12674-11-2	N.D. D1	21	98	5
10885	PCB-1221	11104-28-2	N.D. D1	27	98	5
10885	PCB-1232	11141-16-5	N.D. D1	46	98	5
10885	PCB-1242	53469-21-9	N.D. D1	19	98	5
10885	PCB-1248	12672-29-6	310 D2	19	98	5
10885	PCB-1254	11097-69-1	N.D. D1	19	98	5
10885	PCB-1260	11096-82-5	N.D. D1	28	98	5
10885	PCB-1262	37324-23-5	N.D. D1	19	98	5
10885	PCB-1268	11100-14-4	N.D. D1	19	98	5
10885	Total PCBs[1]	1336-36-3	310	19	98	5
Wet Chemistry	**SW-846 9012B**		**mg/kg**	**mg/kg**	**mg/kg**	
01123	Cyanide (Reactivity)	n.a.	N.D.	19.7	59.0	1
	40 CFR 261.21(a)(2)					
00542	Ignitability[1]	n.a.	See Below	0	0	1
	The sample did not spontaneously ignite when exposed to air or water. The sample did not ignite by friction. The sample vapors did not ignite when exposed to a flame using a closed cup apparatus.					
	SW-846 9034		**mg/kg**	**mg/kg**	**mg/kg**	
01122	Sulfide (Reactivity)[1]	n.a.	N.D.	53.6	160	1
	SW-846 9045D Nov 2004		**Std. Units**	**Std. Units**	**Std. Units**	
00394	pH[1]	n.a.	7.77	0.0100	0.0100	1
	The pH was measured in water at 20.4 C.					
	SW-846 Chapter 7					
00496	Corrosivity[1]	n.a.	See Below	0	0	1
	The pH of the sample is 7.77 indicating that the sample is not corrosive. A sample is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12.5.					
	SW-846 Chapter 7.3		**see below**	**see below**	**see below**	
01121	Reactivity[1]	n.a.	See Below	0	0	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3TSCALVOC071919 Grab Soil**
COC: 5775

Project Name: **Rensselaer**

Submittal Date/Time: 07/20/2019 09:20
Collection Date/Time: 07/19/2019 10:00
SDG#: RNS95-01

BASF Corporation
ELLE Sample #: SW 1105707
ELLE Group #: 2054588
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 Chapter 7.3**		**see below**	**see below**	**see below**	
	Reactivity: This sample was extracted and analyzed by the interim method described in SW-846 Revision 3, December 1996 - Chapter 7.3. The Interim Guidance for Reactive Cyanide and Reactive Sulfide (SW-846 Sections 7.3.3 and 7.3.4 of Chapter 7 - December 1996) identifies a reactive material as generating more than 250 mg/kg of hydrogen cyanide or 500 mg/kg of hydrogen sulfide. This waste is not considered hazardous due to reactivity based on that standard. These results do not reflect total cyanide or total sulfide. On July 14, 2005, EPA published a rule in the Federal Register that removed the Interim Guidance and the method referenced above. At this time there is no specific guidance or a method to be used to evaluate "Reactivity".					
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	**%**	
00111	Moisture[1]	n.a.	14.6	0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10885	PCBs 8082A/3546	SW-846 8082A Feb 2007 Rev 1	1	192030023A	07/23/2019 20:55	Covenant Mutuku	5
10497	PCB Microwave Soil Extraction	SW-846 3546	1	192030023A	07/23/2019 09:30	Joseph Underdonk	1
01123	Cyanide (Reactivity)	SW-846 9012B	1	19203104201A	07/22/2019 13:59	Ashlynn M Cornelius	1
00542	Ignitability	40 CFR 261.21(a)(2)	1	19204054201A	07/23/2019 15:30	Jeremy L Bolf	1
01122	Sulfide (Reactivity)	SW-846 9034	1	19203112101A	07/22/2019 09:15	Susan E Hibner	1
00394	pH	SW-846 9045D Nov 2004	1	19204039402A	07/23/2019 17:24	Kristen Wroblewski	1
00496	Corrosivity	SW-846 Chapter 7	1	19204039402A	07/23/2019 17:24	Kristen Wroblewski	1
01121	Reactivity	SW-846 Chapter 7.3	1	19203112101A	07/22/2019 09:15	Susan E Hibner	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	19204820002B	07/23/2019 09:51	William C Schwebel	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3TSCALVOC071919 Grab Soil**
TCLP NVE
COC: 5775

Project Name: **Rensselaer**

Submittal Date/Time: 07/20/2019 09:20
Collection Date/Time: 07/19/2019 10:00
SDG#: RNS95-02

BASF Corporation
ELLE Sample #: TL 1105708
ELLE Group #: 2054588
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,4-Dichlorobenzene	106-46-7	2 J	0.5	2	1
14242	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
14242	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
14242	Hexachlorobutadiene	87-68-3	N.D.	0.5	2	1
14242	Hexachloroethane	67-72-1	N.D.	1	5	1
14242	2-Methylphenol	95-48-7	N.D.	0.5	2	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Nitrobenzene	98-95-3	N.D.	0.5	2	1
14242	Pentachlorophenol	87-86-5	N.D.	1	5	1
14242	Pyridine	110-86-1	N.D.	2	5	1
14242	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	2	1
14242	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	2	1
Pesticides	**SW-846 8081B**		**mg/l**	**mg/l**	**mg/l**	
10647	Gamma BHC - Lindane	58-89-9	N.D. D2	0.00010	0.00050	10
10647	Chlordane	57-74-9	N.D. D1	0.0080	0.025	10
10647	Endrin	72-20-8	N.D. D1	0.00040	0.0010	10
10647	Heptachlor	76-44-8	N.D. D2	0.00020	0.00050	10
10647	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00012	0.00050	10
10647	Methoxychlor	72-43-5	N.D. D1	0.0015	0.0050	10
10647	Toxaphene	8001-35-2	N.D. D1	0.050	0.15	10
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.477	0.0010	0.0050	1
07049	Cadmium	7440-43-9	0.0079	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07055	Lead	7439-92-1	0.0508	0.0071	0.0150	1
07036	Selenium	7782-49-2	N.D.	0.0210	0.0500	1
07066	Silver	7440-22-4	N.D.	0.0050	0.0100	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **B3TSCALVOC071919 Grab Soil**
TCLP NVE
COC: 5775

Project Name: **Rensselaer**

Submittal Date/Time: 07/20/2019 09:20
Collection Date/Time: 07/19/2019 10:00
SDG#: RNS95-02

BASF Corporation
ELLE Sample #: TL 1105708
ELLE Group #: 2054588
Matrix: Soil

Sample Comments

State of New York Certification No. 10670
The analysis for TCLP Herbicides was subcontracted to another laboratory.
See Attached Reports.

If the analysis is for determination of Hazardous Waste Characteristics,
see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19204WAL026	07/25/2019 17:27	Edward C Monborne	1
00813	BNA Water Extraction	SW-846 3510C	1	19204WAL026	07/24/2019 08:30	Logan M Brosemer	1
10647	TCLP Pesticides by 8081B	SW-846 8081B	1	192050004A	07/25/2019 21:34	Dylan Schreiner	10
11126	Pest Leachate Update IV	SW-846 3510C	1	192050004A	07/24/2019 16:50	Christine E Gleim	1
07035	Arsenic	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07049	Cadmium	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07036	Selenium	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
07066	Silver	SW-846 6010C	1	192041404503	07/24/2019 20:36	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	192040571314	07/24/2019 11:48	Damary Valentin	1
14045	ICP-WW/TL, 3010A (tot) - U345	SW-846 3010A	1	192041404503	07/24/2019 04:53	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192040571314	07/24/2019 06:38	James L Mertz	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	19203-2807-947	07/22/2019 11:08	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Sample Description: **B3TSCALVOC071919 Grab Soil**
TCLP ZHE
COC: 5775

Project Name: **Rensselaer**

Submittal Date/Time: 07/20/2019 09:20
Collection Date/Time: 07/19/2019 10:00
SDG#: RNS95-03

BASF Corporation
ELLE Sample #: TL 1105709
ELLE Group #: 2054588
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/l**	**mg/l**	**mg/l**	
11997	Benzene	71-43-2	N.D.	0.004	0.020	20
11997	2-Butanone	78-93-3	N.D.	0.006	0.20	20
11997	Carbon Tetrachloride	56-23-5	N.D.	0.004	0.020	20
11997	Chlorobenzene	108-90-7	0.062	0.004	0.020	20
11997	Chloroform	67-66-3	N.D.	0.004	0.020	20
11997	1,2-Dichloroethane	107-06-2	N.D.	0.006	0.020	20
11997	1,1-Dichloroethene	75-35-4	N.D.	0.004	0.020	20
11997	Tetrachloroethene	127-18-4	N.D.	0.004	0.020	20
11997	Trichloroethene	79-01-6	N.D.	0.004	0.020	20
11997	Vinyl Chloride	75-01-4	N.D.	0.004	0.020	20

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	TCLP VOAS by 8260C	SW-846 8260C	1	4192051AA	07/24/2019 17:08	Corie Mellinger	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192051AA	07/24/2019 17:07	Corie Mellinger	20
00946	TCLP Zero Headspace Extraction	SW-846 1311	1	19203-2807-946	07/22/2019 11:28	Nicholas W Shroyer	n.a.

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	**mg/l**	**mg/l**
Batch number: 4192051AA	Sample number(s): 1105709		
Benzene	N.D.	0.0002	0.001
2-Butanone	N.D.	0.0003	0.010
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroform	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.0003	0.001
1,1-Dichloroethene	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Vinyl Chloride	N.D.	0.0002	0.001
	ug/l	**ug/l**	**ug/l**
Batch number: 19204WAL026	Sample number(s): 1105708		
1,4-Dichlorobenzene	N.D.	0.5	2
2,4-Dinitrotoluene	N.D.	1	5
Hexachlorobenzene	N.D.	0.1	0.5
Hexachlorobutadiene	N.D.	0.5	2
Hexachloroethane	N.D.	1	5
2-Methylphenol	N.D.	0.5	2
4-Methylphenol	N.D.	0.5	2
Nitrobenzene	N.D.	0.5	2
Pentachlorophenol	N.D.	1	5
Pyridine	N.D.	2	5
2,4,5-Trichlorophenol	N.D.	0.5	2
2,4,6-Trichlorophenol	N.D.	0.5	2
	ug/kg	**ug/kg**	**ug/kg**
Batch number: 192030023A	Sample number(s): 1105707		
PCB-1016	N.D.	3.6	17
PCB-1221	N.D.	4.6	17
PCB-1232	N.D.	8.0	17
PCB-1242	N.D.	3.3	17
PCB-1248	N.D.	3.3	17
PCB-1254	N.D.	3.3	17
PCB-1260	N.D.	4.9	17
PCB-1262	N.D.	3.3	17
PCB-1268	N.D.	3.3	17
Total PCBs	N.D.	3.3	17

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 192050004A	Sample number(s): 1105708		
Gamma BHC - Lindane	N.D.	0.000010	0.000050
Chlordane	N.D.	0.00080	0.0025
Endrin	N.D.	0.000040	0.00010
Heptachlor	N.D.	0.000020	0.000050
Heptachlor Epoxide	N.D.	0.000012	0.000050
Methoxychlor	N.D.	0.00015	0.00050
Toxaphene	N.D.	0.0050	0.015
Batch number: 192040571314	Sample number(s): 1105708		
Mercury	N.D.	0.000050	0.00020
Batch number: 192041404503	Sample number(s): 1105708		
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Cadmium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Lead	N.D.	0.0071	0.0150
Selenium	N.D.	0.0210	0.0500
Silver	N.D.	0.0050	0.0100
	mg/kg	mg/kg	mg/kg
Batch number: 19203104201A	Sample number(s): 1105707		
Cyanide (Reactivity)	N.D.	20.0	60.0
Batch number: 19203112101A	Sample number(s): 1105707		
Sulfide (Reactivity)	N.D.	53.6	160

LCS/LCSD

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4192051AA	Sample number(s): 1105709								
Benzene	0.0200	0.0193	0.0200	0.0201	96	100	80-120	4	30
2-Butanone	0.150	0.124	0.150	0.140	82	93	59-135	13	30
Carbon Tetrachloride	0.0200	0.0175	0.0200	0.0181	88	91	64-134	3	30
Chlorobenzene	0.0200	0.0203	0.0200	0.0209	101	104	80-120	3	30
Chloroform	0.0200	0.0190	0.0200	0.0197	95	99	80-120	4	30
1,2-Dichloroethane	0.0200	0.0194	0.0200	0.0198	97	99	73-124	2	30
1,1-Dichloroethene	0.0200	0.0201	0.0200	0.0209	101	105	80-131	4	30
Tetrachloroethene	0.0200	0.0189	0.0200	0.0196	94	98	80-120	3	30
Trichloroethene	0.0200	0.0185	0.0200	0.0193	92	97	80-120	4	30
Vinyl Chloride	0.0200	0.0134	0.0200	0.0140	67	70	56-120	4	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19204WAL026	Sample number(s): 1105708								
1,4-Dichlorobenzene	50	37.15	50	41.18	74	82	30-109	10	30
2,4-Dinitrotoluene	50	48.48	50	49.83	97	100	69-117	3	30
Hexachlorobenzene	50	48.9	50	50.99	98	102	65-121	4	30
Hexachlorobutadiene	50	40.54	50	42.12	81	84	21-114	4	30
Hexachloroethane	50	34.15	50	37.83	68	76	24-100	10	30
2-Methylphenol	50	40.87	50	44.42	82	89	59-109	8	30
4-Methylphenol	50	43.95	50	47.12	88	94	56-108	7	30
Nitrobenzene	50	43.9	50	45.04	88	90	59-117	3	30
Pentachlorophenol	50	52.2	50	54.65	104	109	64-130	5	30
Pyridine	50	20.79	50	24.28	42	49	13-83	16	30
2,4,5-Trichlorophenol	50	49.41	50	50.84	99	102	73-124	3	30
2,4,6-Trichlorophenol	50	52.17	50	53.64	104	107	69-122	3	30
	ug/kg	**ug/kg**	**ug/kg**	**ug/kg**					
Batch number: 192030023A	Sample number(s): 1105707								
PCB-1016	167.37	158.54			95		76-121		
PCB-1260	168.23	189.7			113		79-130		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192050004A	Sample number(s): 1105708								
Gamma BHC - Lindane	0.000250	0.000272	0.000250	0.000244	109	98	51-132	11	30
Endrin	0.000125	0.000146	0.000125	0.000141	117	113	60-151	3	30
Heptachlor	0.000251	0.000270	0.000251	0.000255	108	102	38-135	6	30
Heptachlor Epoxide	0.000376	0.000409	0.000376	0.000382	109	102	56-132	7	30
Methoxychlor	0.00101	0.00103	0.00101	0.000959	102	95	58-165	7	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192040571314	Sample number(s): 1105708								
Mercury	0.00100	0.00105			105		80-110		
Batch number: 192041404503	Sample number(s): 1105708								
Arsenic	0.150	0.175			116		86-120		
Barium	2.00	1.87			93		87-111		
Cadmium	0.0500	0.0516			103		90-111		
Chromium	0.200	0.205			102		87-110		
Lead	0.150	0.140			93		87-113		
Selenium	0.150	0.170			113		80-120		
Silver	0.0500	0.0553			111		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19203104201A	Sample number(s): 1105707								

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cyanide (Reactivity)	1000	948.34			95		77-113		
Batch number: 19204039402A	Sample number(s): 1105707								
Corrosivity	7.00	7.00			100		89-110		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 19203112101A	Sample number(s): 1105707								
Sulfide (Reactivity)	570	506.79			89		56-104		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19204039402A	Sample number(s): 1105707								
pH	7.00	7.00			100		95-105		
	%	**%**	**%**	**%**					
Batch number: 19204820002B	Sample number(s): 1105707								
Moisture	89.5	89.46			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192041404503	Sample number(s): 1105708 UNSPK: 1105708									
Arsenic	N.D.	5.00	5.01	5.00	4.99	100	100	75-125	0	20
Barium	0.477	100	90.66	100	90.91	90	90	75-125	0	20
Cadmium	0.00788	1.00	0.897	1.00	0.903	89	90	75-125	1	20
Chromium	N.D.	5.00	4.46	5.00	4.49	89	90	75-125	1	20
Lead	0.0508	5.00	4.23	5.00	4.28	84	85	75-125	1	20
Selenium	N.D.	1.00	0.999	1.00	0.984	100	98	75-125	2	20
Silver	N.D.	5.00	3.64	5.00	3.69	73*	74*	75-125	2	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192041404503	Sample number(s): 1105708 BKG: 1105708			
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.477	0.470	1	20
Cadmium	0.00788	0.00775	2 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	0.0508	0.0516	2 (1)	20
Selenium	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP VOAS by 8260C
Batch number: 4192051AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1105709	98	102	103	91
Blank	103	105	104	90
LCS	97	102	106	101
LCSD	97	105	105	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19204WAL026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1105708	49	62	78	75	77	81
Blank	33	44	72	68	67	78
LCS	40	53	86	76	78	92
LCSD	45	60	88	80	80	94
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: PCBs 8082A/3546
Batch number: 192030023A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1105707	78	99	78	107
Blank	100	110	93	106
LCS	100	111	94	109

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/31/2019 18:48

Group Number: 2054588

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs 8082A/3546
Batch number: 192030023A

Limits:	53-140	45-143	53-140	45-143

Analysis Name: TCLP Pesticides by 8081B
Batch number: 192050004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1105708	78	90	77	94
Blank	80	94	82	98
LCS	78	85	82	84
LCSD	69	83	75	81
Limits:	39-139	10-164	39-139	10-164

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

4285 254588 105707-09

AECOM

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client/Project Name: BASF Corp	Project Location: Rensselaer
Project Number: 60323713	Field Logbook No.:
Sampler (Print Name)/(Affiliation): Thomas Quakenbush AECOM	Chain of Custody Tape Nos.:
Signature: Thomas Quakenbush	Send Results/Report to: john.bleier@aecom.com; TAT: 5

Analysis Requested

Field Sample No./Identification	Date	Time	COMP	GRAB	Sample Container (Size/Mat'l)	Matrix	Preserv.	Field Filtered	Ignitability / pH	Reactivity	Corrosivity	Soil/Solid PCBs in Soil	Soil/Solid TCLP Metals	Soil/Solid Pest/Herb TCLP	Soil/Solid TCLP SVOC	Soil/Solid TCLP VOAs			Lab I.D.	Remarks
B3TSCALUCC07	7/19/19	1000		X	3 Amber	Soil			X	X	X	X	X	X	X	X				

Container Type: P – Plastic; A – Amber Glass; G – Clear Glass; V – VOA Vial; O – Other; E – Encore

Preservation: 1 – HCl, 4°; 2 – H2SO4, 4°; 3 – HNO3, 4; 4 – NaOH, 4°; 5 – NaOH/ZnAc, 4; 6 – Na2S2O3, 4°; 7 – 4°

Matrix Codes: DW – Drinking Water; WW – Wastewater; GW – Groundwater; SW – Surface Water; ST – Storm Water; W – Water; S – Soil; SL – Sludge; SD – Sediment; SO – Solid; A – Air; L – Liquid; P – Product

Relinquished by: (Print Name)/(Affiliation) Thomas Quackenbush AECOM	Date: 7/19/19 Time: 1730	Received by: (Print Name)/(Affiliation)	Date: Time:
Signature: Thomas Quakenbush		Signature:	
Relinquished by: (Print Name)/(Affiliation)	Date: Time:	Received by: (Print Name)/(Affiliation)	Date: Time:
Signature:		Signature:	
Relinquished by: (Print Name)/(Affiliation)	Date: Time:	Received by: (Print Name)/(Affiliation) Darian Jaynes	Date: 7.20.19 Time: 0920
Signature:		Signature:	

Analytical Laboratory (Destination): Eurofins Lancaster Laboratories, Env. LLC, 2425 New Holland Pike, Lancaster, PA 17601, (717) 656-2300

Sample Shipped Via: UPS FedEx Courier Other

Temp blank: Yes No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 254581

Group Number(s): 254588

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	07/20/2019 9:20
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes (29 952) at 10:21 on 07/20/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	4.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.co

eurofins | Environment Testing TestAmerica



ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-93158-1
Client Project/Site: Eurofins Lancaster Labs ELLE 2054588

For:
Eurofins Lancaster Laboratories Env LLC
2425 New Holland Pike
Lancaster, Pennsylvania 17601

Attn: Nicole L. Maljovec

Authorized for release by:
7/31/2019 4:26:34 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416

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Case Narrative

Client: Eurofins Lancaster Laboratories Env LLC
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Job ID: 180-93158-1

Job ID: 180-93158-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-93158-1

Receipt
The sample was received on 7/24/2019 at 8:50 AM; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 3.2º C.

Herbicides
The continuing calibration verification (CCV) associated with 180-286496 recovered high and outside the control limits for multiple analytes on the primary column. All results are confirmed on both columns and reported from the passing secondary column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TCLP Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Eurofins Lancaster Laboratories Env LLC
Job ID: 180-93158-1
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Eurofins Lancaster Laboratories Env LLC
Job ID: 180-93158-1
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11182	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte

Sample Summary

Client: Eurofins Lancaster Laboratories Env LLC
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Job ID: 180-93158-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-93158-1	B3TSCALVOC071919	Solid	07/19/19 10:00	07/24/19 08:50	

Method Summary

Client: Eurofins Lancaster Laboratories Env LLC
Job ID: 180-93158-1
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Method	Method Description	Protocol	Laboratory
EPA 8151A	Herbicides (GC)	SW846	TAL PIT
8151A	Extraction (Herbicides)	SW846	TAL PIT
EPA 1311	TCLP Extraction	SW846	TAL PIT

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Eurofins Lancaster Laboratories Env LLC
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Job ID: 180-93158-1

Client Sample ID: B3TSCALVOC071919

Date Collected: 07/19/19 10:00
Date Received: 07/24/19 08:50

Lab Sample ID: 180-93158-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	EPA 1311			100.00 g	2000 mL	286045	07/25/19 16:45	JAS	TAL PIT
TCLP	Prep	8151A			100 mL	10.0 mL	286193	07/27/19 07:15	CBY	TAL PIT
TCLP	Analysis	EPA 8151A		20			286496	07/30/19 21:46	CMR	TAL PIT
	Instrument ID: CGC1									

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Leach

JAS = Jeremy Stundon

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

CMR = Carl Reagle

Client: Eurofins Lancaster Laboratories Env LLC
Job ID: 180-93158-1
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Client Sample ID: B3TSCALVOC071919
Lab Sample ID: 180-93158-1
Date Collected: 07/19/19 10:00
Matrix: Solid
Date Received: 07/24/19 08:50

Method: EPA 8151A - Herbicides (GC) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.040	0.0045	mg/L		07/27/19 07:15	07/30/19 21:46	20
Silvex (2,4,5-TP)	ND		0.010	0.0011	mg/L		07/27/19 07:15	07/30/19 21:46	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*72*	*^c*	*20 - 105*	*07/27/19 07:15*	*07/30/19 21:46*	*20*
2,4-Dichlorophenylacetic acid	*76*		*20 - 105*	*07/27/19 07:15*	*07/30/19 21:46*	*20*

Client: Eurofins Lancaster Laboratories Env LLC
Project/Site: Eurofins Lancaster Labs ELLE 2054588

Job ID: 180-93158-1

Method: EPA 8151A - Herbicides (GC)

Lab Sample ID: MB 180-286193/1-A
Matrix: Solid
Analysis Batch: 286496

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 286193

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.0040	0.00045	mg/L		07/27/19 07:15	07/30/19 15:41	20
Silvex (2,4,5-TP)	ND		0.0010	0.00011	mg/L		07/27/19 07:15	07/30/19 15:41	20

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*47*		*20 - 105*	*07/27/19 07:15*	*07/30/19 15:41*	*20*
2,4-Dichlorophenylacetic acid	*55*		*20 - 105*	*07/27/19 07:15*	*07/30/19 15:41*	*20*

Lab Sample ID: LCS 180-286193/2-A
Matrix: Solid
Analysis Batch: 286496

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 286193

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	0.0200	0.0140		mg/L		70	10 - 100
Silvex (2,4,5-TP)	0.00500	0.00342		mg/L		68	23 - 109

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*60*		*20 - 105*
2,4-Dichlorophenylacetic acid	*65*		*20 - 105*

Lab Sample ID: LCSD 180-286193/3-A
Matrix: Solid
Analysis Batch: 286496

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 286193

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	0.0200	0.0160		mg/L		80	10 - 100	14	35
Silvex (2,4,5-TP)	0.00500	0.00383		mg/L		77	23 - 109	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*64*		*20 - 105*
2,4-Dichlorophenylacetic acid	*69*		*20 - 105*

Lab Sample ID: LB 180-286045/7-C
Matrix: Solid
Analysis Batch: 286496

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 286193

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	ND		0.040	0.0045	mg/L		07/27/19 07:15	07/30/19 20:57	20
Silvex (2,4,5-TP)	ND		0.010	0.0011	mg/L		07/27/19 07:15	07/30/19 20:57	20

Surrogate	*LB %Recovery*	*LB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*70*		*20 - 105*	*07/27/19 07:15*	*07/30/19 20:57*	*20*
2,4-Dichlorophenylacetic acid	*77*		*20 - 105*	*07/27/19 07:15*	*07/30/19 20:57*	*20*

QC Association Summary

Client: Eurofins Lancaster Laboratories Env LLC
Job ID: 180-93158-1
Project/Site: Eurofins Lancaster Labs ELLE 2054588

GC Semi VOA

Leach Batch: 286045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93158-1	B3TSCALVOC071919	TCLP	Solid	EPA 1311	
LB 180-286045/7-C	Method Blank	TCLP	Solid	EPA 1311	

Prep Batch: 286193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93158-1	B3TSCALVOC071919	TCLP	Solid	8151A	286045
LB 180-286045/7-C	Method Blank	TCLP	Solid	8151A	286045
MB 180-286193/1-A	Method Blank	Total/NA	Solid	8151A	
LCS 180-286193/2-A	Lab Control Sample	Total/NA	Solid	8151A	
LCSD 180-286193/3-A	Lab Control Sample Dup	Total/NA	Solid	8151A	

Analysis Batch: 286496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93158-1	B3TSCALVOC071919	TCLP	Solid	EPA 8151A	286193
LB 180-286045/7-C	Method Blank	TCLP	Solid	EPA 8151A	286193
MB 180-286193/1-A	Method Blank	Total/NA	Solid	EPA 8151A	286193
LCS 180-286193/2-A	Lab Control Sample	Total/NA	Solid	EPA 8151A	286193
LCSD 180-286193/3-A	Lab Control Sample Dup	Total/NA	Solid	EPA 8151A	286193

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # _____ Group # 2054588 Sample # 1105708

Subcontractor:	Eurofins Lancaster Labs Env.		
Project Name/#:	Rensselaer	Site ID #:	N/A
Requestor	Nicole Maljovec	P.O. #:	NA
Sampler:	TQ	PWSID #:	N/A
Phone #:	717-556-7259	Quote #:	Interco
State where samples were collected: ___ NY		For Compliance: Yes ☑ No ☐	

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☑	Sediment ☐	Tissue ☐	Water: Surface ☐	Ground ☐	Potable ☐	NPDES ☐	Other:	Total # of Containers	Analyses Requested: TCLP Herbicides
B3TSCALVOC071919	7/19/2019	10:00	X		☑								1	X

Preservation and Filtration Codes: -

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl | T = Thiosulfate

N = HNO_3 | B = NaOH

S = H_2SO_4 | P = H_3PO_4

F = Field Filtered | O = Other

Remarks

1105708

MDL reporting w/ J flags; use ND

180-93158 Chain of Custody

Turnaround Time Requested (TAT) (please check): Standard ☐ Rush ☑

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: 7/29 if possible

Rush results requested by (please check): E-Mail ☑ Phone ☐

E-mail Address: ENVsubcontracting@EurofinsUS.com

Phone: 717-656-2300 Ext

Data Package Options (please check if required) ☐ Full Data Package

Type I (Validation/non-CLP) ☑ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☑ If yes, format: _EQuIS-AECOM_10

	Date	Time		Date	Time
Relinquished by:	7/23/19	15:53	Received by: Deluise Watson	7/24/19	8:55
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

Compound	CAS Number	MDL	LOQ	Units	List Index
2,4,5-TP	93-72-1	0.0010	0.0050	mg/l	4153
2,4-D	94-75-7	0.016	0.050	mg/l	4153

Login Sample Receipt Checklist

Client: Eurofins Lancaster Laboratories Env LLC

Job Number: 180-93158-1

Login Number: 93158
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 05, 2018 16:39

Project: Rensselaer

Account #: 04285
Group Number: 2012773
SDG: RNS53
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF112718 Grab Water	11/27/2018 13:15	9914470
WWTPZEOL2112718 Grab Water	11/27/2018 13:30	9914471
WWTPPOSTCLAR112718 Grab Water	11/27/2018 13:45	9914472
WWTPINF112718 Grab Water	11/27/2018 14:00	9914473
TB 18307 Water	11/06/2018 14:15	9914474

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:15
SDG#: RNS53-01

BASF Corporation
ELLE Sample #: **WW 9914470**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	0.1 J	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:15
SDG#: RNS53-01

BASF Corporation
ELLE Sample #: WW 9914470
ELLE Group #: 2012773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0036	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0074	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0053	0.021	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0055	0.021	1
10589	Delta BHC	319-86-8	N.D. D2	0.0036	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.021	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.011	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the upper QC acceptance limit as noted on the QC Summary. The client was contacted and the data reported.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D. K2	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.224	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	N.D.	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.130	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0044 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.8	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,520	160	480	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:15
SDG#: RNS53-01

BASF Corporation
ELLE Sample #: **WW 9914470**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.09 J	1.00	3.00	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183381AA	12/04/2018 14:35	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183381AA	12/04/2018 14:34	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18332WAK026	11/30/2018 00:47	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18332WAK026	11/29/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183320004A	11/29/2018 20:08	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	183320099A	12/04/2018 18:38	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183320004A	11/28/2018 17:10	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183320099A	11/28/2018 17:10	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07046	Barium	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07053	Copper	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07055	Lead	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	2	183341404401	12/03/2018 21:46	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	2	183341404401	12/04/2018 15:08	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183330571301	11/30/2018 10:25	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183341404401	12/01/2018 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183330571301	11/30/2018 06:40	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	18332004201A	11/28/2018 20:58	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18332964901A	11/28/2018 15:15	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18333385801A	11/29/2018 13:01	Amy L Hankins	1
12151	Temperature of pH	SM 2550 B-2010	1	18332004201A	11/28/2018 20:58	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZEOL2112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:30
SDG#: RNS53-02

BASF Corporation
ELLE Sample #: **WW 9914471**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	110	0.7	20	1
11997	Benzene	71-43-2	2,000	4	20	20
11997	Chlorobenzene	108-90-7	11,000.E	4	20	20
11997	1,2-Dichlorobenzene	95-50-1	430	4	100	20
11997	1,3-Dichlorobenzene	541-73-1	110	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	110	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	800	6	20	20
11997	Ethylbenzene	100-41-4	31	0.4	1	1
11997	Methylene Chloride	75-09-2	0.3 J	0.3	1	1
11997	Toluene	108-88-3	210	0.2	1	1
11997	Vinyl Chloride	75-01-4	0.3 J	0.2	1	1
11997	Xylene (Total)	1330-20-7	150	1	5	1
	The concentration reported for Chlorobenzene is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and confirms the diluted analysis (DF 20).					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	5 J	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	60	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZEOL2112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:30
SDG#: RNS53-02

BASF Corporation
ELLE Sample #: WW 9914471
ELLE Group #: 2012773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	1,2,4-Trichlorobenzene	120-82-1	38	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	0.038 BD2	0.0036	0.010	1
10589	Alpha Chlordane	5103-71-9	0.016 D2	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0052	0.021	1
10589	p,p-DDT	50-29-3	0.0074 JD2	0.0054	0.021	1
10589	Delta BHC	319-86-8	0.026 D1	0.0036	0.010	1
10589	Endrin Aldehyde	7421-93-4	0.39 D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the upper QC acceptance limit as noted on the QC Summary. The client was contacted and the data reported.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D. K2	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0137	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.190 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	1.47	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0031 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0140 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.3	0.010	0.010	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZEOL2112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:30
SDG#: RNS53-02

BASF Corporation
ELLE Sample #: **WW 9914471**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,870	160	480	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.33 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183381AA	12/04/2018 14:57	Abigail Roselli	1
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/04/2018 22:48	Abigail Roselli	20
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/04/2018 22:48	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183381AA	12/04/2018 14:56	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	5183382AA	12/04/2018 22:47	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	3	5183382AA	12/04/2018 22:47	Abigail Roselli	20
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18332WAK026	11/30/2018 01:15	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18332WAK026	11/29/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183320004A	11/29/2018 20:18	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	183320099A	12/04/2018 18:50	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183320004A	11/28/2018 17:10	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183320099A	11/28/2018 17:10	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07046	Barium	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07053	Copper	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07055	Lead	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	2	183341404401	12/03/2018 21:50	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	2	183341404401	12/04/2018 15:11	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183330571301	11/30/2018 10:33	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183341404401	12/01/2018 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183330571301	11/30/2018 06:40	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	18332004201A	11/28/2018 21:02	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18332964902A	11/28/2018 15:20	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18333385801A	11/29/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPZEOL2112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:30
SDG#: RNS53-02

BASF Corporation
ELLE Sample #: WW 9914471
ELLE Group #: 2012773
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12151	Temperature of pH	SM 2550 B-2010	1	18332004201A	11/28/2018 21:02	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPOSTCLAR112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:45
SDG#: RNS53-03

BASF Corporation
ELLE Sample #: **WW 9914472**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	89 J	7	200	10
11997	Benzene	71-43-2	2,000	2	10	10
11997	Chlorobenzene	108-90-7	21,000	20	100	100
11997	1,2-Dichlorobenzene	95-50-1	2,700	2	50	10
11997	1,3-Dichlorobenzene	541-73-1	340	2	50	10
11997	1,4-Dichlorobenzene	106-46-7	230	2	50	10
11997	1,2-Dichloroethane	107-06-2	870	3	10	10
11997	Ethylbenzene	100-41-4	23	4	10	10
11997	Methylene Chloride	75-09-2	N.D.	3	10	10
11997	Toluene	108-88-3	200	2	10	10
11997	Vinyl Chloride	75-01-4	N.D.	2	10	10
11997	Xylene (Total)	1330-20-7	80	10	50	10
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.5	3	5
14242	Benzo(a)anthracene	56-55-3	N.D.	0.5	3	5
14242	Benzo(a)pyrene	50-32-8	N.D.	0.5	3	5
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	3	5
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	3	5
14242	Butylbenzylphthalate	85-68-7	N.D.	10	26	5
14242	Di-n-butylphthalate	84-74-2	N.D.	10	26	5
14242	Carbazole	86-74-8	N.D.	3	10	5
14242	4-Chloroaniline	106-47-8	N.D.	21	52	5
14242	2-Chloronaphthalene	91-58-7	12	2	5	5
14242	Chrysene	218-01-9	N.D.	0.5	3	5
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	3	5
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	26	58	5
14242	Fluoranthene	206-44-0	N.D.	0.5	3	5
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	3	5
14242	2-Methylnaphthalene	91-57-6	N.D.	0.5	3	5
14242	4-Methylphenol	106-44-5	100	3	10	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	33	0.5	3	5
14242	N-Nitrosodimethylamine	62-75-9	N.D.	10	26	5
14242	Phenanthrene	85-01-8	N.D.	0.5	3	5
14242	Phenol	108-95-2	67	3	10	5
14242	Pyrene	129-00-0	N.D.	0.5	3	5
14242	1,2,4-Trichlorobenzene	120-82-1	340	3	10	5

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPOSTCLAR112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:45
SDG#: RNS53-03

BASF Corporation
ELLE Sample #: WW 9914472
ELLE Group #: 2012773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.51	1
10591	PCB-1242	53469-21-9	0.95 D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.035	0.10	10
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.031	0.10	10
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.072	0.21	10
10589	p,p-DDE	72-55-9	1.8 PD1	0.051	0.21	10
10589	p,p-DDT	50-29-3	N.D. D2	0.053	0.21	10
10589	Delta BHC	319-86-8	N.D. VD1	0.085	0.10	10
10589	Endrin Aldehyde	7421-93-4	2.1 D1	0.21	1.0	10
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.024	0.10	10

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the upper QC acceptance limit as noted on the QC Summary. The client was contacted and the data reported.

Reporting limits were raised due to interference from the sample matrix.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.260 J	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.121	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	0.0018 J	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0097 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.425	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	2.39	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0687	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4	0.010	0.010	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPOSTCLAR112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 13:45
SDG#: RNS53-03

BASF Corporation
ELLE Sample #: WW 9914472
ELLE Group #: 2012773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,810	160	480	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.00 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.1	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/04/2018 23:09	Patrick T Herres	10
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/04/2018 23:30	Patrick T Herres	100
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183382AA	12/04/2018 23:08	Patrick T Herres	10
01163	GC/MS VOA Water Prep	SW-846 5030C	2	5183382AA	12/04/2018 23:29	Patrick T Herres	100
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18332WAK026	11/30/2018 01:43	Ashley R Transue	5
00813	BNA Water Extraction	SW-846 3510C	1	18332WAK026	11/29/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183320004A	11/29/2018 20:29	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	183320099A	12/04/2018 19:02	Dylan Schreiner	10
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183320004A	11/28/2018 17:10	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183320099A	11/28/2018 17:10	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	183341404401	12/05/2018 13:26	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07046	Barium	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07053	Copper	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07055	Lead	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	2	183341404401	12/03/2018 21:53	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183330571301	11/30/2018 10:35	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183341404401	12/01/2018 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183330571301	11/30/2018 06:40	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	18332004201A	11/28/2018 21:05	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18332964902B	11/28/2018 15:20	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18333385801A	11/29/2018 13:01	Amy L Hankins	1
12151	Temperature of pH	SM 2550 B-2010	1	18332004201A	11/28/2018 21:05	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPINF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 14:00
SDG#: RNS53-04

BASF Corporation
ELLE Sample #: **WW 9914473**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	79	0.7	20	1
11997	Benzene	71-43-2	120	0.2	1	1
11997	Chlorobenzene	108-90-7	2,600	4	20	20
11997	1,2-Dichlorobenzene	95-50-1	400	4	100	20
11997	1,3-Dichlorobenzene	541-73-1	56	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	44	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	30	0.3	1	1
11997	Ethylbenzene	100-41-4	4	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	49	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	19	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.5	3	5
14242	Benzo(a)anthracene	56-55-3	N.D.	0.5	3	5
14242	Benzo(a)pyrene	50-32-8	N.D.	0.5	3	5
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.5	3	5
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.5	3	5
14242	Butylbenzylphthalate	85-68-7	N.D.	10	25	5
14242	Di-n-butylphthalate	84-74-2	N.D.	10	25	5
14242	Carbazole	86-74-8	N.D.	3	10	5
14242	4-Chloroaniline	106-47-8	N.D.	20	50	5
14242	2-Chloronaphthalene	91-58-7	11	2	5	5
14242	Chrysene	218-01-9	N.D.	0.5	3	5
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.5	3	5
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	25	55	5
14242	Fluoranthene	206-44-0	1 J	0.5	3	5
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.5	3	5
14242	2-Methylnaphthalene	91-57-6	N.D.	0.5	3	5
14242	4-Methylphenol	106-44-5	250	3	10	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	11	0.5	3	5
14242	N-Nitrosodimethylamine	62-75-9	N.D.	10	25	5
14242	Phenanthrene	85-01-8	N.D.	0.5	3	5
14242	Phenol	108-95-2	31	3	10	5
14242	Pyrene	129-00-0	2 J	0.5	3	5
14242	1,2,4-Trichlorobenzene	120-82-1	77	3	10	5

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPINF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 14:00
SDG#: RNS53-04

BASF Corporation
ELLE Sample #: WW 9914473
ELLE Group #: 2012773
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.50	2.5	5
10591	PCB-1221	11104-28-2	N.D. D1	0.50	2.5	5
10591	PCB-1232	11141-16-5	N.D. D1	1.0	2.5	5
10591	PCB-1242	53469-21-9	38 D2	0.50	2.5	5
10591	PCB-1248	12672-29-6	N.D. D1	0.50	2.5	5
10591	PCB-1254	11097-69-1	N.D. D1	0.50	2.5	5
10591	PCB-1260	11096-82-5	N.D. D1	0.75	2.5	5
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. VD2	0.087	0.10	10
10589	Alpha Chlordane	5103-71-9	0.33 PD2	0.030	0.10	10
10589	Gamma Chlordane	5103-74-2	N.D. VD1	0.31	0.31	10
10589	p,p-DDE	72-55-9	N.D. VD1	0.33	0.33	10
10589	p,p-DDT	50-29-3	0.33 D1	0.052	0.20	10
10589	Delta BHC	319-86-8	N.D. D1	0.034	0.10	10
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.20	1.0	10
10589	Heptachlor Epoxide	1024-57-3	0.54 D1	0.023	0.10	10

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the upper QC acceptance limit as noted on the QC Summary. The client was contacted and the data reported.

Reporting limits were raised due to interference from the sample matrix.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	62.8	0.153	0.300	1
07035	Arsenic	7440-38-2	0.0756	0.0160	0.0500	1
07046	Barium	7440-39-3	0.702	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.713	0.0053	0.0150	1
07052	Cobalt	7440-48-4	0.0420	0.0015	0.0050	1
07053	Copper	7440-50-8	0.484	0.0062	0.0200	1
01754	Iron	7439-89-6	97.7	0.0400	0.200	1
07055	Lead	7439-92-1	0.677	0.0071	0.0150	1
07058	Manganese	7439-96-5	2.53	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0975	0.0031	0.0100	1
07072	Zinc	7440-66-6	1.21	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0025	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	11.0 J	0.010	0.010	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPINF112718 Grab Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/27/2018 14:00
SDG#: RNS53-04

BASF Corporation
ELLE Sample #: **WW 9914473**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	385	20.0	60.0	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2,030	100	300	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183381AA	12/04/2018 15:39	Abigail Roselli	1
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183382AA	12/04/2018 23:51	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183381AA	12/04/2018 15:38	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	5183382AA	12/04/2018 23:50	Patrick T Herres	20
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18332WAK026	11/30/2018 02:11	Ashley R Transue	5
00813	BNA Water Extraction	SW-846 3510C	1	18332WAK026	11/29/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183320004A	11/29/2018 20:50	Kirby B Turner	5
10589	OC Pesticides in Water	SW-846 8081B	1	183320099A	12/04/2018 19:14	Dylan Schreiner	10
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183320004A	11/28/2018 17:10	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183320099A	11/28/2018 17:10	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07046	Barium	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07053	Copper	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
01754	Iron	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07055	Lead	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	2	183341404401	12/03/2018 21:56	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	183330571301	11/30/2018 10:41	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183341404401	12/01/2018 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183330571301	11/30/2018 06:40	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	18332004201A	11/28/2018 21:23	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	2	18337964901A	12/03/2018 14:03	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18333385801A	11/29/2018 13:01	Amy L Hankins	1
12151	Temperature of pH	SM 2550 B-2010	1	18332004201A	11/28/2018 21:23	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18307 Water**
COC: 569888

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 08:10
Collection Date/Time: 11/06/2018 14:15
SDG#: RNS53-05TB

BASF Corporation
ELLE Sample #: **WW 9914474**
ELLE Group #: **2012773**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183381AA	12/04/2018 10:30	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183381AA	12/04/2018 10:29	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183381AA	Sample number(s): 9914470-9914471,9914473-9914474		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 5183382AA	Sample number(s): 9914471-9914473		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18332WAK026	Sample number(s): 9914470-9914473		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 183320004A	Sample number(s): 9914470-9914473		
PCB-1016	N.D.	0.10	0.50
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 183320099A	Sample number(s): 9914470-9914473		
Beta BHC	0.0054 J	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 183330571301	Sample number(s): 9914470-9914473		
Mercury	N.D.	0.000050	0.00020
Batch number: 183341404401	Sample number(s): 9914470-9914473		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 18332964901A	Sample number(s): 9914470		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 18332964902A	Sample number(s): 9914471		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 18332964902B	Sample number(s): 9914472		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 18333385801A	Sample number(s): 9914470-9914473		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18337964901A	Sample number(s): 9914473		
Total Dissolved Solids	N.D.	20.0	60.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5183381AA	Sample number(s): 9914470-9914471,9914473-9914474								
Acetone	150	139.95			93		54-157		
Benzene	20	21.77			109		80-120		
Chlorobenzene	20	21.54			108		80-120		
1,2-Dichlorobenzene	20	20.52			103		80-120		
1,3-Dichlorobenzene	20	20.49			102		80-120		
1,4-Dichlorobenzene	20	20.76			104		80-120		
1,2-Dichloroethane	20	21.88			109		73-124		
Ethylbenzene	20	20.89			104		80-120		
Methylene Chloride	20	21.96			110		80-120		
Toluene	20	20.35			102		80-120		
Vinyl Chloride	20	17.6			88		56-120		
Xylene (Total)	60	62.75			105		80-120		
Batch number: 5183382AA	Sample number(s): 9914471-9914473								
Acetone	150	127.27	150	126.08	85	84	54-157	1	30
Benzene	20	21.09	20	21.32	105	107	80-120	1	30
Chlorobenzene	20	21.25	20	20.98	106	105	80-120	1	30
1,2-Dichlorobenzene	20	20.27	20	20.51	101	103	80-120	1	30
1,3-Dichlorobenzene	20	20.45	20	20.64	102	103	80-120	1	30
1,4-Dichlorobenzene	20	20.56	20	20.68	103	103	80-120	1	30
1,2-Dichloroethane	20	21.17	20	21.19	106	106	73-124	0	30
Ethylbenzene	20	19.96	20	20.21	100	101	80-120	1	30
Methylene Chloride	20	21.1	20	21.24	105	106	80-120	1	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Toluene	20	19.71	20	19.67	99	98	80-120	0	30
Vinyl Chloride	20	19	20	19.62	95	98	56-120	3	30
Xylene (Total)	60	61.45	60	61.18	102	102	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18332WAK026	Sample number(s): 9914470-9914473								
Anthracene	50	45.81	50	45.47	92	91	70-118	1	30
Benzo(a)anthracene	50	46.76	50	46.64	94	93	70-123	0	30
Benzo(a)pyrene	50	45.8	50	46.43	92	93	71-122	1	30
Benzo(b)fluoranthene	50	45.87	50	45.15	92	90	70-120	2	30
Benzo(k)fluoranthene	50	47.16	50	46.58	94	93	73-122	1	30
Butylbenzylphthalate	50	43.13	50	42.7	86	85	57-119	1	30
Di-n-butylphthalate	50	44.42	50	43.45	89	87	71-113	2	30
Carbazole	50	47.07	50	46.56	94	93	71-128	1	30
4-Chloroaniline	50	30.18	50	29.18	60	58	42-110	3	30
2-Chloronaphthalene	50	37.77	50	39.49	76	79	51-114	4	30
Chrysene	50	46.2	50	46.02	92	92	71-123	0	30
Dibenz(a,h)anthracene	50	48.4	50	47.05	97	94	67-123	3	30
bis(2-Ethylhexyl)phthalate	50	45.21	50	45.26	90	91	68-120	0	30
Fluoranthene	50	46.78	50	46.47	94	93	70-124	1	30
Indeno(1,2,3-cd)pyrene	50	45.13	50	44.79	90	90	61-121	1	30
2-Methylnaphthalene	50	40.71	50	42.87	81	86	51-112	5	30
4-Methylphenol	50	36.09	50	38.77	72	78	56-108	7	30
Naphthalene	50	38.72	50	39.99	77	80	54-107	3	30
N-Nitrosodimethylamine	50	29.69	50	29.41	59	59	16-108	1	30
Phenanthrene	50	45.02	50	44.58	90	89	68-118	1	30
Phenol	50	23.5	50	25	47	50	23-82	6	30
Pyrene	50	44.47	50	44.5	89	89	68-118	0	30
1,2,4-Trichlorobenzene	50	37.43	50	40.36	75	81	38-116	8	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183320004A	Sample number(s): 9914470-9914473								
PCB-1016	5.01	3.67	5.01	3.51	73	70	60-117	4	30
PCB-1260	5.00	4.22	5.00	4.28	84	86	57-134	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183320099A	Sample number(s): 9914470-9914473								
Beta BHC	0.100	0.133	0.100	0.120	133*	120	56-125	10	30
Alpha Chlordane	0.100	0.111	0.100	0.118	111	118	53-126	5	30
Gamma Chlordane	0.100	0.109	0.100	0.118	109	118	53-130	8	30
p,p-DDE	0.200	0.197	0.200	0.230	99	115	51-129	15	30
p,p-DDT	0.204	0.270	0.204	0.266	132	130	40-145	2	30
Delta BHC	0.100	0.126	0.100	0.107	126	107	49-140	17	30
Endrin Aldehyde	0.202	0.254	0.202	0.233	126	115	40-135	9	20

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Heptachlor Epoxide	0.100	0.129	0.100	0.125	129	125	56-132	3	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183330571301	Sample number(s): 9914470-9914473								
Mercury	0.00100	0.000918			92		80-114		
Batch number: 183341404401	Sample number(s): 9914470-9914473								
Aluminum	2.00	2.00			100		80-120		
Arsenic	0.150	0.159			106		80-120		
Barium	2.00	2.01			100		87-111		
Chromium	0.200	0.199			100		87-110		
Cobalt	0.500	0.519			104		90-111		
Copper	0.250	0.261			104		90-115		
Iron	1.00	1.03			103		85-115		
Lead	0.150	0.160			107		87-113		
Manganese	0.500	0.508			102		90-112		
Nickel	0.500	0.519			104		90-114		
Zinc	0.500	0.498			100		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18332964901A	Sample number(s): 9914470								
Total Dissolved Solids	200	200			100		67-127		
Batch number: 18332964902A	Sample number(s): 9914471								
Total Dissolved Solids	200	210			105		67-127		
Batch number: 18332964902B	Sample number(s): 9914472								
Total Dissolved Solids	200	210			105		67-127		
Batch number: 18333385801A	Sample number(s): 9914470-9914473								
Total Suspended Solids	150	144.9			97		89-105		
Batch number: 18337964901A	Sample number(s): 9914473								
Total Dissolved Solids	200	199			100		67-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18332004201A	Sample number(s): 9914470-9914473								
pH	7.00	7.02			100		95-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183330571301	Sample number(s): 9914470-9914473 UNSPK: 9914470									
Mercury	N.D.	0.00100	0.000838	0.00100	0.000819	84	82	80-120	2	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18332964901A	Sample number(s): 9914470 UNSPK: 9914470									
Total Dissolved Solids	1516	1600	2872			85		67-127		
Batch number: 18332964902A	Sample number(s): 9914471 UNSPK: 9914471									
Total Dissolved Solids	1868	1600	3328			91		67-127		
Batch number: 18332964902B	Sample number(s): 9914472 UNSPK: 9914471									
Total Dissolved Solids	1868	1600	3328			91		67-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	**mg/l**		
Batch number: 183330571301	Sample number(s): 9914470-9914473 BKG: 9914470			
Mercury	N.D.	N.D.	0 (1)	20
	mg/l	**mg/l**		
Batch number: 18332964901A	Sample number(s): 9914470 BKG: 9914470			
Total Dissolved Solids	1516	1652	9* (1)	5
Batch number: 18332964902A	Sample number(s): 9914471 BKG: 9914471			
Total Dissolved Solids	1868	1812	3 (1)	5
Batch number: 18332964902B	Sample number(s): 9914472 BKG: 9914472			
Total Dissolved Solids	1808	1856	3 (1)	5
Batch number: 18333385801A	Sample number(s): 9914470-9914473 BKG: 9914473			
Total Suspended Solids	2030	2460	19*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9914470	102	102	95	97
9914471	100	101	107	117
9914473	99	100	93	101
9914474	103	102	96	98
Blank	102	101	94	98
LCS	102	102	97	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183382AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9914472	100	102	90	98
Blank	100	101	96	97
LCS	100	99	96	104
LCSD	100	98	95	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18332WAK026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9914470	31	45	88	76	80	85
9914471	27	38	82	67	72	71
9914472	26	35	67	58	62	41
9914473	20	25	53	58	63	51
Blank	31	45	89	70	72	98
LCS	41	57	93	79	84	95
LCSD	45	61	96	80	84	95
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 183320004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9914470	59	74	59	76
9914471	40	56	39	55
9914472	34	52	43	51
9914473	34	41	55	44
Blank	52	49	52	48
LCS	56	54	56	56
LCSD	44	75	43	72

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2018 16:39

Group Number: 2012773

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs in Water by 8082A
Batch number: 183320004A

Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 183320099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9914470	73	129	80	147
9914471	62	123	74	137
9914472	96	160*	97	115
9914473	58	90	105	105
Blank	72	79	76	92
LCS	80	90	87	102
LCSD	87	96	99	110
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2012773 Sample # 99/4470-74

COC # 569888

Client Information

Client: BASF Corp
Acct. #:
Project Name/#: RONSSELAER
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: J. DENMAN
Quote #:
State where samples were collected: NEW YORK
For Compliance: Yes [X] No [ ]

Matrix

Soil [ ] Sediment [ ] Tissue [ ]
Water: Potable [ ] Ground [ ] NPDES [X] Surface [X]
Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#: 234420

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settleable Solids 160.5 TDS 160.1	Metals 200.7 200.8 200.9	8260C VOC 624	pH, Temp of pH 150.1	Pesticides 608 PCBs 608 TCLP 1311 8081A 8082A 8270D SIM	TSS 160.2
WWTPEFF112718	11/27/18	1315	X		12	X	X	X	X	X	X
WWTPZeOL2112718	11/27/18	1330	X		4	X	X	X	X	X	X
WWTPPOSTCLAR112718	11/27/18	1345	X		4	X	X	X	X	X	X
WWTPINF112718	11/27/18	1400	X		16	X	X	X	X	X	X
TB 18285	10/18/18	1415	X		1			X			
TB 18307	11/6/18	1415	X		1			X			
Cooler Temp Bottles	11/27/18	1415			2						

Remarks

Cooler Temp bottles

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 3

E-mail address: JOHN.Bleiler@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

	Date	Time
Relinquished by: [signature]	11-6-18	1450
Relinquished by: [signature]	11/27/18	1730
Relinquished by:		
Relinquished by:		
Relinquished by:		

	Date	Time
Received by:		
Received by:		
Received by:		
Received by:		
Received by: [signature]	11/28/18	0810

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 0.9 | 1.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234322

Group Number(s): 20/2773

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/28/2018 8:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	No	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Nicole Reiff (25684) at 08:43 on 11/28/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.9	DT	Wet	Y	Bagged	N
2	DT146	1.8	DT	Wet	Y	Bagged	N

Samples Not Intact Details: Rensselaer

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
TB18285	40 ml glass vial (GC/MS) - HCl	1	N	

Container Quantity Discrepancy Details: Rensselaer

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
WWTPZeOL2112718	12	4	
WWTPPostClar112718	12	4	
WWTPINF112718	12	16	

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 18, 2018 13:47

Project: Rensselaer

Account #: 04285
Group Number: 2016346
SDG: RNS64
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF120618 Grab Water	12/06/2018 13:13	9929746
TB18307 Grab Water	12/06/2018 17:30	9929747
TB18330 Grab Water	12/06/2018 17:30	9929748

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF120618 Grab Water**
COC: 578238

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 13:13
SDG#: RNS64-01

BASF Corporation
ELLE Sample #: **WW 9929746**
ELLE Group #: **2016346**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF120618 Grab Water**
COC: 578238

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 13:13
SDG#: RNS64-01

BASF Corporation
ELLE Sample #: WW 9929746
ELLE Group #: 2016346
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.51	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0072	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0051	0.021	1
10589	p,p-DDT	50-29-3	0.0067 JD2	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.106	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	N.D.	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.110	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	N.D.	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF120618 Grab Water**
COC: 578238

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 13:13
SDG#: RNS64-01

BASF Corporation
ELLE Sample #: **WW 9929746**
ELLE Group #: **2016346**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	724	160	480	1
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	1.40 J	1.00	3.00	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 12:18	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 12:17	Don V Viray	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18344WAJ026	12/12/2018 05:14	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18344WAJ026	12/11/2018 08:00	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183440015A	12/11/2018 14:04	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	183440098A	12/12/2018 22:59	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183440015A	12/10/2018 16:39	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183440098A	12/10/2018 16:39	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	183431404401	12/11/2018 14:29	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	183431404401	12/13/2018 13:48	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	183430571304	12/12/2018 08:45	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183431404401	12/10/2018 16:10	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183430571304	12/11/2018 15:45	JoElla L Rice	1
12152	pH	EPA 150.1	1	18344005204A	12/11/2018 06:02	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18346964901A	12/12/2018 15:39	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18345385801A	12/11/2018 22:33	Hannah M Royer	1
12151	Temperature of pH	SM 2550 B-2010	1	18344005204A	12/11/2018 06:02	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18307 Grab Water**
COC: 578238

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 17:30
SDG#: RNS64-02TB

BASF Corporation
ELLE Sample #: WW 9929747
ELLE Group #: 2016346
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 09:55	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 09:54	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18330 Grab Water**
COC: 578238

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 17:30
SDG#: RNS64-03TB

BASF Corporation
ELLE Sample #: WW 9929748
ELLE Group #: 2016346
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183472AA	12/13/2018 10:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183472AA	12/13/2018 10:18	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2016346
Reported: 12/18/2018 13:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W183472AA	Sample number(s): 9929746-9929748		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18344WAJ026	Sample number(s): 9929746		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 183440015A	Sample number(s): 9929746		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 13:47

Group Number: 2016346

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 183440098A	Sample number(s): 9929746		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 183430571304	Sample number(s): 9929746		
Mercury	N.D.	0.000050	0.00020
Batch number: 183431404401	Sample number(s): 9929746		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 18345385801A	Sample number(s): 9929746		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18346964901A	Sample number(s): 9929746		
Total Dissolved Solids	N.D.	20.0	60.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 13:47

Group Number: 2016346

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W183472AA	Sample number(s): 9929746-9929748								
Acetone	150	133.34	150	143.92	89	96	54-157	8	30
Benzene	20	21.12	20	21.33	106	107	80-120	1	30
Chlorobenzene	20	21.83	20	21.89	109	109	80-120	0	30
1,2-Dichlorobenzene	20	21.88	20	21.93	109	110	80-120	0	30
1,3-Dichlorobenzene	20	21.17	20	21.26	106	106	80-120	0	30
1,4-Dichlorobenzene	20	21.71	20	21.72	109	109	80-120	0	30
1,2-Dichloroethane	20	22.16	20	22.21	111	111	73-124	0	30
Ethylbenzene	20	21.85	20	21.63	109	108	80-120	1	30
Methylene Chloride	20	22	20	21.66	110	108	80-120	2	30
Toluene	20	21.36	20	21.52	107	108	80-120	1	30
Vinyl Chloride	20	19.58	20	19.79	98	99	56-120	1	30
Xylene (Total)	60	65.16	60	65.06	109	108	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18344WAJ026	Sample number(s): 9929746								
Anthracene	50	45.2			90		70-118		
Benzo(a)anthracene	50	48.41			97		70-123		
Benzo(a)pyrene	50	48.27			97		71-122		
Benzo(b)fluoranthene	50	48.86			98		70-120		
Benzo(k)fluoranthene	50	48.73			97		73-122		
Butylbenzylphthalate	50	45.72			91		57-119		
Di-n-butylphthalate	50	46.68			93		71-113		
Carbazole	50	48.02			96		71-128		
4-Chloroaniline	50	21.36			43		42-110		
2-Chloronaphthalene	50	39.98			80		51-114		
Chrysene	50	47.15			94		71-123		
Dibenz(a,h)anthracene	50	46.17			92		67-123		
bis(2-Ethylhexyl)phthalate	50	49.26			99		68-120		
Fluoranthene	50	48.83			98		70-124		
Indeno(1,2,3-cd)pyrene	50	43			86		61-121		
2-Methylnaphthalene	50	43.32			87		51-112		
4-Methylphenol	50	39.17			78		56-108		
Naphthalene	50	40.65			81		54-107		
N-Nitrosodimethylamine	50	29.71			59		16-108		
Phenanthrene	50	44.57			89		68-118		
Phenol	50	25.3			51		23-82		
Pyrene	50	44.25			89		68-118		
1,2,4-Trichlorobenzene	50	41.47			83		38-116		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183440015A	Sample number(s): 9929746								
PCB-1016	5.01	4.05	5.01	3.87	81	77	60-117	4	30
PCB-1260	5.00	4.19	5.00	4.54	84	91	57-134	8	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 13:47

Group Number: 2016346

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183440098A	Sample number(s): 9929746								
Beta BHC	0.100	0.0741	0.100	0.113	74	113	56-125	42*	30
Alpha Chlordane	0.100	0.0567	0.100	0.0885	57	89	53-126	44*	30
Gamma Chlordane	0.100	0.0525	0.100	0.0766	53	77	53-130	37*	30
p,p-DDE	0.200	0.0923	0.200	0.138	46*	69	51-129	40*	30
p,p-DDT	0.204	0.160	0.204	0.259	78	127	40-145	47*	30
Delta BHC	0.100	0.0701	0.100	0.113	70	113	49-140	47*	30
Endrin Aldehyde	0.202	0.145	0.202	0.220	72	109	40-135	41*	20
Heptachlor Epoxide	0.100	0.0694	0.100	0.107	69	107	56-132	42*	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183430571304	Sample number(s): 9929746								
Mercury	0.00100	0.000917			92		80-114		
Batch number: 183431404401	Sample number(s): 9929746								
Aluminum	2.00	2.01			101		80-120		
Arsenic	0.150	0.147			98		80-120		
Barium	2.00	2.08			104		87-111		
Chromium	0.200	0.210			105		87-110		
Cobalt	0.500	0.539			108		90-111		
Copper	0.250	0.264			105		90-115		
Iron	1.00	1.03			103		85-115		
Lead	0.150	0.155			104		87-113		
Manganese	0.500	0.530			106		90-112		
Nickel	0.500	0.535			107		90-114		
Zinc	0.500	0.505			101		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18345385801A	Sample number(s): 9929746								
Total Suspended Solids	150	143.5	150	147.3	96	98	89-105	3	5
Batch number: 18346964901A	Sample number(s): 9929746								
Total Dissolved Solids	200	193			97		67-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18344005204A	Sample number(s): 9929746								
pH	7.00	7.06			101		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 13:47

Group Number: 2016346

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183472AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9929746	102	104	97	92
9929747	103	103	97	94
9929748	102	103	97	94
Blank	101	103	98	93
LCS	101	105	100	100
LCSD	101	99	100	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18344WAJ026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9929746	33	47	96	78	76	58
Blank	34	50	97	80	75	92
LCS	45	59	106	82	82	94
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 183440015A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9929746	65	79	63	73
Blank	51	46	47	43
LCS	46	35	43	33
LCSD	37	79	34	72
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 183440098A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9929746	66	106	69	97
Blank	54	61	55	59
LCS	26*	85	26*	74
LCSD	37	119	38	112
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2016346 Sample # 99297346-48

COC # 578238

Client Information

Client: BASF Corp
Acct. #:
Project Name/#: RENSSELAER
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: J. DENMAN
Quote #:
State where samples were collected: NEW YORK
For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☐ NPDES ☒ Surface ☒ Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Sclentable Solids 160.1	Metals 200.7 200.8 200.9	8260 C VOC 624	Dir Temp/pH 150.1	RBT Fluoride 300.0 Chloride 300.0 Sulfate 300.0 Nitrate 300.0	TSS 160.2	Oil & pesticides in water	Remarks
WWTPEFF120618	12/6/18	1313	X		12	X	X	X	X	X	X	X	
TB18307	12/4/18	1730	X		1			X					
TB 18330	12/6/18	1730	X		1			X					
Cooler temp Bottle	12/6/18	1730	X		1								Cooler temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	12/6/18	1800			
				12/7/18	1020

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ☒ Other ____

Temperature upon receipt 0.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235421

Group Number(s): 2016346

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/07/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 14:02 on 12/07/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.8	DT	Wet	Y	Bagged	N
2	DT131	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 26, 2018 13:56

Project: Rensselaer

Account #: 04285
Group Number: 2018852
SDG: RNS73
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF121318 Grab Water	12/13/2018 13:15	9941331
TB 18330 Water	11/27/2018 14:15	9941332

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF121318 Grab Water**
COC: 569213

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 13:15
SDG#: RNS73-01

BASF Corporation
ELLE Sample #: **WW 9941331**
ELLE Group #: **2018852**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF121318 Grab Water**
COC: 569213

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 13:15
SDG#: RNS73-01

BASF Corporation
ELLE Sample #: WW 9941331
ELLE Group #: 2018852
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	the TNI/DoD Standards. The following analytes are accepted based on this allowance: Di-n-butylphthalate					
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. A reextraction was unable to be performed within the hold time.					
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0036	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0036	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.223	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.0663 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.130	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0048 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**EPA 150.1**	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	0.010	1
		SM 2540 C-2011	**mg/l**	**mg/l**	**mg/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF121318 Grab Water**
COC: 569213

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 13:15
SDG#: RNS73-01

BASF Corporation
ELLE Sample #: **WW 9941331**
ELLE Group #: **2018852**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	534	80.0	240	1
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	1.34 J	1.00	3.00	1
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	The sample was added and analyzed past holding time for the settleable solids analysis.					
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.9	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183531AA	12/19/2018 13:31	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183531AA	12/19/2018 13:30	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18351WAD026	12/20/2018 06:07	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	18351WAD026	12/18/2018 08:00	Kayla A Yuditsky	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183510096A	12/18/2018 17:41	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	183510099A	12/19/2018 00:09	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183510096A	12/17/2018 15:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183510099A	12/18/2018 08:00	Kayla A Yuditsky	1
01743	Aluminum	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	183521404409	12/21/2018 12:56	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183510571308	12/20/2018 11:46	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183521404409	12/19/2018 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183510571308	12/19/2018 09:35	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	18351002202B	12/17/2018 21:07	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18351964901A	12/17/2018 16:28	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18351385801A	12/17/2018 17:52	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPEFF121318 Grab Water**
COC: 569213

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 13:15
SDG#: RNS73-01

BASF Corporation
ELLE Sample #: WW 9941331
ELLE Group #: 2018852
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
00215	Settleable Solids	SM 2540 F-2011	1	18352021501A	12/18/2018 16:45	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	18351002202B	12/17/2018 21:07	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18330 Water**
COC: 569213

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 11/27/2018 14:15
SDG#: RNS73-02TB

BASF Corporation
ELLE Sample #: WW 9941332
ELLE Group #: 2018852
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183531AA	12/19/2018 11:45	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183531AA	12/19/2018 11:44	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 13:56

Group Number: 2018852

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183531AA	Sample number(s): 9941331-9941332		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18351WAD026	Sample number(s): 9941331		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 183510096A	Sample number(s): 9941331		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2018852
Reported: 12/26/2018 13:56

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 183510099A	Sample number(s): 9941331		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 183510571308	Sample number(s): 9941331		
Mercury	N.D.	0.000050	0.00020
Batch number: 183521404409	Sample number(s): 9941331		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 18351385801A	Sample number(s): 9941331		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18351964901A	Sample number(s): 9941331		
Total Dissolved Solids	N.D.	20.0	60.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 18352021501A	Sample number(s): 9941331		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 13:56

Group Number: 2018852

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5183531AA	Sample number(s): 9941331-9941332								
Acetone	150	124.86	150	140.32	83	94	54-157	12	30
Benzene	20	20.12	20	21.56	101	108	80-120	7	30
Chlorobenzene	20	19.41	20	21.48	97	107	80-120	10	30
1,2-Dichlorobenzene	20	18.48	20	21.24	92	106	80-120	14	30
1,3-Dichlorobenzene	20	17.85	20	20.14	89	101	80-120	12	30
1,4-Dichlorobenzene	20	18.4	20	20.69	92	103	80-120	12	30
1,2-Dichloroethane	20	20.81	20	22.25	104	111	73-124	7	30
Ethylbenzene	20	18.63	20	20.4	93	102	80-120	9	30
Methylene Chloride	20	21.26	20	21.82	106	109	80-120	3	30
Toluene	20	18.3	20	19.71	91	99	80-120	7	30
Vinyl Chloride	20	18.69	20	20.26	93	101	56-120	8	30
Xylene (Total)	60	56.9	60	62.54	95	104	80-120	9	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18351WAD026	Sample number(s): 9941331								
Anthracene	50	44.56			89		70-118		
Benzo(a)anthracene	50	44.58			89		70-123		
Benzo(a)pyrene	50	42.5			85		71-122		
Benzo(b)fluoranthene	50	41.08			82		70-120		
Benzo(k)fluoranthene	50	40.69			81		73-122		
Butylbenzylphthalate	50	35.98			72		57-119		
Di-n-butylphthalate	50	32.98			66*		71-113		
Carbazole	50	45.77			92		71-128		
4-Chloroaniline	50	47.51			95		42-110		
2-Chloronaphthalene	50	45.87			92		51-114		
Chrysene	50	44.53			89		71-123		
Dibenz(a,h)anthracene	50	44.43			89		67-123		
bis(2-Ethylhexyl)phthalate	50	36.01			72		68-120		
Fluoranthene	50	39.15			78		70-124		
Indeno(1,2,3-cd)pyrene	50	43.22			86		61-121		
2-Methylnaphthalene	50	46.72			93		51-112		
4-Methylphenol	50	34.73			69		56-108		
Naphthalene	50	42.34			85		54-107		
N-Nitrosodimethylamine	50	28.84			58		16-108		
Phenanthrene	50	43.83			88		68-118		
Phenol	50	22.54			45		23-82		
Pyrene	50	42.82			86		68-118		
1,2,4-Trichlorobenzene	50	40.23			80		38-116		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183510096A	Sample number(s): 9941331								
PCB-1016	5.01	2.99	5.01	2.79	60	56*	60-117	7	30
PCB-1260	5.00	3.87	5.00	3.53	77	71	57-134	9	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 13:56

Group Number: 2018852

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183510099A	Sample number(s): 9941331								
Beta BHC	0.100	0.0960	0.100	0.0922	96	92	56-125	4	30
Alpha Chlordane	0.100	0.0944	0.100	0.0909	94	91	53-126	4	30
Gamma Chlordane	0.100	0.0979	0.100	0.0945	98	94	53-130	4	30
p,p-DDE	0.200	0.188	0.200	0.187	94	94	51-129	1	30
p,p-DDT	0.204	0.215	0.204	0.194	105	95	40-145	10	30
Delta BHC	0.100	0.0921	0.100	0.0876	92	88	49-140	5	30
Endrin Aldehyde	0.202	0.164	0.202	0.173	81	86	40-135	5	20
Heptachlor Epoxide	0.100	0.0964	0.100	0.0920	96	92	56-132	5	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183510571308	Sample number(s): 9941331								
Mercury	0.00100	0.000863			86		80-114		
Batch number: 183521404409	Sample number(s): 9941331								
Aluminum	2.00	2.17			108		80-120		
Arsenic	0.150	0.155			103		80-120		
Barium	2.00	2.05			102		87-111		
Chromium	0.200	0.201			100		87-110		
Cobalt	0.500	0.518			104		90-111		
Copper	0.250	0.257			103		90-115		
Iron	1.00	1.04			104		85-115		
Lead	0.150	0.148			99		87-113		
Manganese	0.500	0.519			104		90-112		
Nickel	0.500	0.526			105		90-114		
Zinc	0.500	0.507			101		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18351385801A	Sample number(s): 9941331								
Total Suspended Solids	150	142.3			95		89-105		
Batch number: 18351964901A	Sample number(s): 9941331								
Total Dissolved Solids	200	193			97		67-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 18351002202B	Sample number(s): 9941331								
pH	7.00	7.02			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 13:56

Group Number: 2018852

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18351964901A	Sample number(s): 9941331 UNSPK: 9941331									
Total Dissolved Solids	534	800	1372			105		67-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	Degrees C	Degrees C		
Batch number: 18351002202B	Sample number(s): 9941331 BKG: 9941331			
Temperature of pH	21.89	21.7	1	5
	mg/l	mg/l		
Batch number: 18351964901A	Sample number(s): 9941331 BKG: 9941331			
Total Dissolved Solids	534	576	8* (1)	5
	Std. Units	Std. Units		
Batch number: 18351002202B	Sample number(s): 9941331 BKG: 9941331			
pH	7.94	7.96	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183531AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9941331	108	103	94	98
9941332	105	102	93	98
Blank	105	104	93	96
LCS	106	101	95	105
LCSD	102	99	95	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18351WAD026

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 13:56

Group Number: 2018852

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 8270D MINI
Batch number: 18351WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9941331	28	35	91	65	88	77
Blank	35	40	98	78	79	98
LCS	39	52	96	75	107*	89
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 183510096A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9941331	68	71	61	67
Blank	51	55	46	52
LCS	17*	67	14*	61
LCSD	13*	71	11*	67
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 183510099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9941331	62	80	65	84
Blank	67	77	74	78
LCS	66	97	73	102
LCSD	64	92	70	95
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 418852 Sample # 494133-32

COC # 569213

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260C VOC	pH/PH Temp	PCBs in water 8082A	CHP	TSS	PAH	Pesticides	Remarks
WWTPEFF12/13/18	12/13/18	1315	X		12	X	X	X	X	X	X	X	X	X	
TB 18330	11/27/18	1415	X		2			X							
Cooler Temp Bottle	12/13/18	1415	X		1										Cooler Temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	12/13/18	1730			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	12/14/18	1012

EDD Required? (Yes) No
If yes, format: Aecom EQuIS4 File Format

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt 1.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236185

Group Number(s): 708852

Client: BASF Corp

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/14/2018 10:12
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 12:21 on 12/14/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 03, 2019 18:12

Project: Rensselaer

Account #: 04285
Group Number: 2021337
SDG: RNS79
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF122018 Grab Water	12/20/2018 09:11	9952465
WWTPHVOCpmycarb122018 Grab Water	12/20/2018 11:00	9952466
WWTPHVOCINF122018 Grab Water	12/20/2018 11:25	9952467
Trip blank 18285 Water	10/18/2018 14:00	9952468
Trip blank 18340 Water	12/13/2018 14:00	9952469

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:11
SDG#: RNS79-01

BASF Corporation
ELLE Sample #: **WW 9952465**
ELLE Group #: **2021337**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	0.9 J	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:11
SDG#: RNS79-01

BASF Corporation
ELLE Sample #: **WW 9952465**
ELLE Group #: **2021337**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1
	The NJ DKQP analyte list requirement was not met for Method 8082A. The client specified list is reported.					
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.150	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.0488 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.124	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0059 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.3	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	357	40.0	120	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHVOCEFF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:11
SDG#: RNS79-01

BASF Corporation
ELLE Sample #: WW 9952465
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.09 J	1.00	3.00	1
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	18.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/03/2019 00:15	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190022AA	01/03/2019 00:14	Don V Viray	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18360WAA026	12/31/2018 16:24	William H Saadeh	1
00813	BNA Water Extraction	SW-846 3510C	1	18360WAA026	12/27/2018 08:00	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183600098A	12/28/2018 05:00	Richard A Shober	1
10589	OC Pesticides in Water	SW-846 8081B	1	183600099A	01/01/2019 02:48	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183600098A	12/27/2018 08:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183600099A	12/27/2018 08:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	183621404406	01/02/2019 08:06	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183610571309	12/29/2018 08:24	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183621404406	12/31/2018 04:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183610571309	12/28/2018 16:50	JoElla L Rice	1
12152	pH	EPA 150.1	1	19002121451A	01/02/2019 13:20	Luz M Groff	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18356964901A	12/22/2018 09:54	Susan A Engle	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18360385801A	12/26/2018 12:36	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	18355021501A	12/21/2018 18:20	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19002121451A	01/02/2019 13:20	Luz M Groff	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:00
SDG#: RNS79-02

BASF Corporation
ELLE Sample #: **WW 9952466**
ELLE Group #: **2021337**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	14 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:00
SDG#: RNS79-02

BASF Corporation
ELLE Sample #: WW 9952466
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0036	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0052	0.021	1
10589	p,p-DDT	50-29-3	0.030 D2	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0036	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0788	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0102 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.103 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.241	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0031 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0181 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**EPA 150.1**	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2	0.010	0.010	1
		SM 2540 C-2011	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	293	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.39 J	3.00	9.00	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPHVOCpmycarb122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:00
SDG#: RNS79-02

BASF Corporation
ELLE Sample #: WW 9952466
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
	Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	18.3	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/03/2019 00:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190022AA	01/03/2019 00:38	Don V Viray	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18360WAA026	12/31/2018 16:53	William H Saadeh	1
00813	BNA Water Extraction	SW-846 3510C	1	18360WAA026	12/27/2018 08:00	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183600098A	12/28/2018 05:11	Richard A Shober	1
10589	OC Pesticides in Water	SW-846 8081B	1	183600099A	01/01/2019 03:00	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183600098A	12/27/2018 08:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183600099A	12/27/2018 08:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	183621404406	01/02/2019 08:10	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183610571309	12/29/2018 08:26	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183621404406	12/31/2018 04:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183610571309	12/28/2018 16:50	JoElla L Rice	1
12152	pH	EPA 150.1	1	19002121451A	01/02/2019 13:20	Luz M Groff	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18356964901A	12/22/2018 09:54	Susan A Engle	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18360385801A	12/26/2018 12:36	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	18355021501A	12/21/2018 18:20	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19002121451A	01/02/2019 13:20	Luz M Groff	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCINF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:25
SDG#: RNS79-03

BASF Corporation
ELLE Sample #: WW 9952467
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Acetone	67-64-1	370		7	200	10
11997	Benzene	71-43-2	440		2	10	10
11997	Chlorobenzene	108-90-7	8,700		20	100	100
11997	1,2-Dichlorobenzene	95-50-1	460		2	50	10
11997	1,3-Dichlorobenzene	541-73-1	40	J	2	50	10
11997	1,4-Dichlorobenzene	106-46-7	47	J	2	50	10
11997	1,2-Dichloroethane	107-06-2	100		3	10	10
11997	Ethylbenzene	100-41-4	9	J	4	10	10
11997	Methylene Chloride	75-09-2	N.D.		3	10	10
11997	Toluene	108-88-3	90		2	10	10
11997	Vinyl Chloride	75-01-4	N.D.		2	10	10
11997	Xylene (Total)	1330-20-7	31	J	10	50	10
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**		**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.		1	5	10
14242	Benzo(a)anthracene	56-55-3	N.D.		1	5	10
14242	Benzo(a)pyrene	50-32-8	N.D.		1	5	10
14242	Benzo(b)fluoranthene	205-99-2	N.D.		1	5	10
14242	Benzo(k)fluoranthene	207-08-9	N.D.		1	5	10
14242	Butylbenzylphthalate	85-68-7	N.D.		21	51	10
14242	Di-n-butylphthalate	84-74-2	N.D.		21	51	10
14242	Carbazole	86-74-8	N.D.		5	21	10
14242	4-Chloroaniline	106-47-8	N.D.		41	100	10
14242	2-Chloronaphthalene	91-58-7	11		4	10	10
14242	Chrysene	218-01-9	N.D.		1	5	10
14242	Dibenz(a,h)anthracene	53-70-3	N.D.		1	5	10
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		51	110	10
14242	Fluoranthene	206-44-0	N.D.		1	5	10
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		1	5	10
14242	2-Methylnaphthalene	91-57-6	N.D.		1	5	10
14242	4-Methylphenol	106-44-5	1,600		26	100	50
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14242	Naphthalene	91-20-3	26		1	5	10
14242	N-Nitrosodimethylamine	62-75-9	N.D.		21	51	10
14242	Phenanthrene	85-01-8	N.D.		1	5	10
14242	Phenol	108-95-2	260		5	21	10
14242	Pyrene	129-00-0	N.D.		1	5	10
14242	1,2,4-Trichlorobenzene	120-82-1	32		5	21	10

Reporting limits were raised due to interference from the sample matrix.

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCINF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:25
SDG#: RNS79-03

BASF Corporation
ELLE Sample #: **WW 9952467**
ELLE Group #: **2021337**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	6.8 D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.35	1.0	100
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.31	1.0	100
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.73	2.1	100
10589	p,p-DDE	72-55-9	N.D. D1	0.52	2.1	100
10589	p,p-DDT	50-29-3	N.D. D2	0.54	2.1	100
10589	Delta BHC	319-86-8	N.D. D1	0.35	1.0	100
10589	Endrin Aldehyde	7421-93-4	N.D. D1	2.1	10	100
10589	Heptachlor Epoxide	1024-57-3	0.43 JD2	0.24	1.0	100
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	4.49	0.153	0.300	1
07035	Arsenic	7440-38-2	0.0312 J	0.0160	0.0500	1
07046	Barium	7440-39-3	0.222	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0715	0.0053	0.0150	1
07052	Cobalt	7440-48-4	0.0098	0.0015	0.0050	1
07053	Copper	7440-50-8	0.287	0.0062	0.0200	1
01754	Iron	7439-89-6	7.21	0.0400	0.200	1
07055	Lead	7439-92-1	0.0840	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.282	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0536	0.0031	0.0100	1
07072	Zinc	7440-66-6	1.02	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00022	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	10.5 J	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	347	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	171	10.0	30.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCINF122018 Grab Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 11:25
SDG#: RNS79-03

BASF Corporation
ELLE Sample #: WW 9952467
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	0.30	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	18.1	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/03/2019 01:02	Don V Viray	10
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/03/2019 01:26	Don V Viray	100
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190022AA	01/03/2019 01:01	Don V Viray	10
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190022AA	01/03/2019 01:25	Don V Viray	100
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18360WAA026	12/31/2018 17:21	William H Saadeh	10
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18360WAA026	01/02/2019 12:17	William H Saadeh	50
00813	BNA Water Extraction	SW-846 3510C	1	18360WAA026	12/27/2018 08:00	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	183600098A	12/28/2018 05:44	Richard A Shober	1
10589	OC Pesticides in Water	SW-846 8081B	1	183600099A	01/02/2019 14:57	Lisa A Reinert	100
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183600098A	12/27/2018 08:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183600099A	12/27/2018 08:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	183621404406	01/02/2019 08:13	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	183610571309	12/29/2018 08:28	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	183621404406	12/31/2018 04:41	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183610571309	12/28/2018 16:50	JoElla L Rice	1
12152	pH	EPA 150.1	1	19002121451A	01/02/2019 13:20	Luz M Groff	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18356964901A	12/22/2018 09:54	Susan A Engle	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18360385801A	12/26/2018 12:36	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	18355021501A	12/21/2018 18:20	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19002121451A	01/02/2019 13:20	Luz M Groff	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip blank 18285 Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 10/18/2018 14:00
SDG#: RNS79-04TB

BASF Corporation
ELLE Sample #: WW 9952468
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/02/2019 23:27	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190022AA	01/02/2019 23:26	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip blank 18340 Water**
COC: 569216

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/13/2018 14:00
SDG#: RNS79-05TB

BASF Corporation
ELLE Sample #: WW 9952469
ELLE Group #: 2021337
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190022AA	01/02/2019 23:51	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190022AA	01/02/2019 23:50	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2021337
Reported: 01/03/2019 18:12

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W190022AA	Sample number(s): 9952465-9952469		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18360WAA026	Sample number(s): 9952465-9952467		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 183600098A	Sample number(s): 9952465-9952467		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/03/2019 18:12

Group Number: 2021337

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 183600099A	Sample number(s): 9952465-9952467		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 183610571309	Sample number(s): 9952465-9952467		
Mercury	0.000051 J	0.000050	0.00020
Batch number: 183621404406	Sample number(s): 9952465-9952467		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 18356964901A	Sample number(s): 9952465-9952467		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 18360385801A	Sample number(s): 9952465-9952467		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 18355021501A	Sample number(s): 9952465-9952467		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/03/2019 18:12

Group Number: 2021337

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W190022AA	Sample number(s): 9952465-9952469								
Acetone	150	130.57	150	125.38	87	84	54-157	4	30
Benzene	20	22.12	20	21.64	111	108	80-120	2	30
Chlorobenzene	20	21.85	20	21.38	109	107	80-120	2	30
1,2-Dichlorobenzene	20	21.36	20	21.33	107	107	80-120	0	30
1,3-Dichlorobenzene	20	21.29	20	20.71	106	104	80-120	3	30
1,4-Dichlorobenzene	20	21.32	20	20.87	107	104	80-120	2	30
1,2-Dichloroethane	20	22.68	20	20.84	113	104	73-124	8	30
Ethylbenzene	20	21.83	20	20.7	109	104	80-120	5	30
Methylene Chloride	20	22.53	20	23.06	113	115	80-120	2	30
Toluene	20	21.45	20	20.38	107	102	80-120	5	30
Vinyl Chloride	20	20.23	20	20.6	101	103	56-120	2	30
Xylene (Total)	60	65.65	60	63.86	109	106	80-120	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18360WAA026	Sample number(s): 9952465-9952467								
Anthracene	50	47.12	50	46.75	94	93	70-118	1	30
Benzo(a)anthracene	50	49.21	50	48.21	98	96	70-123	2	30
Benzo(a)pyrene	50	49.29	50	48.42	99	97	71-122	2	30
Benzo(b)fluoranthene	50	48.49	50	47.97	97	96	70-120	1	30
Benzo(k)fluoranthene	50	48.52	50	47.85	97	96	73-122	1	30
Butylbenzylphthalate	50	36.44	50	36.41	73	73	57-119	0	30
Di-n-butylphthalate	50	42.94	50	42.26	86	85	71-113	2	30
Carbazole	50	48.64	50	47.94	97	96	71-128	1	30
4-Chloroaniline	50	31.49	50	24.02	63	48	42-110	27	30
2-Chloronaphthalene	50	39.97	50	39.69	80	79	51-114	1	30
Chrysene	50	48.47	50	47.47	97	95	71-123	2	30
Dibenz(a,h)anthracene	50	50.9	50	49.99	102	100	67-123	2	30
bis(2-Ethylhexyl)phthalate	50	42.71	50	41.56	85	83	68-120	3	30
Fluoranthene	50	51.23	50	50.15	102	100	70-124	2	30
Indeno(1,2,3-cd)pyrene	50	50.87	50	50.13	102	100	61-121	1	30
2-Methylnaphthalene	50	41.13	50	41.36	82	83	51-112	1	30
4-Methylphenol	50	41.06	50	44.91	82	90	56-108	9	30
Naphthalene	50	39.21	50	39.34	78	79	54-107	0	30
N-Nitrosodimethylamine	50	27.2	50	29.98	54	60	16-108	10	30
Phenanthrene	50	45.6	50	45.48	91	91	68-118	0	30
Phenol	50	23.73	50	25.13	47	50	23-82	6	30
Pyrene	50	46.17	50	45.1	92	90	68-118	2	30
1,2,4-Trichlorobenzene	50	40.03	50	39.75	80	80	38-116	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183600098A	Sample number(s): 9952465-9952467								
PCB-1016	5.01	4.50	5.01	3.93	90	79	60-117	14	30
PCB-1260	5.00	5.02	5.00	4.10	100	82	57-134	20	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/03/2019 18:12

Group Number: 2021337

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183600099A	Sample number(s): 9952465-9952467								
Beta BHC	0.100	0.0987	0.100	0.0969	99	97	56-125	2	30
Alpha Chlordane	0.100	0.0998	0.100	0.0983	100	98	53-126	2	30
Gamma Chlordane	0.100	0.0990	0.100	0.0990	99	99	53-130	0	30
p,p-DDE	0.200	0.197	0.200	0.197	98	99	51-129	0	30
p,p-DDT	0.204	0.232	0.204	0.230	114	113	40-145	1	30
Delta BHC	0.100	0.0994	0.100	0.102	99	102	49-140	3	30
Endrin Aldehyde	0.202	0.188	0.202	0.188	93	93	40-135	0	20
Heptachlor Epoxide	0.100	0.104	0.100	0.104	104	104	56-132	0	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 183610571309	Sample number(s): 9952465-9952467								
Mercury	0.00100	0.000933			93		80-114		
Batch number: 183621404406	Sample number(s): 9952465-9952467								
Aluminum	2.00	1.97			99		80-120		
Arsenic	0.150	0.142			94		80-120		
Barium	2.00	2.08			104		87-111		
Chromium	0.200	0.204			102		87-110		
Cobalt	0.500	0.513			103		90-111		
Copper	0.250	0.250			100		90-115		
Iron	1.00	1.01			101		85-115		
Lead	0.150	0.150			100		87-113		
Manganese	0.500	0.523			105		90-112		
Nickel	0.500	0.524			105		90-114		
Zinc	0.500	0.506			101		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18356964901A	Sample number(s): 9952465-9952467								
Total Dissolved Solids	200	197	200	182	99	91	67-127	8	9
Batch number: 18360385801A	Sample number(s): 9952465-9952467								
Total Suspended Solids	150	141.6			94		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19002121451A	Sample number(s): 9952465-9952467								
pH	7.00	6.98			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/03/2019 18:12

Group Number: 2021337

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	Degrees C	Degrees C		
Batch number: 19002121451A	Sample number(s): 9952465-9952467 BKG: 9952467			
Temperature of pH	18.1	18.2	1	5
	Std. Units	Std. Units		
Batch number: 19002121451A	Sample number(s): 9952465-9952467 BKG: 9952467			
pH	10.52	10.48	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190022AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9952465	104	107	95	94
9952466	104	105	94	92
9952467	106	107	90	94
9952468	103	106	95	93
9952469	104	107	95	97
Blank	103	103	95	94
LCS	102	101	98	101
LCSD	105	100	97	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18360WAA026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9952465	37	53	93	83	83	69
9952466	39	55	98	85	81	68
9952467	36	47	104	79	79	79
Blank	26	37	81	62	60	77
LCS	42	57	110	85	83	95
LCSD	45	61	113	87	85	92
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 183600098A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/03/2019 18:12

Group Number: 2021337

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs in Water by 8082A
Batch number: 183600098A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9952465	78	72	77	71
9952466	72	55	71	56
9952467	64	35	75	36
Blank	75	55	74	54
LCS	74	74	74	76
LCSD	68	40	68	40
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 183600099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9952465	74	79	72	65
9952466	67	64	70	60
9952467	79	84	380*	51
Blank	70	65	72	63
LCS	65	68	70	67
LCSD	71	97	69	94
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2021337 Sample # 9952465-69

COC # 569216

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☒ Surface | Other: cooler Temp bottles

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260 C VOC	pH/pH Temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF122018	12/20/18	0911	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCpmyCArb122018	12/20/18	1100	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCINF122018	12/20/18	1125	X		12	X	X	X	X	X	X	X	X	
TRIP BLANK 18285	10/18/18	1400	X		2			X						
TRIP BLANK 18340	12/13/18	1400	X		2			X						
Cooler Temp bottle	12/20/18	1400			2									Cooler Temp bottles

For Lab Use Only
FSC:
SCR#: 233287

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Richard Rath	10-22-18	9:00			
Jeff Denman	12/20/18	1615			
			Received by	12/21/18	1120

EDD Required? (Yes) No
If yes, format: AECOM EQuIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt 1.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236966

Group Number(s): 721337

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/21/2018 11:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 13:24 on 12/21/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.9	DT	Wet	Y	Bagged	N
2	DT131	3.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 09, 2019 14:12

Project: Rensselaer

Account #: 04285
Group Number: 2022243
SDG: RNS81
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

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To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF122718 Grab Water	12/27/2018 13:20	9956519
TB18307 Water	12/27/2018 17:30	9956520
TB18340 Water	12/27/2018 17:30	9956521

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF122718 Grab Water**
Rensselaer
COC: 576525

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:20
SDG#: RNS81-01

BASF Corporation
ELLE Sample #: WW 9956519
ELLE Group #: 2022243
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	3 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF122718 Grab Water**
Rensselaer
COC: 576525

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:20
SDG#: RNS81-01

BASF Corporation
ELLE Sample #: WW 9956519
ELLE Group #: 2022243
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.50	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.50	1
10591	PCB-1232	11141-16-5	N.D. D1	0.20	0.50	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.50	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.50	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.50	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.50	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.136	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.0438 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.162	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0049 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.2	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	309	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF122718 Grab Water**
Rensselaer
COC: 576525

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 13:20
SDG#: RNS81-01

BASF Corporation
ELLE Sample #: WW 9956519
ELLE Group #: 2022243
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.99 J	1.00	3.00	1
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.9	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190032AA	01/03/2019 23:17	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190032AA	01/03/2019 23:16	Don V Viray	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	18364WAD026	01/03/2019 13:19	Edward C Monborne	1
00813	BNA Water Extraction	SW-846 3510C	1	18364WAD026	12/31/2018 08:30	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190030032A	01/06/2019 12:39	Richard A Shober	1
10589	OC Pesticides in Water	SW-846 8081B	1	190020099A	01/04/2019 22:16	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	2	190030032A	01/04/2019 08:30	Logan M Brosemer	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190020099A	01/03/2019 09:30	Logan M Brosemer	1
01743	Aluminum	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190031404406	01/07/2019 21:33	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190030571306	01/07/2019 10:36	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190031404406	01/07/2019 05:50	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190030571306	01/04/2019 07:00	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	19003008202A	01/04/2019 01:32	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	18365964901A	12/31/2018 14:54	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18365385801A	12/31/2018 10:00	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	18362021501A	12/28/2018 20:40	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19003008202A	01/04/2019 01:32	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18307 Water**
Rensselaer
COC: 576525

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 17:30
SDG#: RNS81-02TB

BASF Corporation
ELLE Sample #: **WW 9956520**
ELLE Group #: **2022243**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190032AA	01/03/2019 22:54	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190032AA	01/03/2019 22:53	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18340 Water**
Rensselaer
COC: 576525

Project Name: **Rensselaer**

Submittal Date/Time: 12/28/2018 10:00
Collection Date/Time: 12/27/2018 17:30
SDG#: RNS81-03TB

BASF Corporation
ELLE Sample #: **WW 9956521**
ELLE Group #: **2022243**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190032AA	01/03/2019 22:30	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190032AA	01/03/2019 22:29	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 14:12

Group Number: 2022243

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W190032AA	Sample number(s): 9956519-9956521		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 18364WAD026	Sample number(s): 9956519		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190030032A	Sample number(s): 9956519		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2022243
Reported: 01/09/2019 14:12

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190020099A	Sample number(s): 9956519		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190030571306	Sample number(s): 9956519		
Mercury	N.D.	0.000050	0.00020
Batch number: 190031404406	Sample number(s): 9956519		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 18365385801A	Sample number(s): 9956519		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18365964901A	Sample number(s): 9956519		
Total Dissolved Solids	N.D.	20.0	60.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 18362021501A	Sample number(s): 9956519		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 14:12

Group Number: 2022243

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W190032AA	Sample number(s): 9956519-9956521								
Acetone	150	127.21	150	134.38	85	90	54-157	5	30
Benzene	20	22.15	20	22.51	111	113	80-120	2	30
Chlorobenzene	20	22.08	20	22.2	110	111	80-120	1	30
1,2-Dichlorobenzene	20	22	20	22.1	110	110	80-120	0	30
1,3-Dichlorobenzene	20	21.53	20	21.64	108	108	80-120	1	30
1,4-Dichlorobenzene	20	21.64	20	21.84	108	109	80-120	1	30
1,2-Dichloroethane	20	22.9	20	23.35	114	117	73-124	2	30
Ethylbenzene	20	21.59	20	21.35	108	107	80-120	1	30
Methylene Chloride	20	23.29	20	22.79	116	114	80-120	2	30
Toluene	20	22.3	20	21.43	112	107	80-120	4	30
Vinyl Chloride	20	21.65	20	21.95	108	110	56-120	1	30
Xylene (Total)	60	66.82	60	66.68	111	111	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18364WAD026	Sample number(s): 9956519								
Anthracene	50	44.82	50	46.01	90	92	70-118	3	30
Benzo(a)anthracene	50	44.18	50	45.02	88	90	70-123	2	30
Benzo(a)pyrene	50	44.36	50	45.53	89	91	71-122	3	30
Benzo(b)fluoranthene	50	43.82	50	45.02	88	90	70-120	3	30
Benzo(k)fluoranthene	50	44.04	50	44.83	88	90	73-122	2	30
Butylbenzylphthalate	50	42.21	50	39.84	84	80	57-119	6	30
Di-n-butylphthalate	50	44.81	50	45.39	90	91	71-113	1	30
Carbazole	50	45.86	50	47	92	94	71-128	2	30
4-Chloroaniline	50	32.51	50	31.96	65	64	42-110	2	30
2-Chloronaphthalene	50	41.08	50	41.52	82	83	51-114	1	30
Chrysene	50	42.7	50	43.28	85	87	71-123	1	30
Dibenz(a,h)anthracene	50	42.98	50	44.48	86	89	67-123	3	30
bis(2-Ethylhexyl)phthalate	50	43.61	50	43.94	87	88	68-120	1	30
Fluoranthene	50	45.28	50	46	91	92	70-124	2	30
Indeno(1,2,3-cd)pyrene	50	40	50	40.35	80	81	61-121	1	30
2-Methylnaphthalene	50	40.19	50	41.42	80	83	51-112	3	30
4-Methylphenol	50	35.85	50	35.74	72	71	56-108	0	30
Naphthalene	50	38.38	50	40.35	77	81	54-107	5	30
N-Nitrosodimethylamine	50	23.51	50	23.92	47	48	16-108	2	30
Phenanthrene	50	42.95	50	44.71	86	89	68-118	4	30
Phenol	50	21.09	50	21.98	42	44	23-82	4	30
Pyrene	50	43.39	50	43.83	87	88	68-118	1	30
1,2,4-Trichlorobenzene	50	36.42	50	39.01	73	78	38-116	7	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190030032A	Sample number(s): 9956519								
PCB-1016	5.01	5.71			114		60-117		
PCB-1260	5.00	4.23			85		57-134		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 14:12

Group Number: 2022243

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190020099A	Sample number(s): 9956519								
Beta BHC	0.100	0.0818	0.100	0.0843	82	84	56-125	3	30
Alpha Chlordane	0.100	0.0794	0.100	0.0852	79	85	53-126	7	30
Gamma Chlordane	0.100	0.0773	0.100	0.0840	77	84	53-130	8	30
p,p-DDE	0.200	0.141	0.200	0.150	71	75	51-129	6	30
p,p-DDT	0.204	0.179	0.204	0.183	88	89	40-145	2	30
Delta BHC	0.100	0.0717	0.100	0.0850	72	85	49-140	17	30
Endrin Aldehyde	0.202	0.174	0.202	0.175	86	87	40-135	0	20
Heptachlor Epoxide	0.100	0.0878	0.100	0.0926	88	93	56-132	5	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190030571306	Sample number(s): 9956519								
Mercury	0.00100	0.000851			85		80-114		
Batch number: 190031404406	Sample number(s): 9956519								
Aluminum	2.00	1.87			93		80-120		
Arsenic	0.150	0.142			95		80-120		
Barium	2.00	1.96			98		87-111		
Chromium	0.200	0.192			96		87-110		
Cobalt	0.500	0.494			99		90-111		
Copper	0.250	0.251			100		90-115		
Iron	1.00	1.01			101		85-115		
Lead	0.150	0.147			98		87-113		
Manganese	0.500	0.496			99		90-112		
Nickel	0.500	0.505			101		90-114		
Zinc	0.500	0.479			96		89-111		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 18365385801A	Sample number(s): 9956519								
Total Suspended Solids	150	146.8			98		89-105		
Batch number: 18365964901A	Sample number(s): 9956519								
Total Dissolved Solids	200	201			101		67-127		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 19003008202A	Sample number(s): 9956519								
pH	7.00	7.04			101		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2019 14:12

Group Number: 2022243

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190032AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9956519	105	105	91	92
9956520	104	104	97	92
9956521	105	103	97	93
Blank	105	105	95	93
LCS	105	102	100	99
LCSD	104	104	99	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 18364WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9956519	34	48	81	72	78	62
Blank	38	50	87	73	81	93
LCS	42	54	83	71	80	88
LCSD	39	54	86	74	82	87
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: OC Pesticides in Water
Batch number: 190020099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9956519	68	65	63	62
Blank	72	86	67	81
LCS	69	69	64	65
LCSD	74	74	68	70
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 190030032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9956519	73	68	88	65
Blank	78	58	95	57
LCS	83	63	101	61
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2022243 Sample # 9956519-21

COC # 576525

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: James Sirvent	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☒ Surface ☐ | Other: cooler temp bottle

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#: [redacted]

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settleable Solids/TDS	metals	8260C VOC	pH/pH Temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTP HVOCEFF122718	12/27/18	1320	X		12	X	X	X	X	X	X	X	X	
TB 18307	12/27/18	1730	X		1			X						
TB 18346	12/27/18	1730	X		1			X						
cooler temp bottle	12/27/18	1730	X		X									cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.Bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[redacted]	[redacted]				
James Sirvent	12/27/18	1800			
			[illegible]	12/28/18	10:00

EDD Required? Yes No

If yes, format: AECOM EQuIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 237300

Group Number(s): 2022243

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/28/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:54 on 12/28/2018

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.6	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 16, 2019 13:14

Project: Rensselaer

Account #: 04285
Group Number: 2023436
SDG: RNS83
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF010319 Grab Water	01/03/2019 15:00	9960523
WWTPHVOCpmycarb010319 Grab Water	01/03/2019 15:15	9960524
TB 18346 Water	12/21/2018 18:00	9960525

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:00
SDG#: RNS83-01

BASF Corporation
ELLE Sample #: **WW 9960523**
ELLE Group #: **2023436**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:00
SDG#: RNS83-01

BASF Corporation
ELLE Sample #: WW 9960523
ELLE Group #: 2023436
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.12	0.59	1
10591	PCB-1221	11104-28-2	N.D. D1	0.12	0.59	1
10591	PCB-1232	11141-16-5	N.D. D1	0.24	0.59	1
10591	PCB-1242	53469-21-9	N.D. D1	0.12	0.59	1
10591	PCB-1248	12672-29-6	N.D. D1	0.12	0.59	1
10591	PCB-1254	11097-69-1	N.D. D1	0.12	0.59	1
10591	PCB-1260	11096-82-5	N.D. D1	0.18	0.59	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0040	0.012	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0036	0.012	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0083	0.024	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0059	0.024	1
10589	p,p-DDT	50-29-3	0.049 D1	0.0062	0.024	1
10589	Delta BHC	319-86-8	N.D. D1	0.0040	0.012	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.024	0.12	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0027	0.012	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D. K4	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.231	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0066 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.0758 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.248	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D. K1K2	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0071 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	326	40.0	120	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHVOCEFF010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:00
SDG#: RNS83-01

BASF Corporation
ELLE Sample #: **WW 9960523**
ELLE Group #: **2023436**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.24 J	1.00	3.00	1
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.9	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	4190081AA	01/08/2019 14:06	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4190081AA	01/08/2019 14:05	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19007WAC026	01/09/2019 01:26	Brandon K Cordova	1
00813	BNA Water Extraction	SW-846 3510C	1	19007WAC026	01/08/2019 08:30	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190080002A	01/09/2019 19:18	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190080006A	01/09/2019 18:28	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190080002A	01/08/2019 17:20	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190080006A	01/08/2019 17:20	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190071404401	01/14/2019 13:25	Patrick J Engle	1
07055	Lead	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190071404401	01/10/2019 22:24	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190070571301	01/10/2019 09:08	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190071404401	01/08/2019 05:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190070571301	01/09/2019 07:15	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	19007011201A	01/07/2019 20:49	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19007964901A	01/07/2019 14:39	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19007385801A	01/07/2019 11:09	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19004021501A	01/04/2019 16:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19007011201A	01/07/2019 20:49	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:15
SDG#: RNS83-02

BASF Corporation
ELLE Sample #: WW 9960524
ELLE Group #: 2023436
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	13 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:15
SDG#: RNS83-02

BASF Corporation
ELLE Sample #: WW 9960524
ELLE Group #: 2023436
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.54	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.54	1
10591	PCB-1232	11141-16-5	N.D. D1	0.22	0.54	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.54	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.54	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.54	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.54	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0037	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0076	0.022	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0054	0.022	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0056	0.022	1
10589	Delta BHC	319-86-8	N.D. D2	0.0037	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.022	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0025	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D. K4	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.106	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0124 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.282	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.416	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D. K1K2	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0388	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 150.1**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.9	0.010	0.010	1
	SM 2540 C-2011		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	282	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.00 J	3.00	9.00	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHVOCpmycarb010319 Grab Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 01/03/2019 15:15
SDG#: RNS83-02

BASF Corporation
ELLE Sample #: WW 9960524
ELLE Group #: 2023436
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
	Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	4190081AA	01/08/2019 14:29	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4190081AA	01/08/2019 14:28	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19007WAC026	01/09/2019 01:54	Brandon K Cordova	1
00813	BNA Water Extraction	SW-846 3510C	1	19007WAC026	01/08/2019 08:30	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190080002A	01/09/2019 19:29	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190080006A	01/09/2019 18:41	Andrea L Jones	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190080002A	01/08/2019 17:20	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190080006A	01/08/2019 17:20	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190071404401	01/14/2019 13:29	Patrick J Engle	1
07055	Lead	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190071404401	01/10/2019 22:27	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190070571301	01/10/2019 09:31	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190071404401	01/08/2019 05:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190070571301	01/09/2019 07:15	Annamaria Kuhns	1
12152	pH	EPA 150.1	1	19007011201A	01/07/2019 20:53	Jeremy L Bolf	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19007964901A	01/07/2019 14:39	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19007385802A	01/07/2019 11:12	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19004021501A	01/04/2019 16:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19007011201A	01/07/2019 20:53	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18346 Water**
COC: 576165

Project Name: **Rensselaer**

Submittal Date/Time: 01/04/2019 10:20
Collection Date/Time: 12/21/2018 18:00
SDG#: RNS83-03TB

BASF Corporation
ELLE Sample #: **WW 9960525**
ELLE Group #: **2023436**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	4190081AA	01/08/2019 11:05	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4190081AA	01/08/2019 11:04	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 4190081AA	Sample number(s): 9960523-9960525		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19007WAC026	Sample number(s): 9960523-9960524		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190080002A	Sample number(s): 9960523-9960524		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190080006A	Sample number(s): 9960523-9960524		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	0.0077 J	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	0.030	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190070571301	Sample number(s): 9960523-9960524		
Mercury	N.D.	0.000050	0.00020
Batch number: 190071404401	Sample number(s): 9960523-9960524		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	0.0070 J	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 19007385801A	Sample number(s): 9960523		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19007385802A	Sample number(s): 9960524		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19007964901A	Sample number(s): 9960523-9960524		
Total Dissolved Solids	N.D.	20.0	60.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19004021501A	Sample number(s): 9960523-9960524		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4190081AA	Sample number(s): 9960523-9960525								
Acetone	150	193.58	150	185.86	129	124	54-157	4	30
Benzene	20	21.15	20	21.25	106	106	80-120	0	30
Chlorobenzene	20	20.47	20	20.42	102	102	80-120	0	30
1,2-Dichlorobenzene	20	19.02	20	18.94	95	95	80-120	0	30
1,3-Dichlorobenzene	20	19.19	20	18.99	96	95	80-120	1	30
1,4-Dichlorobenzene	20	19.94	20	19.71	100	99	80-120	1	30
1,2-Dichloroethane	20	21.49	20	21.34	107	107	73-124	1	30
Ethylbenzene	20	19.14	20	19.11	96	96	80-120	0	30
Methylene Chloride	20	19.66	20	19.47	98	97	80-120	1	30
Toluene	20	20.01	20	20.02	100	100	80-120	0	30
Vinyl Chloride	20	15.35	20	15.87	77	79	56-120	3	30
Xylene (Total)	60	57.77	60	57.67	96	96	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19007WAC026	Sample number(s): 9960523-9960524								
Anthracene	50	44.58	50	43.43	89	87	70-118	3	30
Benzo(a)anthracene	50	49.43	50	45.71	99	91	70-123	8	30
Benzo(a)pyrene	50	47.51	50	44.83	95	90	71-122	6	30
Benzo(b)fluoranthene	50	45.94	50	42.78	92	86	70-120	7	30
Benzo(k)fluoranthene	50	46.54	50	44.54	93	89	73-122	4	30
Butylbenzylphthalate	50	44.54	50	40.8	89	82	57-119	9	30
Di-n-butylphthalate	50	42.24	50	41.15	84	82	71-113	3	30
Carbazole	50	47.72	50	45.89	95	92	71-128	4	30
4-Chloroaniline	50	30.7	50	36.61	61	73	42-110	18	30
2-Chloronaphthalene	50	41.73	50	37.88	83	76	51-114	10	30
Chrysene	50	48.82	50	44.53	98	89	71-123	9	30
Dibenz(a,h)anthracene	50	49	50	46.93	98	94	67-123	4	30
bis(2-Ethylhexyl)phthalate	50	47.4	50	43.25	95	86	68-120	9	30
Fluoranthene	50	47.61	50	45.53	95	91	70-124	4	30
Indeno(1,2,3-cd)pyrene	50	48.56	50	45.39	97	91	61-121	7	30
2-Methylnaphthalene	50	43.85	50	39.07	88	78	51-112	12	30
4-Methylphenol	50	44.33	50	43.64	89	87	56-108	2	30
Naphthalene	50	42.35	50	38.21	85	76	54-107	10	30
N-Nitrosodimethylamine	50	32.87	50	30.7	66	61	16-108	7	30
Phenanthrene	50	45.74	50	43.53	91	87	68-118	5	30
Phenol	50	27.28	50	26.73	55	53	23-82	2	30
Pyrene	50	45.7	50	43.01	91	86	68-118	6	30
1,2,4-Trichlorobenzene	50	42.81	50	38.15	86	76	38-116	11	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190080002A	Sample number(s): 9960523-9960524								
PCB-1016	5.01	3.48			69		60-117		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.00	4.22			84		57-134		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190080006A	Sample number(s): 9960523-9960524								
Beta BHC	0.100	0.0985	0.100	0.0944	99	94	56-125	4	30
Alpha Chlordane	0.100	0.0908	0.100	0.0883	91	88	53-126	3	30
Gamma Chlordane	0.100	0.0853	0.100	0.0834	85	83	53-130	2	30
p,p-DDE	0.200	0.157	0.200	0.152	79	76	51-129	4	30
p,p-DDT	0.204	0.239	0.204	0.211	117	103	40-145	13	30
Delta BHC	0.100	0.0952	0.100	0.0852	95	85	49-140	11	30
Endrin Aldehyde	0.202	0.210	0.202	0.182	104	90	40-135	14	20
Heptachlor Epoxide	0.100	0.108	0.100	0.0996	108	100	56-132	8	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 190070571301	Sample number(s): 9960523-9960524								
Mercury	0.00100	0.000909			91		85-115		
Batch number: 190071404401	Sample number(s): 9960523-9960524								
Aluminum	2.00	2.00			100		80-120		
Arsenic	0.150	0.151			101		80-120		
Barium	2.00	1.94			97		87-111		
Chromium	0.200	0.202			101		87-110		
Cobalt	0.500	0.516			103		90-111		
Copper	0.250	0.244			97		90-115		
Iron	1.00	1.01			101		85-115		
Lead	0.150	0.150			100		87-113		
Manganese	0.500	0.512			102		90-112		
Nickel	0.500	0.527			105		90-114		
Zinc	0.500	0.506			101		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19007385801A	Sample number(s): 9960523								
Total Suspended Solids	150	147.2			98		89-105		
Batch number: 19007385802A	Sample number(s): 9960524								
Total Suspended Solids	150	151			101		89-105		
Batch number: 19007964901A	Sample number(s): 9960523-9960524								
Total Dissolved Solids	200	188			94		67-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19007011201A	Sample number(s): 9960523-9960524								
pH	7.00	7.03			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 190070571301	Sample number(s): 9960523-9960524 UNSPK: 9960523									
Mercury	N.D.	0.00100	0.000417	0.00100	0.000376	42*	38*	80-120	10	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 190070571301	Sample number(s): 9960523-9960524 BKG: 9960523			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 4190081AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9960523	103	101	99	94
9960524	103	103	98	94
9960525	102	104	97	94
Blank	102	104	97	94
LCS	102	103	98	98
LCSD	101	103	98	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19007WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9960523	35	48	81	84	76	53
9960524	36	48	88	77	75	63
Blank	37	51	93	88	80	92
LCS	50	63	89	95	83	91

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/16/2019 13:14

Group Number: 2023436

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 8270D MINI
Batch number: 19007WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
LCSD	47	62	95	85	79	86
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: PCBs in Water by 8082A
Batch number: 190080002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9960523	59	61	54	60
9960524	50	58	48	60
Blank	43	88	42	89
LCS	23*	63	22*	64
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 190080006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9960523	56	68	47	59
9960524	55	71	47	64
Blank	42	93	36	85
LCS	71	51	62	45
LCSD	56	65	47	57
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2023436 Sample # 9960523-25

COC # 576165

Client Information

Client: BASFCORP	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: JEFF DENMAN	Quote #:
State where samples were collected: NEW YORK	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260 C VOC	pH/pH Temp	ABS in Water 1082A	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF010319	01/03/19	1500	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCpmyCARB010319	01/03/19	1515	X		12	X	X	X	X	X	X	X	X	
TB 18346	12/21/18	1800	X		2			X						
Cooler temp bottle	01/03/19	1800	X		1									Cooler Temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	01/03/19	1830			
				1/4/19	1020

EDD Required? (Yes) No
If yes, format: AECOM EQUIS 4
Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____
Temperature upon receipt 2.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 237644

Group Number(s): 2223436

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/04/2019 10:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wesley Miller (2308) at 12:25 on 01/04/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	2.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 21, 2019 10:22

Project: Rensselaer

Account #: 04285
Group Number: 2024754
SDG: RNS85
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF011019 Grab Water	01/10/2019 10:35	9965474
WWTPHVOCpmycarb011019 Grab Water	01/10/2019 10:45	9965475
TB18351 Water	12/26/2018 15:00	9965476

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:35
SDG#: RNS85-01

BASF Corporation
ELLE Sample #: **WW 9965474**
ELLE Group #: **2024754**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:35
SDG#: RNS85-01

BASF Corporation
ELLE Sample #: **WW 9965474**
ELLE Group #: **2024754**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.54	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.54	1
10591	PCB-1232	11141-16-5	N.D. D1	0.22	0.54	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.54	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.54	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.54	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.54	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0037	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0076	0.022	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0054	0.022	1
10589	p,p-DDT	50-29-3	0.012 JPD2	0.0056	0.022	1
10589	Delta BHC	319-86-8	N.D. D2	0.0037	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.022	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0025	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.271	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0085 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.139 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.379	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0095 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	350	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:35
SDG#: RNS85-01

BASF Corporation
ELLE Sample #: **WW 9965474**
ELLE Group #: **2024754**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.09 J	2.00	6.00	1
	Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190142AA	01/14/2019 16:45	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190142AA	01/14/2019 16:44	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19011WAE026	01/14/2019 19:27	Brandon K Cordova	1
00813	BNA Water Extraction	SW-846 3510C	1	19011WAE026	01/14/2019 09:00	Joshua S Ruth	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190140099A	01/16/2019 15:47	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190140022A	01/17/2019 02:22	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190140099A	01/15/2019 07:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190140022A	01/15/2019 07:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190141404408	01/18/2019 14:08	Patrick J Engle	1
07035	Arsenic	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	190141404408	01/16/2019 20:49	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	190140571304	01/16/2019 08:27	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190141404408	01/15/2019 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190140571304	01/15/2019 10:25	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19015964901A	01/15/2019 11:11	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19016385801A	01/16/2019 15:00	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19011021501A	01/11/2019 18:15	James S Mathiot	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPHVOCEFF011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:35
SDG#: RNS85-01

BASF Corporation
ELLE Sample #: WW 9965474
ELLE Group #: 2024754
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12151	Temperature of pH	SM 2550 B-2010	1	19014006201A	01/14/2019 19:28	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19014006201A	01/14/2019 19:28	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:45
SDG#: RNS85-02

BASF Corporation
ELLE Sample #: **WW 9965475**
ELLE Group #: **2024754**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	13 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:45
SDG#: RNS85-02

BASF Corporation
ELLE Sample #: WW 9965475
ELLE Group #: 2024754
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.55	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.55	1
10591	PCB-1232	11141-16-5	N.D. D1	0.22	0.55	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.55	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.55	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.55	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.55	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0037	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0033	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0076	0.022	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0055	0.022	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0057	0.022	1
10589	Delta BHC	319-86-8	N.D. D2	0.0037	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.022	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0025	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.101	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0069 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.695	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.550	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0054 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0337	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	312	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011019 Grab Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 01/10/2019 10:45
SDG#: RNS85-02

BASF Corporation
ELLE Sample #: WW 9965475
ELLE Group #: 2024754
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.14	2.00	6.00	1
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.0	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.1	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190142AA	01/14/2019 17:06	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190142AA	01/14/2019 17:05	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19011WAE026	01/14/2019 19:55	Brandon K Cordova	1
00813	BNA Water Extraction	SW-846 3510C	1	19011WAE026	01/14/2019 09:00	Joshua S Ruth	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190140099A	01/16/2019 15:58	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190140022A	01/17/2019 02:34	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190140099A	01/15/2019 07:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190140022A	01/15/2019 07:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190141404408	01/18/2019 14:11	Patrick J Engle	1
07035	Arsenic	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	190141404408	01/16/2019 20:52	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	190140571304	01/16/2019 08:33	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190141404408	01/15/2019 14:50	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190140571304	01/15/2019 10:25	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19014964901A	01/14/2019 10:50	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19016385801A	01/16/2019 15:00	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19011021501A	01/11/2019 18:15	James S Mathiot	1
12151	Temperature of pH	SM 2550 B-2010	1	19014006201A	01/14/2019 19:35	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19014006201A	01/14/2019 19:35	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18351 Water**
COC: 576383

Project Name: **Rensselaer**

Submittal Date/Time: 01/11/2019 10:10
Collection Date/Time: 12/26/2018 15:00
SDG#: RNS85-03TB

BASF Corporation
ELLE Sample #: WW 9965476
ELLE Group #: 2024754
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5190142AA	01/14/2019 12:28	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190142AA	01/14/2019 12:27	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2024754
Reported: 01/21/2019 10:22

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5190142AA	Sample number(s): 9965474-9965476		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19011WAE026	Sample number(s): 9965474-9965475		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190140099A	Sample number(s): 9965474-9965475		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/21/2019 10:22

Group Number: 2024754

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190140022A	Sample number(s): 9965474-9965475		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190140571304	Sample number(s): 9965474-9965475		
Mercury	N.D.	0.000050	0.00020
Batch number: 190141404408	Sample number(s): 9965474-9965475		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	0.0060 J	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	0.0037 J	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 19014964901A	Sample number(s): 9965475		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19015964901A	Sample number(s): 9965474		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19016385801A	Sample number(s): 9965474-9965475		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19011021501A	Sample number(s): 9965474-9965475		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/21/2019 10:22

Group Number: 2024754

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5190142AA	Sample number(s): 9965474-9965476								
Acetone	150	134.09	150	125.77	89	84	54-157	6	30
Benzene	20	20.22	20	20.28	101	101	80-120	0	30
Chlorobenzene	20	19.98	20	19.91	100	100	80-120	0	30
1,2-Dichlorobenzene	20	20.92	20	20.77	105	104	80-120	1	30
1,3-Dichlorobenzene	20	20.54	20	20.63	103	103	80-120	0	30
1,4-Dichlorobenzene	20	20.81	20	20.77	104	104	80-120	0	30
1,2-Dichloroethane	20	22.04	20	22	110	110	73-124	0	30
Ethylbenzene	20	19.76	20	19.84	99	99	80-120	0	30
Methylene Chloride	20	20.26	20	20.09	101	100	80-120	1	30
Toluene	20	18.73	20	18.9	94	94	80-120	1	30
Vinyl Chloride	20	12.61	20	12.83	63	64	56-120	2	30
Xylene (Total)	60	59.32	60	58.85	99	98	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19011WAE026	Sample number(s): 9965474-9965475								
Anthracene	50	48.3			97		70-118		
Benzo(a)anthracene	50	50.92			102		70-123		
Benzo(a)pyrene	50	48.64			97		71-122		
Benzo(b)fluoranthene	50	48.17			96		70-120		
Benzo(k)fluoranthene	50	49.03			98		73-122		
Butylbenzylphthalate	50	45.31			91		57-119		
Di-n-butylphthalate	50	46.51			93		71-113		
Carbazole	50	48.07			96		71-128		
4-Chloroaniline	50	22.15			44		42-110		
2-Chloronaphthalene	50	44.53			89		51-114		
Chrysene	50	48.58			97		71-123		
Dibenz(a,h)anthracene	50	48.14			96		67-123		
bis(2-Ethylhexyl)phthalate	50	50.25			101		68-120		
Fluoranthene	50	48.47			97		70-124		
Indeno(1,2,3-cd)pyrene	50	45.4			91		61-121		
2-Methylnaphthalene	50	44.7			89		51-112		
4-Methylphenol	50	35.66			71		56-108		
Naphthalene	50	42.17			84		54-107		
N-Nitrosodimethylamine	50	25.53			51		16-108		
Phenanthrene	50	47.18			94		68-118		
Phenol	50	20.84			42		23-82		
Pyrene	50	47.69			95		68-118		
1,2,4-Trichlorobenzene	50	40.75			82		38-116		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190140099A	Sample number(s): 9965474-9965475								
PCB-1016	5.01	3.84	5.01	4.52	77	90	60-117	16	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/21/2019 10:22

Group Number: 2024754

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.00	3.90	5.00	4.86	78	97	57-134	22	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190140022A	Sample number(s): 9965474-9965475								
Beta BHC	0.100	0.0822	0.100	0.109	82	109	56-125	28	30
Alpha Chlordane	0.100	0.0913	0.100	0.116	91	116	53-126	24	30
Gamma Chlordane	0.100	0.0901	0.100	0.118	90	118	53-130	27	30
p,p-DDE	0.200	0.184	0.200	0.234	92	117	51-129	24	30
p,p-DDT	0.204	0.202	0.204	0.258	99	127	40-145	25	30
Delta BHC	0.100	0.0902	0.100	0.124	90	124	49-140	31*	30
Endrin Aldehyde	0.202	0.183	0.202	0.242	90	120	40-135	28*	20
Heptachlor Epoxide	0.100	0.0938	0.100	0.122	94	122	56-132	26	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 190140571304	Sample number(s): 9965474-9965475								
Mercury	0.00100	0.000826			83		80-114		
Batch number: 190141404408	Sample number(s): 9965474-9965475								
Aluminum	2.00	2.13			106		80-120		
Arsenic	0.150	0.158			105		80-120		
Barium	2.00	2.03			102		87-111		
Chromium	0.200	0.210			105		87-110		
Cobalt	0.500	0.506			101		90-111		
Copper	0.250	0.257			103		90-115		
Iron	1.00	1.08			108		85-115		
Lead	0.150	0.152			101		87-113		
Manganese	0.500	0.511			102		90-112		
Nickel	0.500	0.521			104		90-114		
Zinc	0.500	0.513			103		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19014964901A	Sample number(s): 9965475								
Total Dissolved Solids	200	189			95		67-127		
Batch number: 19015964901A	Sample number(s): 9965474								
Total Dissolved Solids	200	180			90		67-127		
Batch number: 19016385801A	Sample number(s): 9965474-9965475								
Total Suspended Solids	150	142.2			95		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19014006201A	Sample number(s): 9965474-9965475								
pH	7.00	7.02			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/21/2019 10:22

Group Number: 2024754

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	Degrees C	Degrees C		
Batch number: 19014006201A	Sample number(s): 9965474-9965475 BKG: 9965474			
Temperature of pH	21.32	21.12	1	5
	Std. Units	Std. Units		
Batch number: 19014006201A	Sample number(s): 9965474-9965475 BKG: 9965474			
pH	7.41	7.43	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5190142AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9965474	102	98	90	99
9965475	102	99	91	100
9965476	101	98	91	100
Blank	100	97	91	101
LCS	101	96	92	105
LCSD	102	96	92	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19011WAE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9965474	34	48	97	76	81	86
9965475	35	49	95	73	80	70
Blank	39	55	112	82	90	108
LCS	41	56	89	78	85	95
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: OC Pesticides in Water
Batch number: 190140022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9965474	62	72	49	62
9965475	68	63	60	56
Blank	71	108	63	98

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/21/2019 10:22

Group Number: 2024754

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pesticides in Water
Batch number: 190140022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCS	73	109	65	101
LCSD	92	130	86	120
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 190140099A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9965474	55	56	53	56
9965475	66	49	65	48
Blank	69	83	68	85
LCS	63	38	61	38
LCSD	72	63	69	64
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # U285 | For Eurofins Lancaster Laboratories Environmental use only: Group # 204754 Sample # 1965474-76

COC # 576383

Client Information

Client: BASF CORP	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: JOHN BLEILER	P.O. #:
Sampler: JEFF DOWMAN	Quote #:
State where samples were collected: NEW YORK	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☒ Surface ☐ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	metals	8260 C VOC	pH/pH Temp	PCB's in water 8082 A	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF011019	01/10/19	1035	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCPMYCARB011019	01/10/19	1045	X		12	X	X	X	X	X	X	X	X	
TB18351	12/26/18	1500	X		2			X						
Cooler Temp bottle	01/10/19	1500			1									cooler Temp bottle

For Lab Use Only: FSC: ____ SCR#: 236837

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) (Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
SDER	12/26/18	4:30			
	01/10/19	1600			
				1/11/19	1010

EDD Required? (Yes) No
If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 03 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 238391

Group Number(s): 2024754

Client: BASF Corp.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/11/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:36 on 01/11/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 25, 2019 16:56

Project: Rensselaer

Account #: 04285
Group Number: 2025770
SDG: RNS88
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF011719 Grab Water	01/17/2019 13:25	9969835
WWTPHVOCpmycarb011719 Grab Water	01/17/2019 13:35	9969836
TB 18340 Water	12/13/2018 16:30	9969837

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:25
SDG#: RNS88-01

BASF Corporation
ELLE Sample #: **WW 9969835**
ELLE Group #: **2025770**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:25
SDG#: RNS88-01

BASF Corporation
ELLE Sample #: WW 9969835
ELLE Group #: 2025770
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	0.0095 JPD2	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.358	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0149 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.182 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.462	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0225	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	414	40.0	120	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:25
SDG#: RNS88-01

BASF Corporation
ELLE Sample #: WW 9969835
ELLE Group #: 2025770
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.00 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.1	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190232AA	01/23/2019 15:38	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190232AA	01/23/2019 15:37	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19021WAJ026	01/23/2019 09:21	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	19021WAJ026	01/22/2019 09:00	Joshua S Ruth	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190210009A	01/22/2019 23:03	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190210008A	01/23/2019 04:05	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190210009A	01/21/2019 17:04	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190210008A	01/21/2019 17:04	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190211404405	01/22/2019 19:28	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190210571310	01/23/2019 09:04	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190211404405	01/22/2019 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190210571310	01/22/2019 09:55	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19021964902A	01/21/2019 13:30	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19022385802A	01/22/2019 11:51	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19018021501A	01/18/2019 18:40	Luz M Groff	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPHVOCEFF011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:25
SDG#: RNS88-01

BASF Corporation
ELLE Sample #: WW 9969835
ELLE Group #: 2025770
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12151	Temperature of pH	SM 2550 B-2010	1	19024004201A	01/24/2019 19:47	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19024004201A	01/24/2019 19:47	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:35
SDG#: RNS88-02

BASF Corporation
ELLE Sample #: **WW 9969836**
ELLE Group #: **2025770**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	15 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:35
SDG#: RNS88-02

BASF Corporation
ELLE Sample #: WW 9969836
ELLE Group #: 2025770
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0036	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0075	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0053	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0056	0.021	1
10589	Delta BHC	319-86-8	0.0052 JPD1	0.0036	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0025	0.011	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.150	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0130 J	0.0062	0.0200	1
01754	Iron	7439-89-6	1.51	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.863	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0040 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.104	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	365	40.0	120	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:35
SDG#: RNS88-02

BASF Corporation
ELLE Sample #: **WW 9969836**
ELLE Group #: **2025770**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	5.00	15.0	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.1	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.0	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190232AA	01/23/2019 16:02	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190232AA	01/23/2019 16:01	Abigail Roselli	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19021WAJ026	01/23/2019 09:50	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	19021WAJ026	01/22/2019 09:00	Joshua S Ruth	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190210009A	01/22/2019 23:14	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190210008A	01/23/2019 04:17	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190210009A	01/21/2019 17:04	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190210008A	01/21/2019 17:04	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190211404405	01/22/2019 19:31	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190210571310	01/23/2019 09:06	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190211404405	01/22/2019 06:00	Annamaria Kuhns	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190210571310	01/22/2019 09:55	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19021964901A	01/21/2019 13:23	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19022385802A	01/22/2019 11:51	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19018021501A	01/18/2019 18:40	Luz M Groff	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb011719 Grab Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 01/17/2019 13:35
SDG#: RNS88-02

BASF Corporation
ELLE Sample #: WW 9969836
ELLE Group #: 2025770
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12151	Temperature of pH	SM 2550 B-2010	1	19024004201A	01/24/2019 19:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19024004201A	01/24/2019 19:50	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18340 Water**
COC: 576384

Project Name: **Rensselaer**

Submittal Date/Time: 01/18/2019 10:20
Collection Date/Time: 12/13/2018 16:30
SDG#: RNS88-03TB

BASF Corporation
ELLE Sample #: WW 9969837
ELLE Group #: 2025770
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190232AA	01/23/2019 16:26	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190232AA	01/23/2019 16:25	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2025770
Reported: 01/25/2019 16:56

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W190232AA	Sample number(s): 9969835-9969837		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19021WAJ026	Sample number(s): 9969835-9969836		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190210009A	Sample number(s): 9969835-9969836		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/25/2019 16:56

Group Number: 2025770

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190210008A	Sample number(s): 9969835-9969836		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190210571310	Sample number(s): 9969835-9969836		
Mercury	N.D.	0.000050	0.00020
Batch number: 190211404405	Sample number(s): 9969835-9969836		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	0.0065 J	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	0.0017 J	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 19021964901A	Sample number(s): 9969836		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19021964902A	Sample number(s): 9969835		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19022385802A	Sample number(s): 9969835-9969836		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19018021501A	Sample number(s): 9969835-9969836		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/25/2019 16:56

Group Number: 2025770

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W190232AA	Sample number(s): 9969835-9969837								
Acetone	150	130.63	150	150	87	100	54-157	14	30
Benzene	20	20.5	20	20.88	103	104	80-120	2	30
Chlorobenzene	20	20.42	20	20.45	102	102	80-120	0	30
1,2-Dichlorobenzene	20	20.17	20	20.83	101	104	80-120	3	30
1,3-Dichlorobenzene	20	20.1	20	20.49	101	102	80-120	2	30
1,4-Dichlorobenzene	20	20.43	20	20.8	102	104	80-120	2	30
1,2-Dichloroethane	20	20.51	20	20.99	103	105	73-124	2	30
Ethylbenzene	20	20.38	20	20.38	102	102	80-120	0	30
Methylene Chloride	20	20.79	20	21.26	104	106	80-120	2	30
Toluene	20	20.19	20	20.57	101	103	80-120	2	30
Vinyl Chloride	20	14.54	20	14.83	73	74	56-120	2	30
Xylene (Total)	60	61.9	60	62.55	103	104	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19021WAJ026	Sample number(s): 9969835-9969836								
Anthracene	50	48.19	50	47.68	96	95	70-118	1	30
Benzo(a)anthracene	50	49.45	50	48.25	99	97	70-123	2	30
Benzo(a)pyrene	50	50.7	50	49.26	101	99	71-122	3	30
Benzo(b)fluoranthene	50	50.25	50	48	100	96	70-120	5	30
Benzo(k)fluoranthene	50	49.74	50	48.16	99	96	73-122	3	30
Butylbenzylphthalate	50	45.73	50	44.73	91	89	57-119	2	30
Di-n-butylphthalate	50	47.36	50	47.25	95	95	71-113	0	30
Carbazole	50	49.38	50	50.37	99	101	71-128	2	30
4-Chloroaniline	50	25.89	50	23.97	52	48	42-110	8	30
2-Chloronaphthalene	50	42.36	50	39.74	85	79	51-114	6	30
Chrysene	50	47.89	50	46.85	96	94	71-123	2	30
Dibenz(a,h)anthracene	50	50.94	50	48.95	102	98	67-123	4	30
bis(2-Ethylhexyl)phthalate	50	48.43	50	46.86	97	94	68-120	3	30
Fluoranthene	50	48.35	50	48.08	97	96	70-124	1	30
Indeno(1,2,3-cd)pyrene	50	48.24	50	45.89	96	92	61-121	5	30
2-Methylnaphthalene	50	43.18	50	41.11	86	82	51-112	5	30
4-Methylphenol	50	38.22	50	38.33	76	77	56-108	0	30
Naphthalene	50	42.23	50	40.26	84	81	54-107	5	30
N-Nitrosodimethylamine	50	31.39	50	31.05	63	62	16-108	1	30
Phenanthrene	50	47	50	46.23	94	92	68-118	2	30
Phenol	50	24.17	50	23.24	48	46	23-82	4	30
Pyrene	50	47.13	50	46.66	94	93	68-118	1	30
1,2,4-Trichlorobenzene	50	39.38	50	36.87	79	74	38-116	7	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190210009A	Sample number(s): 9969835-9969836								
PCB-1016	5.01	3.12	5.01	3.64	62	73	60-117	15	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/25/2019 16:56

Group Number: 2025770

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.00	4.53	5.00	4.85	91	97	57-134	7	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 190210008A	Sample number(s): 9969835-9969836								
Beta BHC	0.100	0.118	0.100	0.0918	118	92	56-125	25	30
Alpha Chlordane	0.100	0.0670	0.100	0.0550	67	55	53-126	20	30
Gamma Chlordane	0.100	0.0615	0.100	0.0504	61	50*	53-130	20	30
p,p-DDE	0.200	0.108	0.200	0.0838	54	42*	51-129	25	30
p,p-DDT	0.204	0.179	0.204	0.132	88	65	40-145	30	30
Delta BHC	0.100	0.0933	0.100	0.0714	93	71	49-140	26	30
Endrin Aldehyde	0.202	0.170	0.202	0.135	84	67	40-135	23*	20
Heptachlor Epoxide	0.100	0.0863	0.100	0.0690	86	69	56-132	22	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 190210571310	Sample number(s): 9969835-9969836								
Mercury	0.00100	0.000858			86		80-114		
Batch number: 190211404405	Sample number(s): 9969835-9969836								
Aluminum	2.00	2.07			104		80-120		
Arsenic	0.150	0.147			98		80-120		
Barium	2.00	1.98			99		87-111		
Chromium	0.200	0.190			95		87-110		
Cobalt	0.500	0.507			101		90-111		
Copper	0.250	0.261			104		90-115		
Iron	1.00	1.02			102		85-115		
Lead	0.150	0.152			102		87-113		
Manganese	0.500	0.501			100		90-112		
Nickel	0.500	0.515			103		90-114		
Zinc	0.500	0.492			98		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19021964901A	Sample number(s): 9969836								
Total Dissolved Solids	200	205			103		67-127		
Batch number: 19021964902A	Sample number(s): 9969835								
Total Dissolved Solids	200	212			106		67-127		
Batch number: 19022385802A	Sample number(s): 9969835-9969836								
Total Suspended Solids	150	145			97		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19024004201A	Sample number(s): 9969835-9969836								
pH	7.00	7.01			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/25/2019 16:56

Group Number: 2025770

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190232AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9969835	101	101	99	98
9969836	100	100	99	99
9969837	102	103	100	99
Blank	101	99	99	98
LCS	100	104	100	100
LCSD	102	105	100	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19021WAJ026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9969835	29	39	72	80	79	64
9969836	32	43	86	81	81	53
Blank	40	58	98	87	85	98
LCS	43	59	95	87	86	93
LCSD	41	57	89	84	81	91
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

Analysis Name: OC Pesticides in Water
Batch number: 190210008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9969835	72	108	64	88
9969836	67	78	59	68
Blank	38	56	37	46
LCS	39	97	36	80
LCSD	29	46	29	37
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 190210009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9969835	57	68	53	62
9969836	57	49	56	48
Blank	58	69	53	66
LCS	24*	47	22*	45
LCSD	41	57	39	55

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation Group Number: 2025770
Reported: 01/25/2019 16:56

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs in Water by 8082A
Batch number: 190210009A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # U285 | For Eurofins Lancaster Laboratories Environmental use only: Group # 2025770 | Sample # 9969835-37

COC # 576384

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler Temp bottle

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260C VOC	pH/pH Temp	PCBs (Number 8082A)	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF011719	1/17/19	1325	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCpmyCarb011719	1/17/19	1335	X		12	X	X	X	X	X	X	X	X	
TB 18340	12/13/18	1630	X		2			X						
Cooler Temp bottle	1/17/19	1630			X									Cooler temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	1/13/19	1708			
			Received by	1/18/19	1020

EDD Required? (Yes) No
If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 238926

Group Number(s): 2025770

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/18/2019 10:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:05 on 01/18/2019

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.4	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: February 01, 2019 16:38

Project: Rensselaer

Account #: 04285
Group Number: 2026678
SDG: RNS89
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF012419 Grab Water	01/24/2019 13:40	9974142
WWTPHVOCpmycarb012419 Grab Water	01/24/2019 14:05	9974143
WWTPZeoL2012419 Grab Water	01/24/2019 14:30	9974144
TB 18340 Water	12/13/2018 16:45	9974145

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 13:40
SDG#: RNS89-01

BASF Corporation
ELLE Sample #: **WW 9974142**
ELLE Group #: **2026678**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 13:40
SDG#: RNS89-01

BASF Corporation
ELLE Sample #: **WW 9974142**
ELLE Group #: **2026678**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.52	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0036	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0073	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D2	0.0036	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.010	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.209	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.148 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.388	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0088 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	297	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.89 J	2.00	6.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHVOCEFF012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 13:40
SDG#: RNS89-01

BASF Corporation
ELLE Sample #: WW 9974142
ELLE Group #: 2026678
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.4	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190291AA	01/29/2019 14:52	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190291AA	01/29/2019 14:51	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19028WAD026	01/29/2019 10:37	Edward C Monborne	1
00813	BNA Water Extraction	SW-846 3510C	1	19028WAD026	01/28/2019 18:00	Mathias Okpo	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190300032A	02/01/2019 12:18	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190300031A	02/01/2019 12:14	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190300032A	01/31/2019 08:30	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190300031A	01/31/2019 08:30	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	190281404402	01/29/2019 20:03	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	190281404402	01/29/2019 20:03	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	190281404402	01/29/2019 11:19	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	190290571301	01/30/2019 11:44	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190281404402	01/28/2019 16:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190290571301	01/30/2019 07:35	Annamaria Kuhns	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19029964902A	01/29/2019 14:57	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19028385802A	01/28/2019 11:15	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19025021501A	01/25/2019 17:45	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19028005201A	01/28/2019 21:45	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19028005201A	01/28/2019 21:45	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:05
SDG#: RNS89-02

BASF Corporation
ELLE Sample #: **WW 9974143**
ELLE Group #: **2026678**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	19 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	120	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:05
SDG#: RNS89-02

BASF Corporation
ELLE Sample #: WW 9974143
ELLE Group #: 2026678
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	0.19 JD2	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0036	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0074	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0053	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0055	0.021	1
10589	Delta BHC	319-86-8	N.D. D2	0.0036	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.021	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.011	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.195 J	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.126	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0069 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.916	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.621	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0031 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0131 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	320	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.00 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCpmycarb012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:05
SDG#: RNS89-02

BASF Corporation
ELLE Sample #: WW 9974143
ELLE Group #: 2026678
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.1	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190291AA	01/29/2019 15:16	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190291AA	01/29/2019 15:15	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19028WAD026	01/29/2019 11:05	Edward C Monborne	1
00813	BNA Water Extraction	SW-846 3510C	1	19028WAD026	01/28/2019 18:00	Mathias Okpo	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190300032A	02/01/2019 12:28	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190300031A	02/01/2019 12:26	Dylan Schreiner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190300031A	02/01/2019 13:50	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190300032A	01/31/2019 08:30	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190300031A	01/31/2019 08:30	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	190281404402	01/29/2019 20:06	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	190281404402	01/29/2019 20:06	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	190281404402	01/29/2019 11:22	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	190290571301	01/30/2019 11:46	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190281404402	01/28/2019 16:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190290571301	01/30/2019 07:35	Annamaria Kuhns	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19030964901A	01/30/2019 12:59	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19029385801A	01/29/2019 15:06	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19025021501A	01/25/2019 17:45	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19028005201A	01/28/2019 21:49	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19028005201A	01/28/2019 21:49	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZeoL2012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:30
SDG#: RNS89-03

BASF Corporation
ELLE Sample #: WW 9974144
ELLE Group #: 2026678
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	150	4	100	5
11997	Benzene	71-43-2	110	1	5	5
11997	Chlorobenzene	108-90-7	3,300	10	50	50
11997	1,2-Dichlorobenzene	95-50-1	520	1	25	5
11997	1,3-Dichlorobenzene	541-73-1	45	1	25	5
11997	1,4-Dichlorobenzene	106-46-7	48	1	25	5
11997	1,2-Dichloroethane	107-06-2	24	2	5	5
11997	Ethylbenzene	100-41-4	8	2	5	5
11997	Methylene Chloride	75-09-2	N.D.	2	5	5
11997	Toluene	108-88-3	17	1	5	5
11997	Vinyl Chloride	75-01-4	N.D.	1	5	5
11997	Xylene (Total)	1330-20-7	31	5	25	5
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	8 J	4	10	1
14242	2-Chloronaphthalene	91-58-7	3	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	370	3	10	5
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	19	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	28	0.1	0.5	1
14242	Phenol	108-95-2	110	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	44	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZeoL2012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:30
SDG#: RNS89-03

BASF Corporation
ELLE Sample #: WW 9974144
ELLE Group #: 2026678
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	0.39 JD2	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0036	0.011	1
10589	Alpha Chlordane	5103-71-9	0.027 PD1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0074	0.021	1
10589	p,p-DDE	72-55-9	0.087 D1	0.0053	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0055	0.021	1
10589	Delta BHC	319-86-8	0.056 D2	0.0036	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.245 J	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0140	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	0.0019 J	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0177 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.168 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.708	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0077 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0076 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	402	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	20.0	60.0	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZeoL2012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:30
SDG#: RNS89-03

BASF Corporation
ELLE Sample #: **WW 9974144**
ELLE Group #: **2026678**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190291AA	01/29/2019 18:27	Corie Mellinger	5
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190291AA	01/29/2019 18:51	Corie Mellinger	50
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190291AA	01/29/2019 18:26	Corie Mellinger	5
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190291AA	01/29/2019 18:50	Corie Mellinger	50
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19028WAD026	01/29/2019 11:33	Edward C Monborne	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19028WAD026	01/30/2019 00:45	Ashley R Transue	5
00813	BNA Water Extraction	SW-846 3510C	1	19028WAD026	01/28/2019 18:00	Mathias Okpo	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190300032A	02/01/2019 14:19	Kirby B Turner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190300031A	02/01/2019 12:38	Dylan Schreiner	1
10589	OC Pesticides in Water	SW-846 8081B	1	190300031A	02/01/2019 14:02	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190300032A	01/31/2019 08:30	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190300031A	01/31/2019 08:30	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	190281404402	01/29/2019 20:09	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	190281404402	01/29/2019 20:09	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	190281404402	01/29/2019 11:25	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	190290571301	01/30/2019 11:48	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190281404402	01/28/2019 16:00	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190290571301	01/30/2019 07:35	Annamaria Kuhns	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19030964901A	01/30/2019 12:59	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19029385802A	01/29/2019 15:10	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19025021501A	01/25/2019 17:45	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19028005201A	01/28/2019 21:53	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPZeoL2012419 Grab Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 01/24/2019 14:30
SDG#: RNS89-03

BASF Corporation
ELLE Sample #: WW 9974144
ELLE Group #: 2026678
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12152	pH	SM 4500-H+ B-2011	1	19028005201A	01/28/2019 21:53	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18340 Water**
COC: 572200

Project Name: **Rensselaer**

Submittal Date/Time: 01/25/2019 10:10
Collection Date/Time: 12/13/2018 16:45
SDG#: RNS89-04TB

BASF Corporation
ELLE Sample #: **WW 9974145**
ELLE Group #: **2026678**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W190291AA	01/29/2019 11:18	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190291AA	01/29/2019 11:17	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W190291AA	Sample number(s): 9974142-9974145		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19028WAD026	Sample number(s): 9974142-9974144		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190300032A	Sample number(s): 9974142-9974144		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190300031A	Sample number(s): 9974142-9974144		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190281404402	Sample number(s): 9974142-9974144		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 190290571301	Sample number(s): 9974142-9974144		
Mercury	N.D.	0.000050	0.00020
Batch number: 19028385802A	Sample number(s): 9974142		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19029385801A	Sample number(s): 9974143		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19029385802A	Sample number(s): 9974144		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19029964902A	Sample number(s): 9974142		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19030964901A	Sample number(s): 9974143-9974144		
Total Dissolved Solids	N.D.	20.0	60.0

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19025021501A	Sample number(s): 9974142-9974144		
Settleable Solids	N.D.	0.10	0.10

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W190291AA	Sample number(s): 9974142-9974145								
Acetone	150	127.8			85		54-157		
Benzene	20	21.88			109		80-120		
Chlorobenzene	20	20.74			104		80-120		
1,2-Dichlorobenzene	20	20.86			104		80-120		
1,3-Dichlorobenzene	20	20.56			103		80-120		
1,4-Dichlorobenzene	20	20.74			104		80-120		
1,2-Dichloroethane	20	23.19			116		73-124		
Ethylbenzene	20	20.76			104		80-120		
Methylene Chloride	20	22.21			111		80-120		
Toluene	20	20.72			104		80-120		
Vinyl Chloride	20	17.6			88		56-120		
Xylene (Total)	60	62.61			104		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19028WAD026	Sample number(s): 9974142-9974144								
Anthracene	50	39.55			79		70-118		
Benzo(a)anthracene	50	40.85			82		70-123		
Benzo(a)pyrene	50	42.42			85		71-122		
Benzo(b)fluoranthene	50	41.03			82		70-120		
Benzo(k)fluoranthene	50	43.1			86		73-122		
Butylbenzylphthalate	50	37.81			76		57-119		
Di-n-butylphthalate	50	39.45			79		71-113		
Carbazole	50	40.66			81		71-128		
4-Chloroaniline	50	23.42			47		42-110		
2-Chloronaphthalene	50	34.26			69		51-114		
Chrysene	50	40.74			81		71-123		
Dibenz(a,h)anthracene	50	42.69			85		67-123		
bis(2-Ethylhexyl)phthalate	50	40.3			81		68-120		
Fluoranthene	50	40.58			81		70-124		
Indeno(1,2,3-cd)pyrene	50	40.72			81		61-121		
2-Methylnaphthalene	50	35.63			71		51-112		
4-Methylphenol	50	36.99			74		56-108		
Naphthalene	50	34.47			69		54-107		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
N-Nitrosodimethylamine	50	31.46			63		16-108		
Phenanthrene	50	38.63			77		68-118		
Phenol	50	22.63			45		23-82		
Pyrene	50	39.61			79		68-118		
1,2,4-Trichlorobenzene	50	32.23			64		38-116		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190300032A	Sample number(s): 9974142-9974144								
PCB-1016	5.01	3.99	5.01	4.00	80	80	60-117	0	30
PCB-1260	5.00	4.52	5.00	4.59	90	92	57-134	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190300031A	Sample number(s): 9974142-9974144								
Beta BHC	0.100	0.117			117		56-125		
Alpha Chlordane	0.100	0.0826			83		53-126		
Gamma Chlordane	0.100	0.0783			78		53-130		
p,p-DDE	0.200	0.155			78		51-129		
p,p-DDT	0.204	0.150			73		40-145		
Delta BHC	0.100	0.0983			98		49-140		
Endrin Aldehyde	0.202	0.168			83		40-135		
Heptachlor Epoxide	0.100	0.0944			94		56-132		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190281404402	Sample number(s): 9974142-9974144								
Aluminum	2.00	1.84			92		80-120		
Arsenic	0.150	0.155			103		80-120		
Barium	2.00	2.00			100		87-111		
Chromium	0.200	0.198			99		87-110		
Cobalt	0.500	0.524			105		90-111		
Copper	0.250	0.256			103		90-115		
Iron	1.00	1.02			102		85-115		
Lead	0.150	0.153			102		87-113		
Manganese	0.500	0.507			101		90-112		
Nickel	0.500	0.518			104		90-114		
Zinc	0.500	0.509			102		89-111		
Batch number: 190290571301	Sample number(s): 9974142-9974144								
Mercury	0.00100	0.000945			94		80-114		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 19028385802A	Sample number(s): 9974142								
Total Suspended Solids	150	147.5			98		89-105		
Batch number: 19029385801A	Sample number(s): 9974143								

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Suspended Solids	150	143			95		89-105		
Batch number: 19029385802A	Sample number(s): 9974144								
Total Suspended Solids	150	142.8			95		89-105		
Batch number: 19029964902A	Sample number(s): 9974142								
Total Dissolved Solids	200	197			99		67-127		
Batch number: 19030964901A	Sample number(s): 9974143-9974144								
Total Dissolved Solids	200	196			98		67-127		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 19028005201A	Sample number(s): 9974142-9974144								
pH	7.00	7.03			100		95-105		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W190291AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9974142	101	101	99	98
9974143	102	100	99	100
9974144	101	100	96	98
9974145	100	101	98	98
Blank	101	98	99	100
LCS	102	105	99	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19028WAD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9974142	33	46	78	79	71	65
9974143	34	47	80	77	70	66
9974144	33	41	78	70	65	63
Blank	35	49	78	84	78	88
LCS	40	54	80	73	71	85
Limits:	10-72	10-85	29-133	30-111	39-105	27-126

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/01/2019 16:38

Group Number: 2026678

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pesticides in Water
Batch number: 190300031A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9974142	65	64	59	54
9974143	61	61	57	51
9974144	43	54	51	44
Blank	55	72	49	64
LCS	61	95	54	80
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 190300032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9974142	64	56	59	54
9974143	64	51	57	50
9974144	64	48	58	45
Blank	55	61	48	58
LCS	51	75	47	78
LCSD	61	73	57	66
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 4285 For Eurofins Lancaster Laboratories Environmental use only Group # 2026678 Sample # 9974142-45

COC # 572200

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☑ | Other: Cooler temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260C VOC	pH/PH Temp	PCB's in water 8082A	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF012419	01/24/19	1340	X		12	X	X	X	X	X	X	X	X	
WWTPHVOCpmyCarb012419	01/24/19	1405	X		12	X	X	X	X	X	X	X	X	
WWTPZEOL2012419	01/24/19	1430	X		12	X	X	X	X	X	X	X	X	
TB 18340	12/13/18	1645	X		2			X						
Cooler temp bottle	01/24/19	1645			1									Cooler temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	01/24/19	1700			
				1/25/19	1020

EDD Required? (Yes) No
If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.6-4.1 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 239444

Group Number(s): 2026678

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/25/2019 10:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wesley Miller (2308) at 13:11 on 01/25/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	1.6	DT	Wet	Y	Bagged	N
2	DT42-02	4.1	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: February 08, 2019 16:16

Project: Rensselaer

Account #: 04285
Group Number: 2027556
SDG: RNS90
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF013119 Grab Water	01/31/2019 10:10	9978245
WWTPHpmycarb013119 Grab Water	01/31/2019 10:17	9978246
TB 18346 Water	12/21/2018 17:00	9978247

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:10
SDG#: RNS90-01

BASF Corporation
ELLE Sample #: **WW 9978245**
ELLE Group #: **2027556**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:10
SDG#: RNS90-01

BASF Corporation
ELLE Sample #: WW 9978245
ELLE Group #: 2027556
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.53	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.53	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.53	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.53	1
10591	PCB-1248	12672-29-6	N.D. D1	0.11	0.53	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.53	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.53	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. VD2	0.0068	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0074	0.021	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0053	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0055	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0036	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.301	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0089 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.303	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.743	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0135 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,620	160	480	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.50 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHVOCEFF013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:10
SDG#: RNS90-01

BASF Corporation
ELLE Sample #: WW 9978245
ELLE Group #: 2027556
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.6	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L190351AA	02/04/2019 18:15	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L190351AA	02/04/2019 18:14	Jennifer K Howe	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19037WAH026	02/08/2019 05:15	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	19037WAH026	02/07/2019 08:30	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190340007A	02/08/2019 11:52	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190340008A	02/06/2019 17:25	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190340007A	02/04/2019 09:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190340008A	02/04/2019 09:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190351404401	02/05/2019 20:03	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
07046	Barium	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
07051	Chromium	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
07052	Cobalt	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
07053	Copper	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
01754	Iron	SW-846 6010C	1	190351404401	02/05/2019 20:03	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190351404401	02/05/2019 20:03	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
07061	Nickel	SW-846 6010C	1	190351404401	02/07/2019 21:30	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	190351404401	02/05/2019 13:56	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190350571301	02/05/2019 20:23	Parker D Lindstrom	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190351404401	02/04/2019 16:05	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190350571301	02/05/2019 06:24	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19035964901A	02/04/2019 14:28	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19035385803A	02/04/2019 14:37	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19032021501A	02/01/2019 17:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19036002105A	02/05/2019 23:00	Kristen Wroblewski	1
12152	pH	SM 4500-H+ B-2011	1	19036002105A	02/05/2019 23:00	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHpmycarb013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:17
SDG#: RNS90-02

BASF Corporation
ELLE Sample #: **WW 9978246**
ELLE Group #: **2027556**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	25	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHpmycarb013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:17
SDG#: RNS90-02

BASF Corporation
ELLE Sample #: WW 9978246
ELLE Group #: 2027556
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.11	0.54	1
10591	PCB-1221	11104-28-2	N.D. D1	0.11	0.54	1
10591	PCB-1232	11141-16-5	N.D. D1	0.22	0.54	1
10591	PCB-1242	53469-21-9	N.D. D1	0.11	0.54	1
10591	PCB-1248	12672-29-6	N.D. D2	0.11	0.54	1
10591	PCB-1254	11097-69-1	N.D. D1	0.11	0.54	1
10591	PCB-1260	11096-82-5	N.D. D1	0.16	0.54	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0037	0.011	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0032	0.011	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0076	0.022	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0054	0.022	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0056	0.022	1
10589	Delta BHC	319-86-8	N.D. D2	0.0037	0.011	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.022	0.11	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0025	0.011	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.141	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0091 J	0.0062	0.0200	1
01754	Iron	7439-89-6	1.03	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.707	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0184 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,410	160	480	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.33 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPHpmycarb013119 Grab Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 01/31/2019 10:17
SDG#: RNS90-02

BASF Corporation
ELLE Sample #: WW 9978246
ELLE Group #: 2027556
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	22.9	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L190351AA	02/04/2019 18:36	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L190351AA	02/04/2019 18:35	Jennifer K Howe	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19037WAH026	02/08/2019 05:44	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	19037WAH026	02/07/2019 08:30	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190340007A	02/08/2019 12:03	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190340008A	02/06/2019 17:37	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190340007A	02/04/2019 09:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190340008A	02/04/2019 09:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	190351404401	02/05/2019 20:06	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
07046	Barium	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
07051	Chromium	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
07052	Cobalt	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
07053	Copper	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
01754	Iron	SW-846 6010C	1	190351404401	02/05/2019 20:06	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	190351404401	02/05/2019 20:06	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
07061	Nickel	SW-846 6010C	1	190351404401	02/07/2019 21:40	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	190351404401	02/05/2019 13:59	Patrick J Engle	1
00259	Mercury	SW-846 7470A	1	190350571301	02/05/2019 20:25	Parker D Lindstrom	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190351404401	02/04/2019 16:05	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190350571301	02/05/2019 06:24	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19035964901A	02/04/2019 14:28	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19035385803A	02/04/2019 14:37	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19032021501A	02/01/2019 17:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19036002105A	02/05/2019 22:48	Kristen Wroblewski	1
12152	pH	SM 4500-H+ B-2011	1	19036002105A	02/05/2019 22:48	Kristen Wroblewski	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18346 Water**
COC: 576051

Project Name: **Rensselaer**

Submittal Date/Time: 02/01/2019 11:00
Collection Date/Time: 12/21/2018 17:00
SDG#: RNS90-03TB

BASF Corporation
ELLE Sample #: **WW 9978247**
ELLE Group #: **2027556**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L190351AA	02/04/2019 15:41	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L190351AA	02/04/2019 15:40	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2027556
Reported: 02/08/2019 16:16

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L190351AA	Sample number(s): 9978245-9978247		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19037WAH026	Sample number(s): 9978245-9978246		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190340007A	Sample number(s): 9978245-9978246		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/08/2019 16:16

Group Number: 2027556

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190340008A	Sample number(s): 9978245-9978246		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190350571301	Sample number(s): 9978245-9978246		
Mercury	N.D.	0.000050	0.00020
Batch number: 190351404401	Sample number(s): 9978245-9978246		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 19035385803A	Sample number(s): 9978245-9978246		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19035964901A	Sample number(s): 9978245-9978246		
Total Dissolved Solids	N.D.	20.0	60.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19032021501A	Sample number(s): 9978245-9978246		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/08/2019 16:16

Group Number: 2027556

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L190351AA	Sample number(s): 9978245-9978247								
Acetone	150	178.04			119		54-157		
Benzene	20	22.26			111		80-120		
Chlorobenzene	20	22.7			113		80-120		
1,2-Dichlorobenzene	20	22.13			111		80-120		
1,3-Dichlorobenzene	20	22.16			111		80-120		
1,4-Dichlorobenzene	20	22.26			111		80-120		
1,2-Dichloroethane	20	22.82			114		73-124		
Ethylbenzene	20	22.81			114		80-120		
Methylene Chloride	20	22.62			113		80-120		
Toluene	20	22.69			113		80-120		
Vinyl Chloride	20	18.05			90		56-120		
Xylene (Total)	60	69.87			116		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19037WAH026	Sample number(s): 9978245-9978246								
Anthracene	50	46.46	50	47.19	93	94	67-112	2	30
Benzo(a)anthracene	50	48.26	50	48.53	97	97	70-118	1	30
Benzo(a)pyrene	50	46.86	50	47.31	94	95	71-117	1	30
Benzo(b)fluoranthene	50	47.65	50	47.98	95	96	71-115	1	30
Benzo(k)fluoranthene	50	47.7	50	48.75	95	97	71-116	2	30
Butylbenzylphthalate	50	46.94	50	47.51	94	95	57-119	1	30
Di-n-butylphthalate	50	46.44	50	48.72	93	97	66-112	5	30
Carbazole	50	48.35	50	49.99	97	100	73-119	3	30
4-Chloroaniline	50	35.07	50	36.88	70	74	30-101	5	30
2-Chloronaphthalene	50	35.66	50	37.92	71	76	50-109	6	30
Chrysene	50	48.46	50	48.39	97	97	69-116	0	30
Dibenz(a,h)anthracene	50	48	50	48.55	96	97	67-116	1	30
bis(2-Ethylhexyl)phthalate	50	49.13	50	49.64	98	99	68-120	1	30
Fluoranthene	50	46.94	50	48.48	94	97	68-118	3	30
Indeno(1,2,3-cd)pyrene	50	44.27	50	44.35	89	89	63-114	0	30
2-Methylnaphthalene	50	35.99	50	37.64	72	75	52-105	4	30
4-Methylphenol	50	38.45	50	39.55	77	79	56-108	3	30
Naphthalene	50	35.41	50	36.34	71	73	53-99	3	30
N-Nitrosodimethylamine	50	28.44	50	31.21	57	62	25-89	9	30
Phenanthrene	50	45.61	50	45.6	91	91	65-113	0	30
Phenol	50	24.89	50	26.73	50	53	23-72	7	30
Pyrene	50	47.13	50	47.8	94	96	68-110	1	30
1,2,4-Trichlorobenzene	50	29.42	50	31.46	59	63	41-105	7	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190340007A	Sample number(s): 9978245-9978246								
PCB-1016	5.01	4.34			87		60-117		
PCB-1260	5.00	4.94			99		57-134		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/08/2019 16:16

Group Number: 2027556

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190340008A	Sample number(s): 9978245-9978246								
Beta BHC	0.100	0.108			108		56-125		
Alpha Chlordane	0.100	0.0689			69		53-126		
Gamma Chlordane	0.100	0.0670			67		53-130		
p,p-DDE	0.200	0.127			63		51-129		
p,p-DDT	0.204	0.188			92		40-145		
Delta BHC	0.100	0.0782			78		49-140		
Endrin Aldehyde	0.202	0.156			77		40-135		
Heptachlor Epoxide	0.100	0.0780			78		56-132		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190350571301	Sample number(s): 9978245-9978246								
Mercury	0.00100	0.000888			89		80-114		
Batch number: 190351404401	Sample number(s): 9978245-9978246								
Aluminum	2.00	1.92			96		80-120		
Arsenic	0.150	0.149			100		80-120		
Barium	2.00	1.99			100		87-111		
Chromium	0.200	0.200			100		87-110		
Cobalt	0.500	0.514			103		90-111		
Copper	0.250	0.285			114		90-115		
Iron	1.00	0.990			99		85-115		
Lead	0.150	0.151			100		87-113		
Manganese	0.500	0.512			102		90-112		
Nickel	0.500	0.511			102		90-114		
Zinc	0.500	0.495			99		89-111		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 19035385803A	Sample number(s): 9978245-9978246								
Total Suspended Solids	150	135.8			91		89-105		
Batch number: 19035964901A	Sample number(s): 9978245-9978246								
Total Dissolved Solids	200	205			103		67-127		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 19036002105A	Sample number(s): 9978245-9978246								
pH	7.00	6.96			99		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/08/2019 16:16

Group Number: 2027556

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L190351AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9978245	101	102	100	101
9978246	101	100	100	99
9978247	102	102	98	99
Blank	100	100	98	99
LCS	101	101	99	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19037WAH026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9978245	36	45	77	73	77	81
9978246	29	38	73	62	68	54
Blank	36	49	93	80	86	99
LCS	44	59	94	83	87	94
LCSD	47	61	94	83	87	95
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: PCBs in Water by 8082A
Batch number: 190340007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9978245	65	58	64	58
9978246	63	59	61	62
Blank	68	65	66	62
LCS	56	58	55	59
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 190340008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9978245	61	60	52	57
9978246	59	63	51	62
Blank	64	66	55	67
LCS	54	42	46	41
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2027556 Sample # 9978245-47

COC # 576051

Client Information

Client: BASF Corp | Acct. #:

Project Name/#: RENSSELAER | PWSID #:

Project Manager: John Bleiler | P.O. #:

Sampler: Jeff Denman | Quote #:

State where samples were collected: New York | For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260C VOC	pH / pH Temp	PCBs in Water 8082A	TSS	PAH	Pesticides	Remarks
WWTPHVOCEFF013119	1/31/19	1010	X		12	X	X	X	X	X	X	X	X	
WWTPHVOC-DUPCARB013119	1/31/19	1017	X		12	X	X	X	X	X	X	X	X	
TB 18346	12/21/18	1700	X		2			X						
Cooler Temp bottle	1/31/19	1700	X		1									Cooler Temp bottle

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	01/31/19	1700			
				Date 2/1/19	Time 1100

EDD Required? (Yes) No

If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx Y Other 1100

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 240022

Group Number(s): 2027556

Client: BASF CORP

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	02/01/2019 11:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 14:53 on 02/01/2019

Samples Chilled Details: Rensselaer

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	2.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: February 18, 2019 10:28

Project: Rensselaer

Account #: 04285
Group Number: 2028498
SDG: RNS91
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Abby Chin

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPHVOCEFF020719 Grab Water	02/07/2019 09:05	9982435
WWTPHVOCPMYCARB020719 Grab Water	02/07/2019 09:20	9982436
TB 18307 Water	02/07/2019 15:00	9982437

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPHVOCEFF020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:05
SDG#: RNS91-01

BASF Corporation
ELLE Sample #: **WW 9982435**
ELLE Group #: **2028498**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:05
SDG#: RNS91-01

BASF Corporation
ELLE Sample #: WW 9982435
ELLE Group #: 2028498
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.20	0.51	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0071	0.020	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0051	0.020	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0053	0.020	1
10589	Delta BHC	319-86-8	0.0052 JD1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D2	0.020	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. VD1	0.0040	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.220	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.328	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.483	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0055 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	1,030	160	480	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.69 J	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCEFF020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:05
SDG#: RNS91-01

BASF Corporation
ELLE Sample #: **WW 9982435**
ELLE Group #: **2028498**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670
The temperature of the temperature blank bottle(s) upon receipt at the lab was 9.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-14.5 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5190462AA	02/15/2019 16:55	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190462AA	02/15/2019 16:54	Linda C Pape	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19043WAC026	02/13/2019 07:14	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	19043WAC026	02/12/2019 16:30	Ryan J Dowdy	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190430007A	02/13/2019 15:33	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190430008A	02/13/2019 18:30	Andrea L Jones	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190430007A	02/12/2019 21:00	Ryan J Dowdy	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190430008A	02/12/2019 21:00	Ryan J Dowdy	1
01743	Aluminum	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190421404401	02/12/2019 22:06	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190420571305	02/13/2019 07:19	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190421404401	02/12/2019 05:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190420571305	02/12/2019 06:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190420571307	02/12/2019 17:00	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19042964901A	02/11/2019 11:38	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19043385801A	02/12/2019 13:35	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19039021501A	02/08/2019 16:50	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19042008201A	02/11/2019 18:56	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19042008201A	02/11/2019 18:56	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCPMYCARB020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:20
SDG#: RNS91-02

BASF Corporation
ELLE Sample #: **WW 9982436**
ELLE Group #: **2028498**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	24	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCPMYCARB020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:20
SDG#: RNS91-02

BASF Corporation
ELLE Sample #: WW 9982436
ELLE Group #: 2028498
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.51	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	0.17 JD1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0072	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0051	0.021	1
10589	p,p-DDT	50-29-3	0.012 JD1	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.0024	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.236 J	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0999	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.803	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.508	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0060 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	980	160	480	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.52	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPHVOCPMYCARB020719 Grab Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 09:20
SDG#: RNS91-02

BASF Corporation
ELLE Sample #: WW 9982436
ELLE Group #: 2028498
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH	n.a.	21.0	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670
The temperature of the temperature blank bottle(s) upon receipt at the lab was 9.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-14.5 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5190462AA	02/15/2019 17:59	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190462AA	02/15/2019 17:58	Linda C Pape	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19043WAC026	02/13/2019 07:43	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	19043WAC026	02/12/2019 16:30	Ryan J Dowdy	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	190430007A	02/13/2019 15:43	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	190430008A	02/13/2019 18:43	Andrea L Jones	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	190430007A	02/12/2019 21:00	Ryan J Dowdy	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	190430008A	02/12/2019 21:00	Ryan J Dowdy	1
01743	Aluminum	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07035	Arsenic	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07046	Barium	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07051	Chromium	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07052	Cobalt	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07053	Copper	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07055	Lead	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07058	Manganese	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07061	Nickel	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
07072	Zinc	SW-846 6010C	1	190421404401	02/12/2019 22:09	Cindy M Gehman	1
00259	Mercury	SW-846 7470A	1	190420571305	02/13/2019 07:21	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	190421404401	02/12/2019 05:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	190420571305	02/12/2019 06:30	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	190420571307	02/12/2019 17:00	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19042964901A	02/11/2019 11:38	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19043385801A	02/12/2019 13:35	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19039021501A	02/08/2019 16:50	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19042008201B	02/11/2019 19:04	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19042008201B	02/11/2019 19:04	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18307 Water**
COC: 577974

Project Name: **Rensselaer**

Submittal Date/Time: 02/08/2019 10:10
Collection Date/Time: 02/07/2019 15:00
SDG#: RNS91-03TB

BASF Corporation
ELLE Sample #: WW 9982437
ELLE Group #: 2028498
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670
The temperature of the temperature blank bottle(s) upon receipt at the lab was 9.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-14.5 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	5190462AA	02/15/2019 18:19	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5190462AA	02/15/2019 18:18	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5190462AA	Sample number(s): 9982435-9982437		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19043WAC026	Sample number(s): 9982435-9982436		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 190430007A	Sample number(s): 9982435-9982436		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 190430008A	Sample number(s): 9982435-9982436		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 190420571305	Sample number(s): 9982435-9982436		
Mercury	N.D.	0.000050	0.00020
Batch number: 190421404401	Sample number(s): 9982435-9982436		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 19042964901A	Sample number(s): 9982435-9982436		
Total Dissolved Solids	N.D.	20.0	60.0
Batch number: 19043385801A	Sample number(s): 9982435-9982436		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19039021501A	Sample number(s): 9982435-9982436		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5190462AA	Sample number(s): 9982435-9982437								
Acetone	150	125.17			83		54-157		
Benzene	20	20.57			103		80-120		
Chlorobenzene	20	20.83			104		80-120		
1,2-Dichlorobenzene	20	20.95			105		80-120		
1,3-Dichlorobenzene	20	20.9			105		80-120		
1,4-Dichlorobenzene	20	21.03			105		80-120		
1,2-Dichloroethane	20	21.84			109		73-124		
Ethylbenzene	20	20.46			102		80-120		
Methylene Chloride	20	20.61			103		80-120		
Toluene	20	19.56			98		80-120		
Vinyl Chloride	20	15.87			79		56-120		
Xylene (Total)	60	60.58			101		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19043WAC026	Sample number(s): 9982435-9982436								
Anthracene	50	43.26			87		67-112		
Benzo(a)anthracene	50	45.9			92		70-118		
Benzo(a)pyrene	50	44.76			90		71-117		
Benzo(b)fluoranthene	50	44.97			90		71-115		
Benzo(k)fluoranthene	50	46.29			93		71-116		
Butylbenzylphthalate	50	29.62			59		57-119		
Di-n-butylphthalate	50	41.06			82		66-112		
Carbazole	50	46.5			93		73-119		
4-Chloroaniline	50	34.68			69		30-101		
2-Chloronaphthalene	50	33.34			67		50-109		
Chrysene	50	44.28			89		69-116		
Dibenz(a,h)anthracene	50	42.14			84		67-116		
bis(2-Ethylhexyl)phthalate	50	43.99			88		68-120		
Fluoranthene	50	48.15			96		68-118		
Indeno(1,2,3-cd)pyrene	50	41.13			82		63-114		
2-Methylnaphthalene	50	35.2			70		52-105		
4-Methylphenol	50	40.9			82		56-108		
Naphthalene	50	34.09			68		53-99		
N-Nitrosodimethylamine	50	24.07			48		25-89		
Phenanthrene	50	43.02			86		65-113		
Phenol	50	22.68			45		23-72		
Pyrene	50	45.17			90		68-110		
1,2,4-Trichlorobenzene	50	31.7			63		41-105		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190430007A	Sample number(s): 9982435-9982436								
PCB-1016	5.01	4.20	5.01	4.02	84	80	60-117	4	30
PCB-1260	5.00	4.62	5.00	4.22	92	84	57-134	9	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 190430008A	Sample number(s): 9982435-9982436								
Beta BHC	0.100	0.0624	0.100	0.0789	62	79	56-125	23	30
Alpha Chlordane	0.100	0.0622	0.100	0.0795	62	79	53-126	24	30
Gamma Chlordane	0.100	0.0625	0.100	0.0791	62	79	53-130	23	30
p,p-DDE	0.200	0.124	0.200	0.160	62	80	51-129	26	30
p,p-DDT	0.204	0.137	0.204	0.188	67	92	40-145	31*	30
Delta BHC	0.100	0.0692	0.100	0.0875	69	87	49-140	23	30
Endrin Aldehyde	0.202	0.142	0.202	0.198	70	98	40-135	33*	20
Heptachlor Epoxide	0.100	0.0740	0.100	0.0925	74	93	56-132	22	30
	mg/l	mg/l	mg/l	mg/l					
Batch number: 190420571305	Sample number(s): 9982435-9982436								
Mercury	0.00100	0.000920			92		82-119		
Batch number: 190421404401	Sample number(s): 9982435-9982436								
Aluminum	2.00	2.10			105		80-120		
Arsenic	0.150	0.160			107		80-120		
Barium	2.00	2.01			101		87-111		
Chromium	0.200	0.198			99		87-110		
Cobalt	0.500	0.519			104		90-111		
Copper	0.250	0.251			100		90-115		
Iron	1.00	1.02			102		85-115		
Lead	0.150	0.151			101		87-113		
Manganese	0.500	0.512			102		90-112		
Nickel	0.500	0.524			105		90-114		
Zinc	0.500	0.500			100		89-111		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 19042964901A	Sample number(s): 9982435-9982436								
Total Dissolved Solids	200	194			97		67-127		
Batch number: 19043385801A	Sample number(s): 9982435-9982436								
Total Suspended Solids	150	143.6			96		89-105		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 19042008201A	Sample number(s): 9982435								
pH	7.00	7.00			100		95-105		
Batch number: 19042008201B	Sample number(s): 9982436								
pH	7.00	7.00			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5190462AA	Sample number(s): 9982435-9982437 UNSPK: 9982435									
Acetone	N.D.	150	139.59	150	132.85	93	89	54-157	5	30
Benzene	N.D.	20	22.59	20	21.98	113	110	80-120	3	30
Chlorobenzene	N.D.	20	22.2	20	21.89	111	109	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	22.8	20	21.6	114	108	80-120	5	30
1,3-Dichlorobenzene	N.D.	20	22.38	20	21.89	112	109	80-120	2	30
1,4-Dichlorobenzene	N.D.	20	22.63	20	21.45	113	107	80-120	5	30
1,2-Dichloroethane	N.D.	20	23.51	20	22.83	118	114	73-124	3	30
Ethylbenzene	N.D.	20	22.13	20	21.64	111	108	80-120	2	30
Methylene Chloride	N.D.	20	22.32	20	21.44	112	107	80-120	4	30
Toluene	N.D.	20	21.29	20	20.79	106	104	80-120	2	30
Vinyl Chloride	N.D.	20	19.42	20	16.74	97	84	56-120	15	30
Xylene (Total)	N.D.	60	66.26	60	64.61	110	108	80-120	3	30

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc Degrees C	DUP Conc Degrees C	DUP RPD	DUP RPD Max
Batch number: 19042008201A	Sample number(s): 9982435 BKG: 9982435			
Temperature of pH	21.3	21.32	0	5
Batch number: 19042008201B	Sample number(s): 9982436 BKG: 9982436			
Temperature of pH	21.02	21.56	3	5
	Std. Units	**Std. Units**		
Batch number: 19042008201A	Sample number(s): 9982435 BKG: 9982435			
pH	7.15	7.18	0	4
Batch number: 19042008201B	Sample number(s): 9982436 BKG: 9982436			
pH	7.40	7.41	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/18/2019 10:28

Group Number: 2028498

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 5190462AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9982435	101	97	91	99
9982436	101	98	91	99
9982437	100	95	90	97
Blank	101	98	91	98
LCS	100	98	93	103
MS	99	96	93	104
MSD	100	94	94	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19043WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9982435	26	36	63	72	68	71
9982436	28	39	79	73	78	70
Blank	24	35	86	60	62	91
LCS	39	53	85	78	76	88
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: PCBs in Water by 8082A
Batch number: 190430007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9982435	74	59	77	62
9982436	73	45	76	50
Blank	65	50	68	49
LCS	77	60	81	60
LCSD	64	70	65	71
Limits:	33-137	10-148	33-137	10-148

Analysis Name: OC Pesticides in Water
Batch number: 190430008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9982435	76	79	73	68
9982436	67	58	64	48
Blank	65	62	59	52
LCS	57	63	51	52
LCSD	66	59	51	48
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2028498
Reported: 02/18/2019 10:28

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # U285 Group # 2028498 Sample # 9982435-37

COC # 577974

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Thomas Quackenbush	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☑ Surface ☐ | Other: Cooler temp bottle

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, P=H_3PO_4, F=Field Filtered, O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Potable	Ground	NPDES	Surface	Water	Other: Cooler temp bottle	Total # of Containers	Settable Solids/TDS	Metals	8260c VOC	pH / pH temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTP HVOC EFF 020719	2/7/19	0905	X									X		12	X	X	X	X	X	X	X	X	
WWTP HVOC PMYCARB 020719	2/7/19	0920	X									X		12	X	X	X	X	X	X	X	X	
TB 18307	2/7/19	1500	X									X		2			X						
Cooler temp bottle	11/6/18	1500	X									X	X	1									Cooler temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@AECOM.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Thomas Quackenbush	02/07/2019				
			Samantha Lyn	2.8.19	1000

EDD Required? (Yes) No
If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 9.2-14.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 240669

Group Number(s): 2284498

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	02/08/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Brandy Barclay (2299) at 11:38 on 02/08/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT42-02	9.5	DT	Wet	Y	Bagged	Y	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	32170023	11.2	12.1	14.5	9.2	9.6	1 ice bag at the bottom of the cooler. Temp bottle was at the very top of the cooler.	

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Lancaster, PA 17605-2425
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F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: July 26, 2019 16:46

Project: Rensselaer

Account #: 04285
Group Number: 2054259
SDG: RNS94
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPLVOCEFF071719 Grab Water	07/17/2019 08:50	1104240
WWTPLVOCCV-03-OUT071719 Grab Water	07/17/2019 09:05	1104241

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPLVOCEFF071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 08:50
SDG#: RNS94-01

BASF Corporation
ELLE Sample #: **WW 1104240**
ELLE Group #: **2054259**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	8 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	0.5 J	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCEFF071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 08:50
SDG#: RNS94-01

BASF Corporation
ELLE Sample #: **WW 1104240**
ELLE Group #: **2054259**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.51	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
	The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.					
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0072	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0051	0.021	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.136	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0059 J	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.345	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.238	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0043 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0136 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	253	10.0	30.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCEFF071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 08:50
SDG#: RNS94-01

BASF Corporation
ELLE Sample #: **WW 1104240**
ELLE Group #: **2054259**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192041AA	07/23/2019 15:50	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192041AA	07/23/2019 15:49	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19200WAC026	07/22/2019 10:36	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	19200WAC026	07/19/2019 16:45	Laura Duquette	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	192000014A	07/24/2019 11:24	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	192000013A	07/25/2019 22:23	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	192000014A	07/19/2019 16:55	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	192000013A	07/19/2019 16:55	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	192001404401	07/24/2019 17:23	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	192000571304	07/22/2019 09:24	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192001404401	07/19/2019 16:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192000571304	07/19/2019 18:30	Barbara A Kane	1
06649	Total Dissolved Solids	SM 2540 C-2011	2	19204964904A	07/23/2019 14:19	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19200385802A	07/19/2019 14:25	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19200021501A	07/19/2019 00:30	Daniel S Smith	1
12151	Temperature of pH	SM 2550 B-2010	1	19200007201A	07/19/2019 17:36	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19200007201A	07/19/2019 17:36	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCCV-03-OUT071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 09:05
SDG#: RNS94-02

BASF Corporation
ELLE Sample #: **WW 1104241**
ELLE Group #: **2054259**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	5 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	0.6 J	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	0.7 J	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	11	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	12	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCCV-03-OUT071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 09:05
SDG#: RNS94-02

BASF Corporation
ELLE Sample #: WW 1104241
ELLE Group #: 2054259
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.51	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.51	1
10591	PCB-1232	11141-16-5	N.D. D1	0.20	0.51	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.51	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.51	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.51	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.51	1
	The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.					
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0034	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0030	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0071	0.020	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0051	0.020	1
10589	p,p-DDT	50-29-3	N.D. D2	0.0053	0.020	1
10589	Delta BHC	319-86-8	N.D. D1	0.0034	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.020	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0023	0.010	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0394	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.362	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.275	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0035 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0239	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	265	20.0	60.0	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCCV-03-OUT071719 Grab Water**
COC: 562566

Project Name: **Rensselaer**

Submittal Date/Time: 07/18/2019 10:20
Collection Date/Time: 07/17/2019 09:05
SDG#: RNS94-02

BASF Corporation
ELLE Sample #: WW 1104241
ELLE Group #: 2054259
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192041AA	07/23/2019 16:12	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192041AA	07/23/2019 16:11	Corie Mellinger	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19200WAC026	07/22/2019 11:05	Kira N Beck	1
00813	BNA Water Extraction	SW-846 3510C	1	19200WAC026	07/19/2019 16:45	Laura Duquette	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	192000014A	07/24/2019 11:35	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	192000013A	07/25/2019 22:35	Dylan Schreiner	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	192000014A	07/19/2019 16:55	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	192000013A	07/19/2019 16:55	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07035	Arsenic	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07046	Barium	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07052	Cobalt	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07053	Copper	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010C	1	192001404401	07/24/2019 17:41	Elaine F Stoltzfus	1
00259	Mercury	SW-846 7470A	1	192000571304	07/22/2019 09:26	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192001404401	07/19/2019 16:35	Barbara A Kane	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192000571304	07/19/2019 18:30	Barbara A Kane	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19200964901B	07/19/2019 10:27	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19200385802A	07/19/2019 14:25	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19200021501A	07/19/2019 00:30	Daniel S Smith	1
12151	Temperature of pH	SM 2550 B-2010	1	19200007201A	07/19/2019 17:28	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19200007201A	07/19/2019 17:28	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2054259
Reported: 07/26/2019 16:46

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 4192041AA	Sample number(s): 1104240-1104241		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	0.5 J	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19200WAC026	Sample number(s): 1104240-1104241		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 192000014A	Sample number(s): 1104240-1104241		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 192000013A	Sample number(s): 1104240-1104241		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 192000571304	Sample number(s): 1104240-1104241		
Mercury	N.D.	0.000050	0.00020
Batch number: 192001404401	Sample number(s): 1104240-1104241		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	0.0035 J	0.0030	0.0200
Batch number: 19200385802A	Sample number(s): 1104240-1104241		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19200964901B	Sample number(s): 1104241		
Total Dissolved Solids	10.0 J	10.0	30.0
Batch number: 19204964904A	Sample number(s): 1104240		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19200021501A	Sample number(s): 1104240-1104241		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4192041AA	Sample number(s): 1104240-1104241								
Acetone	150	216.97	150	202.98	145	135	54-157	7	30
Benzene	20	19.63	20	19.49	98	97	80-120	1	30
Chlorobenzene	20	20.12	20	20.29	101	101	80-120	1	30
1,2-Dichlorobenzene	20	20.01	20	19.86	100	99	80-120	1	30
1,3-Dichlorobenzene	20	19.09	20	19.33	95	97	80-120	1	30
1,4-Dichlorobenzene	20	19.75	20	19.97	99	100	80-120	1	30
1,2-Dichloroethane	20	21.07	20	20.8	105	104	73-124	1	30
Ethylbenzene	20	18.87	20	18.91	94	95	80-120	0	30
Methylene Chloride	20	20.61	20	20.5	103	102	80-120	1	30
Toluene	20	19.63	20	19.88	98	99	80-120	1	30
Vinyl Chloride	20	15.07	20	15.24	75	76	56-120	1	30
Xylene (Total)	60	55.22	60	55.85	92	93	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19200WAC026	Sample number(s): 1104240-1104241								
Anthracene	50	50.39			101		67-112		
Benzo(a)anthracene	50	56.34			113		70-118		
Benzo(a)pyrene	50	54.13			108		71-117		
Benzo(b)fluoranthene	50	53.71			107		71-115		
Benzo(k)fluoranthene	50	53.94			108		71-116		
Butylbenzylphthalate	50	53.06			106		57-119		
Di-n-butylphthalate	50	49.64			99		66-112		
Carbazole	50	52.94			106		73-119		
4-Chloroaniline	50	38.98			78		30-101		
2-Chloronaphthalene	50	46.33			93		50-109		
Chrysene	50	56.05			112		69-116		
Dibenz(a,h)anthracene	50	50.34			101		67-116		
bis(2-Ethylhexyl)phthalate	50	56.06			112		68-120		
Fluoranthene	50	52.85			106		68-118		
Indeno(1,2,3-cd)pyrene	50	48.2			96		63-114		
2-Methylnaphthalene	50	44.71			89		52-105		
4-Methylphenol	50	40.66			81		56-108		
Naphthalene	50	44.5			89		53-99		
N-Nitrosodimethylamine	50	26.27			53		25-89		
Phenanthrene	50	50.52			101		65-113		
Phenol	50	26.74			53		23-72		
Pyrene	50	50.24			100		68-110		
1,2,4-Trichlorobenzene	50	42.08			84		41-105		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192000014A	Sample number(s): 1104240-1104241								
PCB-1016	5.02	3.39	5.02	3.94	68	79	60-117	15	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	3.86	5.05	4.34	77	86	57-134	12	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192000013A	Sample number(s): 1104240-1104241								
Beta BHC	0.100	0.0999	0.100	0.0994	100	99	27-143	0	30
Alpha Chlordane	0.101	0.0886	0.101	0.0941	87	93	28-136	6	30
Gamma Chlordane	0.101	0.0864	0.101	0.0877	85	87	53-130	1	30
p,p-DDE	0.201	0.161	0.201	0.168	80	83	22-138	4	30
p,p-DDT	0.201	0.145	0.201	0.155	72	77	40-145	7	30
Delta BHC	0.100	0.101	0.100	0.0961	101	96	28-141	5	30
Endrin Aldehyde	0.201	0.186	0.201	0.191	93	95	40-135	2	20
Heptachlor Epoxide	0.100	0.101	0.100	0.0994	101	99	28-146	1	30
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192000571304	Sample number(s): 1104240-1104241								
Mercury	0.00100	0.000825			83		80-110		
Batch number: 192001404401	Sample number(s): 1104240-1104241								
Aluminum	2.00	2.12			106		87-122		
Arsenic	0.150	0.145			96		86-120		
Barium	2.00	2.03			101		87-111		
Chromium	0.200	0.205			102		87-110		
Cobalt	0.500	0.528			106		90-111		
Copper	0.250	0.258			103		90-115		
Iron	1.00	1.03			103		90-115		
Lead	0.150	0.162			108		87-113		
Manganese	0.500	0.525			105		90-112		
Nickel	0.500	0.529			106		90-114		
Zinc	0.500	0.510			102		89-111		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19200385802A	Sample number(s): 1104240-1104241								
Total Suspended Solids	150	144.6			96		89-105		
Batch number: 19200964901B	Sample number(s): 1104241								
Total Dissolved Solids	200	212			106		74-127		
Batch number: 19204964904A	Sample number(s): 1104240								
Total Dissolved Solids	200	212			106		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19200007201A	Sample number(s): 1104240-1104241								
pH	7.00	6.99			100		95-105		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192001404401	Sample number(s): 1104240-1104241 UNSPK: 1104240									
Aluminum	N.D.	2.00	2.16	2.00	2.20	108	110	75-125	2	20
Arsenic	N.D.	0.150	0.159	0.150	0.152	106	101	75-125	4	20
Barium	0.136	2.00	2.17	2.00	2.16	102	101	75-125	1	20
Chromium	0.00594	0.200	0.206	0.200	0.205	100	100	75-125	0	20
Cobalt	N.D.	0.500	0.523	0.500	0.526	105	105	80-115	1	20
Copper	N.D.	0.250	0.260	0.250	0.258	104	103	75-125	1	20
Iron	0.345	1.00	1.34	1.00	1.36	100	101	75-125	1	20
Lead	N.D.	0.150	0.149	0.150	0.147	99	98	75-125	1	20
Manganese	0.238	0.500	0.752	0.500	0.753	103	103	75-125	0	20
Nickel	0.00425	0.500	0.523	0.500	0.524	104	104	75-125	0	20
Zinc	0.0136	0.500	0.521	0.500	0.522	101	102	75-125	0	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 192001404401	Sample number(s): 1104240-1104241 BKG: 1104240			
Aluminum	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.136	0.137	1	20
Chromium	0.00594	N.D.	200* (1)	20
Cobalt	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	0.345	0.342	1 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Manganese	0.238	0.239	1	20
Nickel	0.00425	N.D.	200* (1)	20
Zinc	0.0136	0.0140	2 (1)	20
	Degrees C	Degrees C		
Batch number: 19200007201A	Sample number(s): 1104240-1104241 BKG: 1104241			
Temperature of pH	23.33	23.31	0	5
	mg/l	mg/l		
Batch number: 19200964901B	Sample number(s): 1104241 BKG: 1104241			
Total Dissolved Solids	265	269	1 (1)	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l Std. Units	DUP Conc mg/l Std. Units	DUP RPD	DUP RPD Max
Batch number: 19200007201A	Sample number(s): 1104240-1104241 BKG: 1104241			
pH	7.66	7.70	1	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192041AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1104240	106	106	103	89
1104241	106	104	103	88
Blank	102	103	103	91
LCS	100	104	106	102
LCSD	99	101	105	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19200WAC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1104240	38	49	75	77	78	93
1104241	36	48	75	65	69	86
Blank	40	52	77	74	76	96
LCS	48	58	90	79	87	98
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: OC Pesticides in Water
Batch number: 192000013A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1104240	59	62	65	61
1104241	51	58	54	61
Blank	53	61	57	68
LCS	51	77	56	82
LCSD	52	76	56	78

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 07/26/2019 16:46

Group Number: 2054259

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pesticides in Water
Batch number: 192000013A

Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 192000014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1104240	69	71	73	69
1104241	56	62	59	63
Blank	64	77	67	79
LCS	28*	69	29*	71
LCSD	37	81	40	81
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2054259 Sample # 1104240-42

COC # 562566

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Thomas Quackenbush	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Potable ☐ Ground ☐ Water ☑ Surface ☐ NPDES | Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable Solids/TDS	Metals	8260 c VOC	PH / PH Temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTPLVOC EFF071719	7/17/19	0850	X		12									
WWTPLVOC CV-03-OUT 071719	7/17/19	0905	X		12									
TB18307	11/6/18		X		1									
Cooler temp bottle	7/17/19				2									Cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 7/22/2019

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Thomas Quackenbush	7/17/19	1417			
				7/18/19	1020

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 3.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 254295

254 295

Group Number(s): 2054259

Client: BASF Corp.

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	07/18/2019 10:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	No		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25 684) at 12:30 on 07/18/2019

Samples Chilled Details: Rensselaer

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	3.4	DT	Wet	Y	Loose	N

Samples Not Intact Details: Rensselaer

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
TB18307	40 ml glass vial (GC/MS) - HCl	1	N	Lab Accident

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: August 02, 2019 12:15

Project: Rensselaer

Account #: 04285
Group Number: 2055413
SDG: RNS97
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-072419 Grab Water	07/24/2019 09:20	1109568
WWTPPMYCARB-072419 Grab Water	07/24/2019 09:40	1109569
TB19197-061919 Water	06/19/2019	1109570

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:20
SDG#: RNS97-01

BASF Corporation
ELLE Sample #: **RW 1109568**
ELLE Group #: **2055413**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	10 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:20
SDG#: RNS97-01

BASF Corporation
ELLE Sample #: **RW 1109568**
ELLE Group #: **2055413**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.52	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.52	1
10591	PCB-1232	11141-16-5	N.D. D1	0.21	0.52	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.52	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.52	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.52	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.52	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0035	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0031	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0072	0.021	1
10589	p,p-DDE	72-55-9	N.D. D1	0.0052	0.021	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0054	0.021	1
10589	Delta BHC	319-86-8	N.D. D1	0.0035	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.021	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0024	0.010	1
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0921	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0149 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.286	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.493	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0046 J	0.0030	0.0200	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	484	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.78	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:20
SDG#: RNS97-01

BASF Corporation
ELLE Sample #: RW 1109568
ELLE Group #: 2055413
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.6	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670
The sample receipt temperature requirement was not met. The temperature of the temperature blank bottle(s) upon receipt at the lab was 13.4 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-15.3 C.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192121AA	07/31/2019 18:02	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192121AA	07/31/2019 18:01	Anita M Dale	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19207WAE026	07/28/2019 23:05	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	19207WAE026	07/27/2019 16:00	Jeancarlo Morales	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	192070007A	07/30/2019 03:37	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	192070006A	07/30/2019 22:15	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	192070007A	07/26/2019 15:59	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	192070006A	07/26/2019 15:59	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	192071404402	07/31/2019 19:56	Cindy M Gehman	1
01754	Iron	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	192071404402	07/31/2019 04:29	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	192110571301	07/31/2019 07:13	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192071404402	07/26/2019 13:25	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192070571301	07/26/2019 14:20	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	192110571301	07/30/2019 17:00	Barbara A Kane	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19207964901A	07/26/2019 12:58	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19207385802A	07/26/2019 10:58	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19206021501A	07/25/2019 23:40	Daniel S Smith	1
12151	Temperature of pH	SM 2550 B-2010	1	19207002201A	07/26/2019 15:41	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:20
SDG#: RNS97-01

BASF Corporation
ELLE Sample #: RW 1109568
ELLE Group #: 2055413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12152	pH	SM 4500-H+ B-2011	1	19207002201A	07/26/2019 15:41	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPMYCARB-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:40
SDG#: RNS97-02

BASF Corporation
ELLE Sample #: **RW 1109569**
ELLE Group #: **2055413**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	48	0.7	20	1
11997	Benzene	71-43-2	2	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	5	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	1	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPMYCARB-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:40
SDG#: RNS97-02

BASF Corporation
ELLE Sample #: RW 1109569
ELLE Group #: 2055413
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.50	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.50	1
10591	PCB-1232	11141-16-5	N.D. D1	0.20	0.50	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.50	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.50	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.50	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.50	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D2	0.0034	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0030	0.010	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0070	0.020	1
10589	p,p-DDE	72-55-9	N.D. D2	0.0050	0.020	1
10589	p,p-DDT	50-29-3	N.D. D1	0.0052	0.020	1
10589	Delta BHC	319-86-8	N.D. D2	0.0034	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.020	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0023	0.010	1
Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0152	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.261	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.542	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0035 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	486	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.73	1.00	3.00	1
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPPMYCARB-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:40
SDG#: RNS97-02

BASF Corporation
ELLE Sample #: RW 1109569
ELLE Group #: 2055413
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.6	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670
The sample receipt temperature requirement was not met. The temperature of the temperature blank bottle(s) upon receipt at the lab was 13.4 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-15.3 C.

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192121AA	07/31/2019 11:49	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192121AA	07/31/2019 11:48	Anita M Dale	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19207WAE026	07/28/2019 23:34	Ashley R Transue	1
00813	BNA Water Extraction	SW-846 3510C	1	19207WAE026	07/27/2019 16:00	Jeancarlo Morales	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	192070007A	07/30/2019 03:48	Covenant Mutuku	1
10589	OC Pesticides in Water	SW-846 8081B	1	192070006A	07/30/2019 22:27	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	192070007A	07/26/2019 15:59	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	192070006A	07/26/2019 15:59	Christine E Gleim	1
01743	Aluminum	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07055	Lead	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	192071404402	07/31/2019 04:51	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	192110571301	07/31/2019 07:15	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192071404402	07/26/2019 13:25	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192070571301	07/26/2019 14:20	JoElla L Rice	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	192110571301	07/30/2019 17:00	Barbara A Kane	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19207964902A	07/26/2019 13:12	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19207385802A	07/26/2019 10:58	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19206021501A	07/25/2019 23:40	Daniel S Smith	1
12151	Temperature of pH	SM 2550 B-2010	1	19207002201A	07/26/2019 15:44	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPPMYCARB-072419 Grab Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 07/24/2019 09:40
SDG#: RNS97-02

BASF Corporation
ELLE Sample #: RW 1109569
ELLE Group #: 2055413
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12152	pH	SM 4500-H+ B-2011	1	19207002201A	07/26/2019 15:44	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19197-061919 Water**
COC: 588942

Project Name: **Rensselaer**

Submittal Date/Time: 07/25/2019 10:05
Collection Date/Time: 06/19/2019
SDG#: RNS97-03TB

BASF Corporation
ELLE Sample #: RW 1109570
ELLE Group #: 2055413
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670
The sample receipt temperature requirement was not met. The temperature of the temperature blank bottle(s) upon receipt at the lab was 13.4 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 9.2-15.3 C.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	L192121AA	07/31/2019 12:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L192121AA	07/31/2019 12:10	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2055413
Reported: 08/02/2019 12:15

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L192121AA	Sample number(s): 1109568-1109570		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	N.D.	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19207WAE026	Sample number(s): 1109568-1109569		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 192070007A	Sample number(s): 1109568-1109569		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 192070006A	Sample number(s): 1109568-1109569		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 192071404402	Sample number(s): 1109568-1109569		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 192110571301	Sample number(s): 1109568-1109569		
Mercury	N.D.	0.000050	0.00020
Batch number: 19207385802A	Sample number(s): 1109568-1109569		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19207964901A	Sample number(s): 1109568		
Total Dissolved Solids	N.D.	10.0	30.0
Batch number: 19207964902A	Sample number(s): 1109569		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19206021501A	Sample number(s): 1109568-1109569		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L192121AA	Sample number(s): 1109568-1109570								
Acetone	150	181.4	150	167	121	111	54-157	8	30
Benzene	20	20.27	20	20.01	101	100	80-120	1	30
Chlorobenzene	20	20.01	20	20.04	100	100	80-120	0	30
1,2-Dichlorobenzene	20	19.33	20	18.79	97	94	80-120	3	30
1,3-Dichlorobenzene	20	19.15	20	18.52	96	93	80-120	3	30
1,4-Dichlorobenzene	20	19.32	20	18.53	97	93	80-120	4	30
1,2-Dichloroethane	20	22.32	20	21.84	112	109	73-124	2	30
Ethylbenzene	20	19.82	20	19.57	99	98	80-120	1	30
Methylene Chloride	20	19.82	20	19.49	99	97	80-120	2	30
Toluene	20	19.5	20	19.33	97	97	80-120	1	30
Vinyl Chloride	20	16.71	20	16.89	84	84	56-120	1	30
Xylene (Total)	60	60.87	60	60.63	101	101	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19207WAE026	Sample number(s): 1109568-1109569								
Anthracene	50	50.58			101		67-112		
Benzo(a)anthracene	50	52.86			106		70-118		
Benzo(a)pyrene	50	53.6			107		71-117		
Benzo(b)fluoranthene	50	52.49			105		71-115		
Benzo(k)fluoranthene	50	51.79			104		71-116		
Butylbenzylphthalate	50	47.51			95		57-119		
Di-n-butylphthalate	50	50.77			102		66-112		
Carbazole	50	54.07			108		73-119		
4-Chloroaniline	50	42.23			84		30-101		
2-Chloronaphthalene	50	43.57			87		50-109		
Chrysene	50	50.77			102		69-116		
Dibenz(a,h)anthracene	50	53.36			107		67-116		
bis(2-Ethylhexyl)phthalate	50	53.58			107		68-120		
Fluoranthene	50	51.72			103		68-118		
Indeno(1,2,3-cd)pyrene	50	50.82			102		63-114		
2-Methylnaphthalene	50	46.14			92		52-105		
4-Methylphenol	50	43.8			88		56-108		
Naphthalene	50	44			88		53-99		
N-Nitrosodimethylamine	50	29.53			59		25-89		
Phenanthrene	50	48.2			96		65-113		
Phenol	50	28.6			57		23-72		
Pyrene	50	49.1			98		68-110		
1,2,4-Trichlorobenzene	50	41.48			83		41-105		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192070007A	Sample number(s): 1109568-1109569								
PCB-1016	5.02	4.09	5.02	4.21	81	84	60-117	3	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.39	5.05	4.23	87	84	57-134	4	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192070006A	Sample number(s): 1109568-1109569								
Beta BHC	0.100	0.0915			92		27-143		
Alpha Chlordane	0.101	0.0957			94		28-136		
Gamma Chlordane	0.101	0.0895			88		53-130		
p,p-DDE	0.201	0.179			89		22-138		
p,p-DDT	0.201	0.167			83		40-145		
Delta BHC	0.100	0.0912			91		28-141		
Endrin Aldehyde	0.201	0.180			89		40-135		
Heptachlor Epoxide	0.100	0.0969			97		28-146		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192071404402	Sample number(s): 1109568-1109569								
Aluminum	2.00	2.11			105		87-122		
Arsenic	0.150	0.154			103		86-120		
Barium	2.00	1.99			100		87-111		
Chromium	0.200	0.190			95		87-110		
Cobalt	0.500	0.515			103		90-111		
Copper	0.250	0.250			100		90-115		
Iron	1.00	0.984			98		90-115		
Lead	0.150	0.148			99		87-113		
Manganese	0.500	0.508			102		90-112		
Nickel	0.500	0.525			105		90-114		
Zinc	0.500	0.509			102		89-111		
Batch number: 192110571301	Sample number(s): 1109568-1109569								
Mercury	0.00100	0.000843			84		80-110		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19207385802A	Sample number(s): 1109568-1109569								
Total Suspended Solids	150	148.7			99		89-105		
Batch number: 19207964901A	Sample number(s): 1109568								
Total Dissolved Solids	200	217			109		74-127		
Batch number: 19207964902A	Sample number(s): 1109569								
Total Dissolved Solids	200	202			101		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19207002201A	Sample number(s): 1109568-1109569								
pH	7.00	7.03			100		95-105		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192071404402	Sample number(s): 1109568-1109569 UNSPK: 1109568									
Aluminum	N.D.	2.00	1.99	2.00	1.94	99	97	75-125	2	20
Arsenic	N.D.	0.150	0.153	0.150	0.157	102	105	75-125	3	20
Barium	0.0921	2.00	2.01	2.00	1.98	96	95	75-125	1	20
Chromium	N.D.	0.200	0.188	0.200	0.187	94	94	75-125	1	20
Cobalt	N.D.	0.500	0.497	0.500	0.497	99	99	80-115	0	20
Copper	0.0149	0.250	0.264	0.250	0.256	100	97	75-125	3	20
Iron	0.286	1.00	1.26	1.00	1.20	97	92	75-125	5	20
Lead	N.D.	0.150	0.144	0.150	0.140	96	93	75-125	3	20
Manganese	0.493	0.500	1.00	0.500	0.981	102	97	75-125	2	20
Nickel	N.D.	0.500	0.509	0.500	0.507	102	101	75-125	0	20
Zinc	0.00458	0.500	0.506	0.500	0.504	100	100	75-125	0	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 19207964902A	Sample number(s): 1109569 UNSPK: 1109569									
Total Dissolved Solids	486	800	1280			99		74-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192071404402	Sample number(s): 1109568-1109569 BKG: 1109568			
Aluminum	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.0921	0.0925	0	20
Chromium	N.D.	N.D.	0 (1)	20
Cobalt	N.D.	N.D.	0 (1)	20
Copper	0.0149	0.0163	9 (1)	20
Iron	0.286	0.276	4 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Manganese	0.493	0.498	1	20
Nickel	N.D.	N.D.	0 (1)	20
Zinc	0.00458	0.00433	6 (1)	20
	mg/l	mg/l		
Batch number: 19207964902A	Sample number(s): 1109569 BKG: 1109569			
Total Dissolved Solids	486	470	3 (1)	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: L192121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1109568	106	102	99	100
1109569	106	105	99	100
1109570	107	104	99	100
Blank	105	102	99	100
LCS	105	104	100	100
LCSD	105	101	102	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19207WAE026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1109568	29	41	85	72	72	81
1109569	31	42	98	73	80	87
Blank	40	55	96	71	68	91
LCS	47	60	99	83	79	92
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: OC Pesticides in Water
Batch number: 192070006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1109568	53	58	55	58
1109569	65	53	67	52
Blank	53	60	57	60
LCS	52	19*	55	19*
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 192070007A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/02/2019 12:15

Group Number: 2055413

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCBs in Water by 8082A
Batch number: 192070007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1109568	56	62	61	65
1109569	72	57	75	61
Blank	69	71	75	76
LCS	48	71	54	72
LCSD	49	63	51	65
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2055413 Sample # 1109 568-70

COC # 588942

Client Information

Client: BASF corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Thomas Quackenbush	Quote #:
State where samples were collected: NY (New York)	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☑ Surface | Other: cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC: 246374
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification (JC)	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settleable solids/TDS	metals	8260c VOC	pH / pH temp	PCBs in water 8082A	TSS	PAH	pesticides	Remarks
~~WWTP HW0E~~ EFF 072419	7/24/19	0920	X		12	X	X	X	X	X	X	X	X	
WWTP ~~HW0E~~ PMYCARB 072419 (JS)	7/24/19	0940	X		12	X	X	X	X	X	X	X	X	
TB 19197	6/19/19		X		2			X						
cooler temp bottle	7/24/19				1									cooler temp bottle

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.Bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7/19/19	1430			
Thomas Quackenbush	7/24/19	1530			
			[signature]	7-25-19	10:05

EDD Required? (Yes) No
If yes, format: AECOM Equis 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt 13.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 254946

Group Number(s): 2055413

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	07/25/2019 10:05
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jessenia Colon Martinez (30856) at 14:24 on 07/25/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	DT131	13.4	DT	Wet	N	Bagged	Y	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	192099059	14.2	14.3	12.2	15.3	9.2	SMALL BAGS OF ICE	

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: August 09, 2019 17:18

Project: Rensselaer

Account #: 04285
Group Number: 2056518
SDG: RNS98
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-073119 Grab Water	07/31/2019 10:50	1114886
TB19206-073019 Water	07/30/2019	1114887

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-073119 Grab Water**
COC: 589318

Project Name: **Rensselaer**

Submittal Date/Time: 08/01/2019 10:10
Collection Date/Time: 07/31/2019 10:50
SDG#: RNS98-01

BASF Corporation
ELLE Sample #: **RW 1114886**
ELLE Group #: **2056518**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	13 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	0.7 J	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	
14242	Anthracene	120-12-7	N.D.	0.1	0.5	1
14242	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
14242	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
14242	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
14242	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
14242	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
14242	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
14242	Carbazole	86-74-8	N.D.	0.5	2	1
14242	4-Chloroaniline	106-47-8	N.D.	4	10	1
14242	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
14242	Chrysene	218-01-9	N.D.	0.1	0.5	1
14242	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
14242	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	5	11	1
14242	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
14242	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
14242	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
14242	4-Methylphenol	106-44-5	N.D.	0.5	2	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14242	Naphthalene	91-20-3	N.D.	0.1	0.5	1
14242	N-Nitrosodimethylamine	62-75-9	N.D.	2	5	1
14242	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
14242	Phenol	108-95-2	N.D.	0.5	2	1
14242	Pyrene	129-00-0	N.D.	0.1	0.5	1
14242	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.5	2	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-073119 Grab Water**
COC: 589318

Project Name: **Rensselaer**

Submittal Date/Time: 08/01/2019 10:10
Collection Date/Time: 07/31/2019 10:50
SDG#: RNS98-01

BASF Corporation
ELLE Sample #: RW 1114886
ELLE Group #: 2056518
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.10	0.50	1
10591	PCB-1221	11104-28-2	N.D. D1	0.10	0.50	1
10591	PCB-1232	11141-16-5	N.D. D1	0.20	0.50	1
10591	PCB-1242	53469-21-9	N.D. D1	0.10	0.50	1
10591	PCB-1248	12672-29-6	N.D. D1	0.10	0.50	1
10591	PCB-1254	11097-69-1	N.D. D1	0.10	0.50	1
10591	PCB-1260	11096-82-5	N.D. D1	0.15	0.50	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	
10589	Beta BHC	319-85-7	N.D. D1	0.0034	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.060	0.20	20
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.14	0.40	20
10589	p,p-DDE	72-55-9	N.D. D1	0.10	0.40	20
10589	p,p-DDT	50-29-3	N.D. D1	0.0052	0.020	1
10589	Delta BHC	319-86-8	N.D. D1	0.0034	0.010	1
10589	Endrin Aldehyde	7421-93-4	N.D. D1	0.020	0.10	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D2	0.046	0.20	20

The sample was analyzed without a bracketing instrument blank.
Due to the nature of the sample extract matrix, a dilution was used for the analysis. The reporting limits were raised accordingly.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.406	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0511	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.289	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.386	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0055 J	0.0030	0.0200	1
	SW-846 7470A		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	556	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.39 J	1.00	3.00	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF-073119 Grab Water**
COC: 589318

Project Name: **Rensselaer**

Submittal Date/Time: 08/01/2019 10:10
Collection Date/Time: 07/31/2019 10:50
SDG#: RNS98-01

BASF Corporation
ELLE Sample #: RW 1114886
ELLE Group #: 2056518
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.4	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192181AA	08/06/2019 17:38	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192181AA	08/06/2019 17:37	Chelsea B Riehl	1
14242	TCL SW846 8270D MINI	SW-846 8270D	1	19213WAH026	08/03/2019 05:53	Brandon K Cordova	1
00813	BNA Water Extraction	SW-846 3510C	1	19213WAH026	08/02/2019 09:00	Logan M Brosemer	1
10591	PCBs in Water by 8082A	SW-846 8082A	1	192130028A	08/05/2019 16:25	Jessica L Miller	1
10589	OC Pesticides in Water	SW-846 8081B	1	192130027A	08/08/2019 06:42	Dylan Schreiner	1
10589	OC Pesticides in Water	SW-846 8081B	1	192130027A	08/08/2019 17:55	Dylan Schreiner	20
11121	PCB Waters Update IV Ext	SW-846 3510C	1	192130028A	08/02/2019 09:00	David S Schrum	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	192130027A	08/02/2019 09:00	David S Schrum	1
01743	Aluminum	SW-846 6010C	1	192131404405	08/06/2019 09:35	Lisa J Cooke	1
07035	Arsenic	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
07046	Barium	SW-846 6010C	1	192131404405	08/06/2019 09:35	Lisa J Cooke	1
07051	Chromium	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
07052	Cobalt	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
07053	Copper	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
01754	Iron	SW-846 6010C	1	192131404405	08/06/2019 13:55	Patrick J Engle	1
07055	Lead	SW-846 6010C	1	192131404405	08/06/2019 09:35	Lisa J Cooke	1
07058	Manganese	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
07061	Nickel	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
07072	Zinc	SW-846 6010C	1	192131404405	08/05/2019 22:22	Lisa J Cooke	1
00259	Mercury	SW-846 7470A	1	192130571303	08/05/2019 06:48	Damary Valentin	1
14044	ICP-WW, 3005A (tot rec) - U345	SW-846 3005A	1	192131404405	08/02/2019 09:05	Denise L Trimby	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	192130571303	08/02/2019 09:50	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19214964901A	08/02/2019 10:41	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19214385801A	08/02/2019 13:07	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19213021501A	08/01/2019 16:10	Jeremy L Bolf	1
12151	Temperature of pH	SM 2550 B-2010	1	19218003101B	08/06/2019 18:47	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19218003101B	08/06/2019 18:47	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19206-073019 Water**
COC: 589318

Project Name: **Rensselaer**

Submittal Date/Time: 08/01/2019 10:10
Collection Date/Time: 07/30/2019
SDG#: RNS98-02TB

BASF Corporation
ELLE Sample #: RW 1114887
ELLE Group #: 2056518
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methylene Chloride	75-09-2	0.6 J	0.3	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C/D	SW-846 8260C	1	4192181AA	08/06/2019 18:01	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	4192181AA	08/06/2019 18:00	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2056518
Reported: 08/09/2019 17:18

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 4192181AA	Sample number(s): 1114886-1114887		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
1,2-Dichloroethane	N.D.	0.3	1
Ethylbenzene	N.D.	0.4	1
Methylene Chloride	0.6 J	0.3	1
Toluene	N.D.	0.2	1
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 19213WAH026	Sample number(s): 1114886		
Anthracene	N.D.	0.1	0.5
Benzo(a)anthracene	N.D.	0.1	0.5
Benzo(a)pyrene	N.D.	0.1	0.5
Benzo(b)fluoranthene	N.D.	0.1	0.5
Benzo(k)fluoranthene	N.D.	0.1	0.5
Butylbenzylphthalate	N.D.	2	5
Di-n-butylphthalate	N.D.	2	5
Carbazole	N.D.	0.5	2
4-Chloroaniline	N.D.	4	10
2-Chloronaphthalene	N.D.	0.4	1
Chrysene	N.D.	0.1	0.5
Dibenz(a,h)anthracene	N.D.	0.1	0.5
bis(2-Ethylhexyl)phthalate	N.D.	5	11
Fluoranthene	N.D.	0.1	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5
2-Methylnaphthalene	N.D.	0.1	0.5
4-Methylphenol	N.D.	0.5	2
Naphthalene	N.D.	0.1	0.5
N-Nitrosodimethylamine	N.D.	2	5
Phenanthrene	N.D.	0.1	0.5
Phenol	N.D.	0.5	2
Pyrene	N.D.	0.1	0.5
1,2,4-Trichlorobenzene	N.D.	0.5	2
Batch number: 192130028A	Sample number(s): 1114886		
PCB-1016	N.D.	0.10	0.50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/09/2019 17:18

Group Number: 2056518

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.10	0.50
PCB-1232	N.D.	0.20	0.50
PCB-1242	N.D.	0.10	0.50
PCB-1248	N.D.	0.10	0.50
PCB-1254	N.D.	0.10	0.50
PCB-1260	N.D.	0.15	0.50
Batch number: 192130027A	Sample number(s): 1114886		
Beta BHC	N.D.	0.0034	0.010
Alpha Chlordane	N.D.	0.0030	0.010
Gamma Chlordane	N.D.	0.0070	0.020
p,p-DDE	N.D.	0.0050	0.020
p,p-DDT	N.D.	0.0052	0.020
Delta BHC	N.D.	0.0034	0.010
Endrin Aldehyde	N.D.	0.020	0.10
Heptachlor Epoxide	N.D.	0.0023	0.010
	mg/l	mg/l	mg/l
Batch number: 192130571303	Sample number(s): 1114886		
Mercury	N.D.	0.000050	0.00020
Batch number: 192131404405	Sample number(s): 1114886		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	0.0032 J	0.0030	0.0200
Batch number: 19214385801A	Sample number(s): 1114886		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19214964901A	Sample number(s): 1114886		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19213021501A	Sample number(s): 1114886		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/09/2019 17:18

Group Number: 2056518

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 4192181AA	Sample number(s): 1114886-1114887								
Acetone	150	230.26	150	226.81	154	151	54-157	2	30
Benzene	20	19.52	20	19.08	98	95	80-120	2	30
Chlorobenzene	20	20.3	20	20.09	102	100	80-120	1	30
1,2-Dichlorobenzene	20	19.68	20	19.57	98	98	80-120	1	30
1,3-Dichlorobenzene	20	19.47	20	19.22	97	96	80-120	1	30
1,4-Dichlorobenzene	20	20.15	20	20	101	100	80-120	1	30
1,2-Dichloroethane	20	19.82	20	19.73	99	99	73-124	0	30
Ethylbenzene	20	19.4	20	18.96	97	95	80-120	2	30
Methylene Chloride	20	20.55	20	20.21	103	101	80-120	2	30
Toluene	20	19.82	20	19.4	99	97	80-120	2	30
Vinyl Chloride	20	16.56	20	15.4	83	77	56-120	7	30
Xylene (Total)	60	58.03	60	56.58	97	94	80-120	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19213WAH026	Sample number(s): 1114886								
Anthracene	50	48.99			98		67-112		
Benzo(a)anthracene	50	52.58			105		70-118		
Benzo(a)pyrene	50	52.04			104		71-117		
Benzo(b)fluoranthene	50	51.88			104		71-115		
Benzo(k)fluoranthene	50	49.59			99		71-116		
Butylbenzylphthalate	50	50.72			101		57-119		
Di-n-butylphthalate	50	50.85			102		66-112		
Carbazole	50	52.32			105		73-119		
4-Chloroaniline	50	40.2			80		30-101		
2-Chloronaphthalene	50	40.91			82		50-109		
Chrysene	50	51.26			103		69-116		
Dibenz(a,h)anthracene	50	49.54			99		67-116		
bis(2-Ethylhexyl)phthalate	50	51.25			102		68-120		
Fluoranthene	50	52.77			106		68-118		
Indeno(1,2,3-cd)pyrene	50	49.2			98		63-114		
2-Methylnaphthalene	50	44.2			88		52-105		
4-Methylphenol	50	41.36			83		56-108		
Naphthalene	50	40.76			82		53-99		
N-Nitrosodimethylamine	50	27.87			56		25-89		
Phenanthrene	50	45.7			91		65-113		
Phenol	50	25.9			52		23-72		
Pyrene	50	49.03			98		68-110		
1,2,4-Trichlorobenzene	50	39.52			79		41-105		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192130028A	Sample number(s): 1114886								
PCB-1016	5.02	4.39	5.02	3.94	87	78	60-117	11	30
PCB-1260	5.05	4.61	5.05	4.04	91	80	57-134	13	30

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/09/2019 17:18

Group Number: 2056518

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192130027A	Sample number(s): 1114886								
Beta BHC	0.100	0.0888			88		27-143		
Alpha Chlordane	0.100	0.0882			88		28-136		
Gamma Chlordane	0.100	0.0860			86		53-130		
p,p-DDE	0.200	0.174			87		22-138		
p,p-DDT	0.204	0.188			92		40-145		
Delta BHC	0.100	0.0863			86		28-141		
Endrin Aldehyde	0.199	0.167			84		40-135		
Heptachlor Epoxide	0.101	0.0894			89		28-146		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192130571303	Sample number(s): 1114886								
Mercury	0.00100	0.000799			80		80-110		
Batch number: 192131404405	Sample number(s): 1114886								
Aluminum	2.00	2.18	2.00	2.23	109	111	87-122	2	20
Arsenic	0.150	0.159	0.150	0.162	106	108	86-120	2	20
Barium	2.00	1.98	2.00	2.00	99	100	87-111	1	20
Chromium	0.200	0.200	0.200	0.199	100	99	87-110	0	20
Cobalt	0.500	0.523	0.500	0.521	105	104	90-111	0	20
Copper	0.250	0.257	0.250	0.253	103	101	90-115	1	20
Iron	1.00	1.02	1.00	1.03	102	103	90-115	2	20
Lead	0.150	0.155	0.150	0.156	103	104	87-113	1	20
Manganese	0.500	0.521	0.500	0.517	104	103	90-112	1	20
Nickel	0.500	0.523	0.500	0.520	105	104	90-114	0	20
Zinc	0.500	0.504	0.500	0.503	101	101	89-111	0	20
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19214385801A	Sample number(s): 1114886								
Total Suspended Solids	150	139.9			93		89-105		
Batch number: 19214964901A	Sample number(s): 1114886								
Total Dissolved Solids	200	215			108		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19218003101B	Sample number(s): 1114886								
pH	7.00	6.99			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/09/2019 17:18

Group Number: 2056518

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192130571303	Sample number(s): 1114886 UNSPK: 1114886									
Mercury	N.D.	0.00100	0.000855	0.00100	0.000832	86	83	80-120	3	20
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19214964901A	Sample number(s): 1114886 UNSPK: 1114886									
Total Dissolved Solids	556	800	1336			98		74-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	**mg/l**		
Batch number: 192130571303	Sample number(s): 1114886 BKG: 1114886			
Mercury	N.D.	N.D.	0 (1)	20
	Degrees C	**Degrees C**		
Batch number: 19218003101B	Sample number(s): 1114886 BKG: 1114886			
Temperature of pH	23.39	23.47	0	5
	mg/l	**mg/l**		
Batch number: 19214964901A	Sample number(s): 1114886 BKG: 1114886			
Total Dissolved Solids	556	550	1 (1)	5
	Std. Units	**Std. Units**		
Batch number: 19218003101B	Sample number(s): 1114886 BKG: 1114886			
pH	7.72	7.74	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1114886	102	103	102	95

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/09/2019 17:18

Group Number: 2056518

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C/D
Batch number: 4192181AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1114887	102	102	102	95
Blank	101	103	103	93
LCS	99	101	103	99
LCSD	97	101	104	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL SW846 8270D MINI
Batch number: 19213WAH026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
1114886	30	42	95	73	74	77
Blank	35	47	94	74	73	97
LCS	40	51	96	76	76	88
Limits:	10-67	10-84	23-135	35-107	44-102	33-126

Analysis Name: OC Pesticides in Water
Batch number: 192130027A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1114886	72	68	67	53
Blank	56	54	57	49
LCS	60	66	59	60
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCBs in Water by 8082A
Batch number: 192130028A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1114886	72	57	66	55
Blank	78	66	73	69
LCS	76	64	73	66
LCSD	67	79	63	81
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 For Eurofins Lancaster Laboratories Environmental use only Group # 2056518 Sample # 1114686-87

COC # 589318

Client Information

Client: BASF CORP	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: James Sirvent	Quote #:
State where samples were collected: NY (New York)	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☑ Surface ☑ | Other: Cooler temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settleable solids/TDS	Metals	8260c VOC	pH/pH Temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTP EFF 073119	07-31-19	1050	X		12	X	X	X	X	X	X	X	X	
TB192O6	7-30-19		X		1			X						
Cooler temp bottle	7-31-19				1									cooler temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address:

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
James Sirvent	7/31/19	1800			
				8/1/19	1010

EDD Required? Yes No
If yes, format: AECOM EQuIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt 6.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 255610

Group Number(s): 2056518

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/01/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	1
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 11:43 on 08/01/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	6.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: August 19, 2019 12:02

Project: Rensselaer

Account #: 04285
Group Number: 2057643
SDG: RNS99
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF080719 Grab Water	08/07/2019 13:35	1119771
TB19206 Water	07/30/2019	1119772

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF080719 Grab Water**
COC: 589317

Project Name: **Rensselaer**

Submittal Date/Time: 08/08/2019 10:10
Collection Date/Time: 08/07/2019 13:35
SDG#: RNS99-01

BASF Corporation
ELLE Sample #: **RW 1119771**
ELLE Group #: **2057643**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	0.14 J	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.7	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF080719 Grab Water**
COC: 589317

Project Name: **Rensselaer**

Submittal Date/Time: 08/08/2019 10:10
Collection Date/Time: 08/07/2019 13:35
SDG#: RNS99-01

BASF Corporation
ELLE Sample #: RW 1119771
ELLE Group #: 2057643
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0777	0.525	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0777	0.525	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0777	0.525	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0777	0.525	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0777	0.525	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0777	0.525	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0777	0.525	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0483	0.105	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D2	0.00630	0.0105	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00872	0.0105	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0210	0.0420	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0105	0.0210	1
13634	Delta BHC	319-86-8	N.D. D1	0.0116	0.0315	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00956	0.105	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00525	0.0105	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	N.D.	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0403	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0061 J	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.327	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.452	0.0011	0.0200	1
07061	Nickel	7440-02-0	0.0034 J	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0044 J	0.0030	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	554	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.84 J	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF080719 Grab Water**
COC: 589317

Project Name: **Rensselaer**

Submittal Date/Time: 08/08/2019 10:10
Collection Date/Time: 08/07/2019 13:35
SDG#: RNS99-01

BASF Corporation
ELLE Sample #: RW 1119771
ELLE Group #: 2057643
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	24.1	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.9	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192241AA	08/12/2019 15:43	Don V Viray	1
14669	Method 625.1 MINI	EPA 625.1	1	19224WAE625	08/13/2019 12:20	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19224WAE625	08/13/2019 02:00	Mathias Okpo	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192240012A	08/13/2019 09:57	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192260012A	08/15/2019 16:42	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192240012A	08/12/2019 17:20	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	2	192260012A	08/14/2019 18:57	Christine E Gleim	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 19:47	Cindy M Gehman	1
07046	Barium	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07053	Copper	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
01754	Iron	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 19:47	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	192200571608	08/13/2019 16:27	Cindy M Gehman	1
00259	Mercury	EPA 245.1 rev 3	1	192210571403	08/14/2019 10:20	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192200571608	08/12/2019 08:20	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192210571403	08/13/2019 08:45	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19224964902A	08/12/2019 12:46	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19221385801A	08/09/2019 13:39	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19220021501A	08/08/2019 17:35	Jeremy L Bolf	1
12151	Temperature of pH	SM 2550 B-2010	1	19221002102A	08/09/2019 16:38	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19221002102A	08/09/2019 16:38	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19206 Water**
COC: 589317

Project Name: **Rensselaer**

Submittal Date/Time: 08/08/2019 10:10
Collection Date/Time: 07/30/2019
SDG#: RNS99-02TB

BASF Corporation
ELLE Sample #: RW 1119772
ELLE Group #: 2057643
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192241AA	08/12/2019 11:28	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/19/2019 12:02

Group Number: 2057643

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192241AA	Sample number(s): 1119771-1119772		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19224WAE625	Sample number(s): 1119771		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192240012A	Sample number(s): 1119771		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2057643
Reported: 08/19/2019 12:02

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192260012A	Sample number(s): 1119771		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192200571608	Sample number(s): 1119771		
Aluminum	0.288 J	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	N.D.	0.0030	0.0200
Batch number: 192210571403	Sample number(s): 1119771		
Mercury	N.D.	0.000050	0.00020
Batch number: 19221385801A	Sample number(s): 1119771		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19224964902A	Sample number(s): 1119771		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19220021501A	Sample number(s): 1119771		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 08/19/2019 12:02

Group Number: 2057643

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192241AA	Sample number(s): 1119771-1119772								
Acetone	150	119.47			80		60-140		
Benzene	20	22.11			111		65-135		
Chlorobenzene	20	22.88			114		65-135		
1,2-Dichlorobenzene	20	21.28			106		65-135		
1,3-Dichlorobenzene	20	21.09			105		70-130		
1,4-Dichlorobenzene	20	21.58			108		65-135		
1,2-Dichloroethane	20	19.79			99		70-130		
Ethylbenzene	20	21.18			106		60-140		
Methylene Chloride	20	22.79			114		60-140		
Toluene	20	22.33			112		70-130		
Vinyl Chloride	20	18.45			92		10-195		
Xylene (Total)	60	67.35			112		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19224WAE625	Sample number(s): 1119771								
Anthracene	50	43.2	50	43.78	86	88	27-133	1	30
Benzo(a)anthracene	50	40.96	50	46.1	82	92	33-143	12	30
Benzo(a)pyrene	50	41.99	50	46.93	84	94	17-163	11	30
Benzo(b)fluoranthene	50	43.62	50	50.92	87	102	24-159	15	30
Benzo(k)fluoranthene	50	42.35	50	46.67	85	93	11-162	10	30
Butylbenzylphthalate	50	40.48	50	43.62	81	87	10-152	7	30
Di-n-butylphthalate	50	43.93	50	43.14	88	86	10-118	2	30
Carbazole	50	47.13	50	48.54	94	97	79-112	3	30
4-Chloroaniline	50	40.67	50	42.88	81	86	52-105	5	30
2-Chloronaphthalene	50	38.94	50	43.65	78	87	60-118	11	24
Chrysene	50	44.53	50	47.59	89	95	17-168	7	30
Dibenz(a,h)anthracene	50	43.05	50	45.82	86	92	10-200	6	30
bis(2-Ethylhexyl)phthalate	50	44.33	50	46.54	89	93	10-158	5	30
Fluoranthene	50	45.37	50	46.84	91	94	26-137	3	30
Indeno(1,2,3-cd)pyrene	50	43.85	50	44.91	88	90	10-171	2	30
2-Methylnaphthalene	50	35.05	50	37.78	70	76	59-101	7	30
4-Methylphenol	50	35.03	50	33.67	70	67	62-98	4	30
Naphthalene	50	34.99	50	38.58	70	77	21-133	10	30
N-Nitrosodimethylamine	50	26.42	50	27.63	53	55	38-74	4	30
Phenanthrene	50	45.01	50	45.08	90	90	54-120	0	30
Phenol	50	22.37	50	23.12	45	46	10-112	3	30
Pyrene	50	45.18	50	48.64	90	97	52-115	7	30
1,2,4-Trichlorobenzene	50	32.28	50	34.25	65	68	44-142	6	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192240012A	Sample number(s): 1119771								
PCB-1016	5.02	3.52	5.02	3.37	70	67	50-140	4	36
PCB-1260	5.05	3.82	5.05	3.42	76	68	10-140	11	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/19/2019 12:02

Group Number: 2057643

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192260012A	Sample number(s): 1119771								
Beta BHC	0.100	0.0872	0.100	0.0997	87	100	17-147	13	44
Alpha Chlordane	0.101	0.0801	0.101	0.0933	79	92	45-140	15	35
Gamma Chlordane	0.101	0.0765	0.101	0.0894	76	88	45-140	15	35
p,p-DDE	0.201	0.145	0.201	0.160	72	80	30-145	10	35
p,p-DDT	0.201	0.159	0.201	0.173	79	86	25-160	8	30
Delta BHC	0.100	0.0918	0.100	0.103	92	103	19-140	11	52
Endrin Aldehyde	0.201	0.172	0.201	0.204	85	101	60-140	17	30
Heptachlor Epoxide	0.100	0.0910	0.100	0.0991	91	99	37-142	8	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192200571608	Sample number(s): 1119771								
Aluminum	2.00	2.04			102		85-115		
Arsenic	0.150	0.143			95		85-115		
Barium	2.00	2.00			100		85-115		
Chromium	0.200	0.197			99		85-115		
Cobalt	0.500	0.520			104		85-115		
Copper	0.250	0.262			105		85-115		
Iron	1.00	0.984			98		85-115		
Lead	0.150	0.156			104		85-115		
Manganese	0.500	0.521			104		85-115		
Nickel	0.500	0.528			106		85-115		
Zinc	0.500	0.515			103		85-115		
Batch number: 192210571403	Sample number(s): 1119771								
Mercury	0.00100	0.00112			112		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19221385801A	Sample number(s): 1119771								
Total Suspended Solids	150	143.3			96		89-105		
Batch number: 19224964902A	Sample number(s): 1119771								
Total Dissolved Solids	200	201			101		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19221002102A	Sample number(s): 1119771								
pH	7.00	7.00			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/19/2019 12:02

Group Number: 2057643

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192210571403	Sample number(s): 1119771 UNSPK: 1119771									
Mercury	N.D.	0.00100	0.00109			109		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192210571403	Sample number(s): 1119771 BKG: 1119771			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1119771	107	111	100	96
1119772	108	112	100	96
Blank	105	110	100	96
LCS	101	106	104	96
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19224WAE625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1119771	65	68	74	26	34	71
Blank	76	69	88	28	40	75
LCS	73	70	83	34	46	78
LCSD	81	79	86	33	47	77
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/19/2019 12:02

Group Number: 2057643

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 192240012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1119771	69	65	78	72
Blank	81	37	88	41
LCS	49	67	47	70
LCSD	42	62	45	67
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192260012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1119771	57	60	57	55
Blank	64	84	60	76
LCS	60	35	57	30*
LCSD	74	59	71	51
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4785 Group # 205763 Sample # 1119771-72

COC #589317

Client Information

Client: BASF Corp

Acct. #:

Project Name/#: RENSSALEAR

PWSID #:

Project Manager: John Bleiler

P.O. #:

Sampler: Jeff Denman

Quote #:

State where samples were collected: New York

For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐

Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒

Other: cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#: 246832

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOCs 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 2540 D	Remarks
WWTPEFF080719	8/7/19	1335	X		12	X	X	X	X	X	X	X	X	X	
TB 19206	7/30/19		X		1										
Cooler Temp Bottle	7/30/19				1										Cooler Temp Bottle

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: kit.williams@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)

Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7/30/19	3:30			
[signature]	8/7/19	1800			
			[signature]	8/8/19	1040

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt 3.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 256323

Group Number(s): 2057643

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/08/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 11:15 on 08/08/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	3.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: August 23, 2019 12:23

Project: Rensselaer

Account #: 04285
Group Number: 2058850
SDG: RNT01
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-081419 Grab Water	08/14/2019 08:20	1125348
TB19206-073019 Water	07/30/2019	1125349

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-081419 Grab Water**
COC: 589812

Project Name: **Rensselaer**

Submittal Date/Time: 08/15/2019 10:10
Collection Date/Time: 08/14/2019 08:20
SDG#: RNT01-01

BASF Corporation
ELLE Sample #: **RW 1125348**
ELLE Group #: **2058850**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.6	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-081419 Grab Water**
COC: 589812

Project Name: **Rensselaer**

Submittal Date/Time: 08/15/2019 10:10
Collection Date/Time: 08/14/2019 08:20
SDG#: RNT01-01

BASF Corporation
ELLE Sample #: RW 1125348
ELLE Group #: 2058850
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0523	0.353	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0523	0.353	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0523	0.353	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0523	0.353	1
14188	PCB-1248	12672-29-6	0.161 JD1	0.0523	0.353	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0523	0.353	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0523	0.353	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0487	0.106	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00636	0.0106	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00879	0.0106	1
13634	p,p-DDE	72-55-9	N.D. D2	0.0212	0.0424	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0106	0.0212	1
13634	Delta BHC	319-86-8	N.D. D1	0.0117	0.0318	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00964	0.106	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00530	0.0106	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.554	0.153	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0500	1
07046	Barium	7440-39-3	0.0421	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0210	0.0053	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	0.0109 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.646	0.0400	0.200	1
07055	Lead	7439-92-1	0.0227	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.495	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0184 J	0.0030	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000092 J	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	514	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	14.4	4.00	12.0	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF-081419 Grab Water**
COC: 589812

Project Name: **Rensselaer**

Submittal Date/Time: 08/15/2019 10:10
Collection Date/Time: 08/14/2019 08:20
SDG#: RNT01-01

BASF Corporation
ELLE Sample #: RW 1125348
ELLE Group #: 2058850
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.2	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192282AA	08/17/2019 02:56	Hu Yang	1
14669	Method 625.1 MINI	EPA 625.1	1	19231WAK625	08/21/2019 13:42	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19231WAK625	08/20/2019 09:00	Logan M Brosemer	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192280008A	08/20/2019 10:29	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192280009A	08/20/2019 14:12	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192280008A	08/19/2019 16:40	Kate E Lutte	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192280009A	08/19/2019 16:40	Kate E Lutte	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192280571602	08/20/2019 11:43	Patrick J Engle	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	192280571602	08/20/2019 11:43	Patrick J Engle	1
07051	Chromium	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	192280571602	08/20/2019 11:43	Patrick J Engle	1
01754	Iron	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	192280571602	08/18/2019 18:17	Elaine F Stoltzfus	1
00259	Mercury	EPA 245.1 rev 3	1	192270571404	08/16/2019 10:59	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192280571602	08/16/2019 03:44	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192270571404	08/16/2019 05:55	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19228964901A	08/16/2019 13:23	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19231385801A	08/19/2019 10:38	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19227021501A	08/15/2019 19:54	Michelle L Lalli	1
12151	Temperature of pH	SM 2550 B-2010	1	19233011201A	08/21/2019 17:04	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19233011201A	08/21/2019 17:04	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19206-073019 Water**
COC: 589812

Project Name: **Rensselaer**

Submittal Date/Time: 08/15/2019 10:10
Collection Date/Time: 07/30/2019
SDG#: RNT01-02TB

BASF Corporation
ELLE Sample #: RW 1125349
ELLE Group #: 2058850
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192282AA	08/16/2019 22:40	Hu Yang	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2058850
Reported: 08/23/2019 12:23

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192282AA	Sample number(s): 1125348-1125349		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19231WAK625	Sample number(s): 1125348		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192280008A	Sample number(s): 1125348		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/23/2019 12:23

Group Number: 2058850

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192280009A	Sample number(s): 1125348		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192270571404	Sample number(s): 1125348		
Mercury	N.D.	0.000050	0.00020
Batch number: 192280571602	Sample number(s): 1125348		
Aluminum	N.D.	0.153	0.300
Arsenic	N.D.	0.0160	0.0500
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0053	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	0.0033 J	0.0030	0.0200
Batch number: 19228964901A	Sample number(s): 1125348		
Total Dissolved Solids	N.D.	10.0	30.0
Batch number: 19231385801A	Sample number(s): 1125348		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19227021501A	Sample number(s): 1125348		
Settleable Solids	N.D.	0.10	0.10

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/23/2019 12:23

Group Number: 2058850

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192282AA	Sample number(s): 1125348-1125349								
Acetone	150	171.66			114		60-140		
Benzene	20	21.13			106		65-135		
Chlorobenzene	20	22.75			114		65-135		
1,2-Dichlorobenzene	20	21.63			108		65-135		
1,3-Dichlorobenzene	20	21.66			108		70-130		
1,4-Dichlorobenzene	20	22.35			112		65-135		
1,2-Dichloroethane	20	19.91			100		70-130		
Ethylbenzene	20	21.83			109		60-140		
Methylene Chloride	20	20.96			105		60-140		
Toluene	20	22.7			113		70-130		
Vinyl Chloride	20	20.1			100		10-195		
Xylene (Total)	60	68.62			114		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19231WAK625	Sample number(s): 1125348								
Anthracene	50	44.25	50	42.79	89	86	27-133	3	30
Benzo(a)anthracene	50	46.05	50	43.07	92	86	33-143	7	30
Benzo(a)pyrene	50	46.76	50	45.98	94	92	17-163	2	30
Benzo(b)fluoranthene	50	50.44	50	43.92	101	88	24-159	14	30
Benzo(k)fluoranthene	50	44.76	50	46.88	90	94	11-162	5	30
Butylbenzylphthalate	50	51.33	50	48.81	103	98	10-152	5	30
Di-n-butylphthalate	50	51.39	50	44.81	103	90	10-118	14	30
Carbazole	50	51.53	50	43.77	103	88	79-112	16	30
4-Chloroaniline	50	38.82	50	35.85	78	72	52-105	8	30
2-Chloronaphthalene	50	35.84	50	37.58	72	75	60-118	5	24
Chrysene	50	47.47	50	43.79	95	88	17-168	8	30
Dibenz(a,h)anthracene	50	46.91	50	42.91	94	86	10-200	9	30
bis(2-Ethylhexyl)phthalate	50	52.93	50	48.52	106	97	10-158	9	30
Fluoranthene	50	49.61	50	43.84	99	88	26-137	12	30
Indeno(1,2,3-cd)pyrene	50	43.72	50	42.12	87	84	10-171	4	30
2-Methylnaphthalene	50	42.64	50	35.85	85	72	59-101	17	30
4-Methylphenol	50	43.13	50	36.61	86	73	62-98	16	30
Naphthalene	50	39.16	50	35.86	78	72	21-133	9	30
N-Nitrosodimethylamine	50	28.42	50	23.27	57	47	38-74	20	30
Phenanthrene	50	46.16	50	42.45	92	85	54-120	8	30
Phenol	50	25.78	50	22.56	52	45	10-112	13	30
Pyrene	50	45.07	50	46.35	90	93	52-115	3	30
1,2,4-Trichlorobenzene	50	36.66	50	33.18	73	66	44-142	10	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192280008A	Sample number(s): 1125348								
PCB-1016	5.02	4.39	5.02	3.74	87	74	50-140	16	36
PCB-1260	5.05	5.10	5.05	4.27	101	85	10-140	18	38

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 08/23/2019 12:23

Group Number: 2058850

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192280009A	Sample number(s): 1125348								
Beta BHC	0.100	0.0978	0.100	0.0887	97	88	17-147	10	44
Alpha Chlordane	0.100	0.0773	0.100	0.0659	77	66	45-140	16	35
Gamma Chlordane	0.100	0.0754	0.100	0.0625	75	62	45-140	19	35
p,p-DDE	0.200	0.141	0.200	0.114	70	57	30-145	21	35
p,p-DDT	0.204	0.140	0.204	0.125	69	61	25-160	11	30
Delta BHC	0.100	0.0943	0.100	0.0830	94	83	19-140	13	52
Endrin Aldehyde	0.199	0.181	0.199	0.165	91	83	60-140	9	30
Heptachlor Epoxide	0.101	0.0901	0.101	0.0815	90	81	37-142	10	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192270571404	Sample number(s): 1125348								
Mercury	0.00100	0.000997			100		85-115		
Batch number: 192280571602	Sample number(s): 1125348								
Aluminum	2.00	1.88			94		85-115		
Arsenic	0.150	0.156			104		85-115		
Barium	2.00	1.97			98		85-115		
Chromium	0.200	0.203			102		85-115		
Cobalt	0.500	0.532			106		85-115		
Copper	0.250	0.251			100		85-115		
Iron	1.00	1.07			107		85-115		
Lead	0.150	0.158			105		85-115		
Manganese	0.500	0.520			104		85-115		
Nickel	0.500	0.535			107		85-115		
Zinc	0.500	0.524			105		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19228964901A	Sample number(s): 1125348								
Total Dissolved Solids	200	205			103		74-127		
Batch number: 19231385801A	Sample number(s): 1125348								
Total Suspended Solids	150	152.5			102		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19233011201A	Sample number(s): 1125348								
pH	7.00	7.01			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2058850
Reported: 08/23/2019 12:23

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192282AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1125348	104	106	103	96
1125349	103	106	104	96
Blank	102	107	102	95
LCS	97	103	107	96
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19231WAK625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1125348	74	77	72	25	33	61
Blank	80	71	91	35	50	67
LCS	78	75	84	41	53	90
LCSD	74	69	83	35	49	72
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 192280008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1125348	40	35	43	41
Blank	55	44	57	52
LCS	48	67	50	77
LCSD	30	36	33	42
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192280009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1125348	58	48	55	44
Blank	56	41	56	39
LCS	57	52	53	49
LCSD	50	46	49	44
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 258850 Sample # 1125348-S20

COC # 589812

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSALEAR	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PH 150.1	Settable Solids 160.5	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 2540D	Remarks
WWTPEFF081419	8-14-19	0830	X		12	X	X	X	X	X	X	X	X	X	
TB 19206	7-30-19		X		1				X						
TB 19220	8-1-19		X		1				X						
Cooler Temp Bottle					1										Cooler Temp Bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Amanda Demeo	8-12-19	1048			
Jeff Denman	8-14-19	1730			
			Received by	8/15/19	1010

EDD Required? Yes No
If yes, format: AECOM EQUIS 4
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx X Other
Temperature upon receipt 1.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 257114

Group Number(s): 2058850

Client: BASF Corp.

Renssalear

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/15/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:33 on 08/15/2019

Samples Chilled Details: Renssalear

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.8	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 04, 2019 10:12

Project: Rensselaer

Account #: 04285
Group Number: 2060590
SDG: RNT02
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF082319 Grab Water	08/23/2019 10:40	1134737
TB19220 Water	08/12/2019	1134738

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF082319 Grab Water Rennselaer**

Project Name: **Rensselaer**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:40
SDG#: RNT02-01

BASF Corporation
ELLE Sample #: **WW 1134737**
ELLE Group #: **2060590**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	0.23 J	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.5	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.5	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF082319 Grab Water Rennselaer**

Project Name: **Rensselaer**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:40
SDG#: RNT02-01

BASF Corporation
ELLE Sample #: WW 1134737
ELLE Group #: 2060590
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0811	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0811	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0811	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0811	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0811	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0811	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0811	0.548	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0504	0.110	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00658	0.0110	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00910	0.0110	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0219	0.0439	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0110	0.0219	1
13634	Delta BHC	319-86-8	N.D. D1	0.0121	0.0329	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00998	0.110	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00548	0.0110	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.332	0.107	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0130	0.0500	1
07046	Barium	7440-39-3	0.0155	0.00086	0.0050	1
07051	Chromium	7440-47-3	0.0023 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0013	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.177 J	0.0460	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.274	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0039 J	0.0030	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	477	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.99 J	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF082319 Grab Water Rennselaer**

Project Name: **Rensselaer**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/23/2019 10:40
SDG#: RNT02-01

BASF Corporation
ELLE Sample #: **WW 1134737**
ELLE Group #: **2060590**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.8	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	8.0	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192411AA	08/29/2019 12:15	Jason M Long	1
14669	Method 625.1 MINI	EPA 625.1	1	19239WAC625	08/28/2019 12:02	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19239WAC625	08/27/2019 20:10	Laura Duquette	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192400005A	08/29/2019 10:24	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192400004A	08/30/2019 22:53	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192400005A	08/28/2019 16:50	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192400004A	08/28/2019 16:50	Christine E Gleim	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07046	Barium	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07053	Copper	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
01754	Iron	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 23:27	Cindy M Gehman	1
00259	Mercury	EPA 245.1 rev 3	1	192390571406	08/28/2019 06:28	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192380571606	08/27/2019 05:37	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192390571406	08/27/2019 16:05	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19240964901A	08/28/2019 10:15	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19240385801A	08/28/2019 13:21	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19236021501A	08/24/2019 13:30	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19238006102A	08/26/2019 21:30	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19238006102A	08/26/2019 21:30	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19220 Water Rennselaer**

Project Name: **Rensselaer**

Submittal Date/Time: 08/24/2019 09:20
Collection Date/Time: 08/12/2019
SDG#: RNT02-02TB

BASF Corporation
ELLE Sample #: **WW 1134738**
ELLE Group #: **2060590**
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192403AA	08/28/2019 12:49	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192403AA	Sample number(s): 1134738		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: U192411AA	Sample number(s): 1134737		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19239WAC625	Sample number(s): 1134737		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192400005A	Sample number(s): 1134737		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192400004A	Sample number(s): 1134737		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192380571606	Sample number(s): 1134737		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0130	0.0500
Barium	N.D.	0.00086	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0013	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0460	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	0.0030 J	0.0030	0.0200
Batch number: 192390571406	Sample number(s): 1134737		
Mercury	N.D.	0.000050	0.00020

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 19240385801A	Sample number(s): 1134737		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19240964901A	Sample number(s): 1134737		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19236021501A	Sample number(s): 1134737		
Settleable Solids	N.D.	0.10	0.10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192403AA	Sample number(s): 1134738								
Acetone	150	142.42			95		60-140		
Benzene	20	21.76			109		65-135		
Chlorobenzene	20	22.88			114		65-135		
1,2-Dichlorobenzene	20	22.12			111		65-135		
1,3-Dichlorobenzene	20	22.43			112		70-130		
1,4-Dichlorobenzene	20	22.83			114		65-135		
1,2-Dichloroethane	20	21.33			107		70-130		
Ethylbenzene	20	23.1			116		60-140		
Methylene Chloride	20	21.35			107		60-140		
Toluene	20	23.67			118		70-130		
Vinyl Chloride	20	22.65			113		10-195		
Xylene (Total)	60	69.33			116		60-140		
Batch number: U192411AA	Sample number(s): 1134737								
Acetone	150	140.11			93		60-140		
Benzene	20	21.84			109		65-135		
Chlorobenzene	20	22.95			115		65-135		
1,2-Dichlorobenzene	20	22.37			112		65-135		
1,3-Dichlorobenzene	20	22.58			113		70-130		
1,4-Dichlorobenzene	20	22.92			115		65-135		
1,2-Dichloroethane	20	21.53			108		70-130		
Ethylbenzene	20	22.17			111		60-140		
Methylene Chloride	20	21.09			105		60-140		
Toluene	20	23.11			116		70-130		
Vinyl Chloride	20	22.72			114		10-195		
Xylene (Total)	60	68.57			114		60-140		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19239WAC625	Sample number(s): 1134737								
Anthracene	50	45.63	50	48.92	91	98	27-133	7	30
Benzo(a)anthracene	50	46.93	50	51.23	94	102	33-143	9	30
Benzo(a)pyrene	50	47.14	50	49.32	94	99	17-163	5	30
Benzo(b)fluoranthene	50	46.5	50	50.04	93	100	24-159	7	30
Benzo(k)fluoranthene	50	51.97	50	53.31	104	107	11-162	3	30
Butylbenzylphthalate	50	52.19	50	53.33	104	107	10-152	2	30
Di-n-butylphthalate	50	46.82	50	50.09	94	100	10-118	7	30
Carbazole	50	46.71	50	52.86	93	106	79-112	12	30
4-Chloroaniline	50	42.05	50	44.16	84	88	52-105	5	30
2-Chloronaphthalene	50	35.42	50	35.8	71	72	60-118	1	24
Chrysene	50	47.97	50	51.21	96	102	17-168	7	30
Dibenz(a,h)anthracene	50	44.36	50	49.93	89	100	10-200	12	30
bis(2-Ethylhexyl)phthalate	50	51.64	50	53.45	103	107	10-158	3	30
Fluoranthene	50	44.02	50	49.93	88	100	26-137	13	30
Indeno(1,2,3-cd)pyrene	50	42.31	50	49.1	85	98	10-171	15	30
2-Methylnaphthalene	50	38.72	50	40.2	77	80	59-101	4	30
4-Methylphenol	50	39.61	50	46.49	79	93	62-98	16	30
Naphthalene	50	38.62	50	40.5	77	81	21-133	5	30
N-Nitrosodimethylamine	50	28.16	50	30.99	56	62	38-74	10	30
Phenanthrene	50	45.65	50	50.5	91	101	54-120	10	30
Phenol	50	26.16	50	24.29	52	49	10-112	7	30
Pyrene	50	52.35	50	52.71	105	105	52-115	1	30
1,2,4-Trichlorobenzene	50	34.21	50	35.1	68	70	44-142	3	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192400005A	Sample number(s): 1134737								
PCB-1016	5.02	4.00	5.02	4.11	80	82	50-140	3	36
PCB-1260	5.05	4.06	5.05	4.12	81	82	10-140	1	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192400004A	Sample number(s): 1134737								
Beta BHC	0.100	0.0895	0.100	0.0934	89	93	17-147	4	44
Alpha Chlordane	0.100	0.0720	0.100	0.0740	72	74	45-140	3	35
Gamma Chlordane	0.100	0.0675	0.100	0.0673	67	67	45-140	0	35
p,p-DDE	0.200	0.119	0.200	0.127	59	63	30-145	7	35
p,p-DDT	0.204	0.152	0.204	0.171	74	84	25-160	12	30
Delta BHC	0.100	0.0881	0.100	0.0904	88	90	19-140	3	52
Endrin Aldehyde	0.199	0.164	0.199	0.176	82	88	60-140	7	30
Heptachlor Epoxide	0.101	0.0823	0.101	0.0872	82	87	37-142	6	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192380571606	Sample number(s): 1134737								
Aluminum	2.00	2.31			115		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Arsenic	0.150	0.157			105		85-115		
Barium	2.00	2.03			101		85-115		
Chromium	0.200	0.201			101		85-115		
Cobalt	0.500	0.528			106		85-115		
Copper	0.250	0.263			105		85-115		
Iron	1.00	1.05			105		85-115		
Lead	0.150	0.157			105		85-115		
Manganese	0.500	0.524			105		85-115		
Nickel	0.500	0.532			106		85-115		
Zinc	0.500	0.520			104		85-115		
Batch number: 192390571406	Sample number(s): 1134737								
Mercury	0.00100	0.00101			101		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19240385801A	Sample number(s): 1134737								
Total Suspended Solids	150	145			97		89-105		
Batch number: 19240964901A	Sample number(s): 1134737								
Total Dissolved Solids	200	193			97		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19238006102A	Sample number(s): 1134737								
pH	7.00	6.99			100		95-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192390571406	Sample number(s): 1134737 UNSPK: 1134737									
Mercury	N.D.	0.00100	0.00100			100		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2060590
Reported: 09/04/2019 10:12

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192390571406	Sample number(s): 1134737 BKG: 1134737			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192403AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1134738	98	104	103	104
Blank	99	105	104	105
LCS	96	102	108	106
Limits:	60-140	60-140	60-140	60-140

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1134737	102	104	102	103
Blank	98	105	103	105
LCS	96	103	105	105
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19239WAC625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1134737	76	75	85	32	46	64
Blank	80	80	96	36	51	68
LCS	78	77	92	38	52	82
LCSD	82	80	89	41	57	86
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192400004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1134737	73	79	71	80
Blank	55	69	57	73

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/04/2019 10:12

Group Number: 2060590

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192400004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCS	61	33	60	32
LCSD	64	81	66	87
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192400005A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1134737	69	68	66	68
Blank	57	62	55	64
LCS	51	44	49	47
LCSD	57	49	54	52
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2060590 Sample # 1134737-38

COC # 579383

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSALEAR	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: J. DENMAN	Quote #:
State where samples were collected: NEW YORK	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 2540D	Remarks
WWTPEFF082319	8-23-19	1040	X		12	X	X	X	X	X	X	X	X	X	
TB19220	8-12-19				2				X						
Cooler Temp Bottle	8-23-19				1										Cooler temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: JOHN.bleiler@AECOM.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	8-23-19	1700			
			[signature]	8-24-19	0920

EDD Required? Yes No
If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 258280

Group Number(s): 2060590

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/24/2019 9:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	UNP
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jessenia Colon Martinez (30 856) at 11:38 on 08/24/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 12, 2019 16:50

Project: Rensselaer

Account #: 04285
Group Number: 2062403
SDG: RNT03
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-090419 Grab Water	09/04/2019 08:25	1143474
TB19233 Grab Water	08/26/2019	1143475

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-090419 Grab Water**
COC: 590274

Project Name: **Rensselaer**

Submittal Date/Time: 09/05/2019 10:00
Collection Date/Time: 09/04/2019 08:25
SDG#: RNT03-01

BASF Corporation
ELLE Sample #: **RW 1143474**
ELLE Group #: **2062403**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.07	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.08	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.08	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.6	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.07	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-090419 Grab Water**
COC: 590274

Project Name: **Rensselaer**

Submittal Date/Time: 09/05/2019 10:00
Collection Date/Time: 09/04/2019 08:25
SDG#: RNT03-01

BASF Corporation
ELLE Sample #: RW 1143474
ELLE Group #: 2062403
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0749	0.506	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0749	0.506	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0749	0.506	1
14188	PCB-1242	53469-21-9	0.315 JD1	0.0749	0.506	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0749	0.506	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0749	0.506	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0749	0.506	1
Pesticides	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0466	0.101	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00607	0.0101	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00840	0.0101	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0202	0.0405	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0101	0.0202	1
13634	Delta BHC	319-86-8	N.D. D1	0.0111	0.0304	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00921	0.101	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00506	0.0101	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals	**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.456	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0140 J	0.0130	0.0500	1
07046	Barium	7440-39-3	0.184	0.00086	0.0050	1
07051	Chromium	7440-47-3	0.0078 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0013	0.0050	1
07053	Copper	7440-50-8	0.0176 J	0.0062	0.0200	1
01754	Iron	7439-89-6	0.248	0.0460	0.200	1
07055	Lead	7439-92-1	0.0151	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.150	0.0011	0.0200	1
07061	Nickel	7440-02-0	N.D.	0.0031	0.0100	1
07072	Zinc	7440-66-6	0.0201	0.0030	0.0200	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00015 J	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	584	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	7.20 J	4.00	12.0	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPEFF-090419 Grab Water**
COC: 590274

Project Name: **Rensselaer**

Submittal Date/Time: 09/05/2019 10:00
Collection Date/Time: 09/04/2019 08:25
SDG#: RNT03-01

BASF Corporation
ELLE Sample #: **RW 1143474**
ELLE Group #: **2062403**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
	Reporting limits were raised due to interference from the sample matrix.					
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.3	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.3	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192491AA	09/06/2019 12:07	Jason M Long	1
14669	Method 625.1 MINI	EPA 625.1	1	19248WAL625	09/09/2019 18:12	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19248WAL625	09/06/2019 09:30	Logan M Brosemer	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192480029A	09/06/2019 18:41	Jessica L Miller	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192480028A	09/11/2019 02:00	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192480029A	09/06/2019 09:30	David S Schrum	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192480028A	09/06/2019 09:30	David S Schrum	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192490571605	09/12/2019 04:01	Lisa J Cooke	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07046	Barium	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07053	Copper	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
01754	Iron	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	192490571605	09/10/2019 17:58	Cindy M Gehman	1
00259	Mercury	EPA 245.1 rev 3	1	192520571401	09/10/2019 07:59	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192490571605	09/09/2019 15:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192520571401	09/09/2019 14:20	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19252964903A	09/09/2019 13:37	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19252385803A	09/09/2019 11:21	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19248021501A	09/05/2019 14:50	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19249009201A	09/06/2019 19:59	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPEFF-090419 Grab Water**
COC: 590274

Project Name: **Rensselaer**

Submittal Date/Time: 09/05/2019 10:00
Collection Date/Time: 09/04/2019 08:25
SDG#: RNT03-01

BASF Corporation
ELLE Sample #: RW 1143474
ELLE Group #: 2062403
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12152	pH	SM 4500-H+ B-2011	1	19249009201A	09/06/2019 19:59	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19233 Grab Water**
COC: 590274

Project Name: **Rensselaer**

Submittal Date/Time: 09/05/2019 10:00
Collection Date/Time: 08/26/2019
SDG#: RNT03-02TB

BASF Corporation
ELLE Sample #: WW 1143475
ELLE Group #: 2062403
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192491AA	09/06/2019 11:44	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2062403
Reported: 09/12/2019 16:50

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192491AA	Sample number(s): 1143474-1143475		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19248WAL625	Sample number(s): 1143474		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192480029A	Sample number(s): 1143474		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/12/2019 16:50

Group Number: 2062403

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192480028A	Sample number(s): 1143474		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192490571605	Sample number(s): 1143474		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0130	0.0500
Barium	N.D.	0.00086	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0013	0.0050
Copper	N.D.	0.0062	0.0200
Iron	0.0521 J	0.0460	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0011	0.0200
Nickel	N.D.	0.0031	0.0100
Zinc	0.0038 J	0.0030	0.0200
Batch number: 192520571401	Sample number(s): 1143474		
Mercury	N.D.	0.000050	0.00020
Batch number: 19252385803A	Sample number(s): 1143474		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19252964903A	Sample number(s): 1143474		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19248021501A	Sample number(s): 1143474		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/12/2019 16:50

Group Number: 2062403

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192491AA	Sample number(s): 1143474-1143475								
Acetone	150	150.08			100		60-140		
Benzene	20	22.39			112		65-135		
Chlorobenzene	20	23.31			117		65-135		
1,2-Dichlorobenzene	20	23.22			116		65-135		
1,3-Dichlorobenzene	20	22.96			115		70-130		
1,4-Dichlorobenzene	20	23.23			116		65-135		
1,2-Dichloroethane	20	22.18			111		70-130		
Ethylbenzene	20	22.72			114		60-140		
Methylene Chloride	20	22.03			110		60-140		
Toluene	20	23.43			117		70-130		
Vinyl Chloride	20	23.63			118		10-195		
Xylene (Total)	60	69.5			116		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19248WAL625	Sample number(s): 1143474								
Anthracene	50	41.49			83		27-133		
Benzo(a)anthracene	50	39.41			79		33-143		
Benzo(a)pyrene	50	41.52			83		17-163		
Benzo(b)fluoranthene	50	41.02			82		24-159		
Benzo(k)fluoranthene	50	40.58			81		11-162		
Butylbenzylphthalate	50	35.74			71		10-152		
Di-n-butylphthalate	50	35.76			72		10-118		
Carbazole	50	43.39			87		79-112		
4-Chloroaniline	50	29.64			59		52-105		
2-Chloronaphthalene	50	35.9			72		60-118		
Chrysene	50	42.56			85		17-168		
Dibenz(a,h)anthracene	50	40.56			81		10-200		
bis(2-Ethylhexyl)phthalate	50	31.68			63		10-158		
Fluoranthene	50	41.4			83		26-137		
Indeno(1,2,3-cd)pyrene	50	39.94			80		10-171		
2-Methylnaphthalene	50	36.84			74		59-101		
4-Methylphenol	50	31.46			63		62-98		
Naphthalene	50	36.32			73		21-133		
N-Nitrosodimethylamine	50	25.38			51		38-74		
Phenanthrene	50	42.21			84		54-120		
Phenol	50	19.08			38		10-112		
Pyrene	50	43.3			87		52-115		
1,2,4-Trichlorobenzene	50	33.7			67		44-142		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192480029A	Sample number(s): 1143474								
PCB-1016	5.02	3.68	5.02	4.61	73	92	50-140	22	36
PCB-1260	5.05	3.65	5.05	4.70	72	93	10-140	25	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/12/2019 16:50

Group Number: 2062403

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192480028A	Sample number(s): 1143474								
Beta BHC	0.100	0.0983	0.100	0.0984	98	98	17-147	0	44
Alpha Chlordane	0.100	0.0845	0.100	0.0846	84	85	45-140	0	35
Gamma Chlordane	0.100	0.0835	0.100	0.0839	83	84	45-140	0	35
p,p-DDE	0.200	0.151	0.200	0.153	75	77	30-145	2	35
p,p-DDT	0.201	0.179	0.201	0.185	89	92	25-160	3	30
Delta BHC	0.100	0.0992	0.100	0.103	99	103	19-140	4	52
Endrin Aldehyde	0.200	0.184	0.200	0.177	92	88	60-140	4	30
Heptachlor Epoxide	0.101	0.0976	0.101	0.100	96	99	37-142	3	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192490571605	Sample number(s): 1143474								
Aluminum	2.00	2.05			102		85-115		
Arsenic	0.150	0.146			97		85-115		
Barium	2.00	1.98			99		85-115		
Chromium	0.200	0.199			99		85-115		
Cobalt	0.500	0.516			103		85-115		
Copper	0.250	0.257			103		85-115		
Iron	1.00	0.962			96		85-115		
Lead	0.150	0.155			103		85-115		
Manganese	0.500	0.513			103		85-115		
Nickel	0.500	0.516			103		85-115		
Zinc	0.500	0.510			102		85-115		
Batch number: 192520571401	Sample number(s): 1143474								
Mercury	0.00100	0.00110			110		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19252385803A	Sample number(s): 1143474								
Total Suspended Solids	150	147.8			99		89-105		
Batch number: 19252964903A	Sample number(s): 1143474								
Total Dissolved Solids	200	196			98		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19249009201A	Sample number(s): 1143474								
pH	7.00	6.94			99		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/12/2019 16:50

Group Number: 2062403

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1143474	100	103	102	100
1143475	101	106	103	103
Blank	100	104	103	100
LCS	96	106	105	102
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19248WAL625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1143474	68	73	65	22	32	61
Blank	69	70	77	30	41	69
LCS	71	74	73	31	42	74
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192480028A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1143474	29	23*	29	24*
Blank	58	69	60	64
LCS	70	72	71	70
LCSD	71	88	74	90
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192480029A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1143474	80	53	78	57
Blank	76	70	75	77
LCS	63	46	61	50
LCSD	75	55	73	62
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2062403 Sample # 1143474-75

COC # 590274

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Tom Quackenbush	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒ | Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settleable Solids 160.5	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB 608/608	Metals 200.7 200.8 245.1	TSS SM2540D	Remarks
~~WWTPEFF082816~~ DA															
WWTPEFF090419	9-4-19		X		15	X	X	X	X	X	X	X	X	X	
TR19233	08-26-19		X		4				X						
Cooler Temp Bottle	9-4-19														Cooler Temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
John Bleiler	09-04-19				
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by Charity Hall	Date 9/5/19	Time 10:00

EDD Required? (Yes) No

If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 1.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 259277

Group Number(s): 2062403

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/05/2019 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	Total Trip Blank Qty:	4
Samples Chilled:	Yes	Trip Blank Type:	See Below
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): 2- HCl, 2- UNP

Unpacked by Leah Foreman (12 616) at 12:42 on 09/05/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.5	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
WWTPEFF090419	9/04/2019 08:25	

2425 New Holland Pike
Lancaster, PA 17605-2425
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F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 19, 2019 13:21

Project: Rensselaer

Account #: 04285
Group Number: 2063543
SDG: RNT04
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-091119 Grab Water	09/11/2019 15:15	1148143
TB19220-081219 Grab Water	08/12/2019 17:50	1148144

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-091119 Grab Water**
COC: 590275

Project Name: **Rensselaer**

Submittal Date/Time: 09/12/2019 10:33
Collection Date/Time: 09/11/2019 15:15
SDG#: RNT04-01

BASF Corporation
ELLE Sample #: **RW 1148143**
ELLE Group #: **2063543**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	3.12 J	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.6	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-091119 Grab Water**
COC: 590275

Project Name: **Rensselaer**

Submittal Date/Time: 09/12/2019 10:33
Collection Date/Time: 09/11/2019 15:15
SDG#: RNT04-01

BASF Corporation
ELLE Sample #: RW 1148143
ELLE Group #: 2063543
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0801	0.541	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0801	0.541	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0801	0.541	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0801	0.541	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0801	0.541	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0801	0.541	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0801	0.541	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0498	0.108	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00649	0.0108	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00898	0.0108	1
13634	p,p-DDE	72-55-9	N.D. D2	0.0216	0.0433	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0108	0.0216	1
13634	Delta BHC	319-86-8	N.D. D1	0.0119	0.0325	1
13634	Endrin Aldehyde	7421-93-4	N.D. D2	0.00985	0.108	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00541	0.0108	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.587	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0236 J	0.0160	0.0300	1
07046	Barium	7440-39-3	0.242	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0048 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0062	0.0200	1
01754	Iron	7439-89-6	0.207	0.0400	0.200	1
07055	Lead	7439-92-1	0.0076 J	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.213	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0155 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000055 J	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	778	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.33	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF-091119 Grab Water**
COC: 590275

Project Name: **Rensselaer**

Submittal Date/Time: 09/12/2019 10:33
Collection Date/Time: 09/11/2019 15:15
SDG#: RNT04-01

BASF Corporation
ELLE Sample #: RW 1148143
ELLE Group #: 2063543
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.6	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192601AA	09/17/2019 17:02	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19256WAJ625	09/16/2019 15:19	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19256WAJ625	09/13/2019 15:40	Osvaldo R Sanchez	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192590012A	09/17/2019 11:23	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192590011A	09/17/2019 13:09	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192590012A	09/16/2019 16:45	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192590011A	09/16/2019 16:45	Christine E Gleim	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192550571603	09/14/2019 10:16	Patrick J Engle	1
07046	Barium	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07051	Chromium	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07053	Copper	EPA 200.7 rev 4.4	1	192550571603	09/14/2019 10:16	Patrick J Engle	1
01754	Iron	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07055	Lead	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07058	Manganese	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07061	Nickel	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
07072	Zinc	EPA 200.7 rev 4.4	1	192550571603	09/13/2019 12:38	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	192550571402	09/16/2019 08:17	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192550571603	09/12/2019 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192550571402	09/13/2019 07:45	Denise L Trimby	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19260964901A	09/17/2019 12:09	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19256385802A	09/13/2019 11:10	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19255021501A	09/12/2019 17:15	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19255007204A	09/13/2019 02:01	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19255007204A	09/13/2019 02:01	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19220-081219 Grab Water**
COC: 590275

Project Name: **Rensselaer**

Submittal Date/Time: 09/12/2019 10:33
Collection Date/Time: 08/12/2019 17:50
SDG#: RNT04-02TB

BASF Corporation
ELLE Sample #: **RW 1148144**
ELLE Group #: **2063543**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192601AA	09/17/2019 16:39	John Glacken	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192601AA	Sample number(s): 1148143-1148144		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19256WAJ625	Sample number(s): 1148143		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192590012A	Sample number(s): 1148143		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192590011A	Sample number(s): 1148143		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192550571402	Sample number(s): 1148143		
Mercury	N.D.	0.000050	0.00020
Batch number: 192550571603	Sample number(s): 1148143		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0062	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19256385802A	Sample number(s): 1148143		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19260964901A	Sample number(s): 1148143		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19255021501A	Sample number(s): 1148143		
Settleable Solids	N.D.	0.10	0.10

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192601AA	Sample number(s): 1148143-1148144								
Acetone	150	144.27			96		60-140		
Benzene	20	20.94			105		65-135		
Chlorobenzene	20	20.56			103		65-135		
1,2-Dichlorobenzene	20	19.96			100		65-135		
1,3-Dichlorobenzene	20	19.97			100		70-130		
1,4-Dichlorobenzene	20	20.24			101		65-135		
1,2-Dichloroethane	20	20.07			100		70-130		
Ethylbenzene	20	20.65			103		60-140		
Methylene Chloride	20	20.39			102		60-140		
Toluene	20	20.47			102		70-130		
Vinyl Chloride	20	19.96			100		10-195		
Xylene (Total)	60	61.56			103		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19256WAJ625	Sample number(s): 1148143								
Anthracene	50	40.92	50	45.88	82	92	27-133	11	30
Benzo(a)anthracene	50	41.19	50	45.84	82	92	33-143	11	30
Benzo(a)pyrene	50	41.73	50	48.19	83	96	17-163	14	30
Benzo(b)fluoranthene	50	42.37	50	48.96	85	98	24-159	14	30
Benzo(k)fluoranthene	50	46.33	50	51.57	93	103	11-162	11	30
Butylbenzylphthalate	50	39.7	50	42.51	79	85	10-152	7	30
Di-n-butylphthalate	50	38.98	50	42.47	78	85	10-118	9	30
Carbazole	50	42	50	46.68	84	93	79-112	11	30
4-Chloroaniline	50	36.92	50	39.8	74	80	52-105	8	30
2-Chloronaphthalene	50	36.1	50	36.9	72	74	60-118	2	24
Chrysene	50	43.86	50	48.55	88	97	17-168	10	30
Dibenz(a,h)anthracene	50	40.36	50	43.85	81	88	10-200	8	30
bis(2-Ethylhexyl)phthalate	50	40.49	50	44.03	81	88	10-158	8	30
Fluoranthene	50	42.58	50	46.98	85	94	26-137	10	30
Indeno(1,2,3-cd)pyrene	50	38.06	50	43.49	76	87	10-171	13	30
2-Methylnaphthalene	50	37.28	50	39.73	75	79	59-101	6	30
4-Methylphenol	50	41.55	50	40.42	83	81	62-98	3	30
Naphthalene	50	36.16	50	38.59	72	77	21-133	6	30
N-Nitrosodimethylamine	50	28.45	50	27.94	57	56	38-74	2	30
Phenanthrene	50	41.61	50	46.2	83	92	54-120	10	30
Phenol	50	25.66	50	23.71	51	47	10-112	8	30
Pyrene	50	46.58	50	51.53	93	103	52-115	10	30
1,2,4-Trichlorobenzene	50	33.02	50	36.64	66	73	44-142	10	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192590012A	Sample number(s): 1148143								
PCB-1016	5.02	3.64	5.02	4.47	73	89	50-140	20	36
PCB-1260	5.05	3.72	5.05	4.57	74	91	10-140	20	38

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192590011A	Sample number(s): 1148143								
Beta BHC	0.100	0.0866	0.100	0.0979	87	98	17-147	12	44
Alpha Chlordane	0.100	0.0760	0.100	0.0853	76	85	45-140	11	35
Gamma Chlordane	0.100	0.0703	0.100	0.0811	70	81	45-140	14	35
p,p-DDE	0.200	0.131	0.200	0.151	66	75	30-145	14	35
p,p-DDT	0.201	0.137	0.201	0.158	68	78	25-160	14	30
Delta BHC	0.100	0.0833	0.100	0.0944	83	94	19-140	13	52
Endrin Aldehyde	0.200	0.161	0.200	0.195	81	97	60-140	19	30
Heptachlor Epoxide	0.101	0.0856	0.101	0.0987	85	98	37-142	14	26
	mg/l	mg/l	mg/l	mg/l					
Batch number: 192550571402	Sample number(s): 1148143								
Mercury	0.00100	0.00109			109		85-115		
Batch number: 192550571603	Sample number(s): 1148143								
Aluminum	2.00	2.02	2.00	2.05	101	103	85-115	1	20
Arsenic	0.150	0.154	0.150	0.161	103	107	85-115	4	20
Barium	2.00	1.94	2.00	1.97	97	99	85-115	2	20
Chromium	0.200	0.196	0.200	0.199	98	99	85-115	1	20
Cobalt	0.500	0.508	0.500	0.513	102	103	85-115	1	20
Copper	0.250	0.289	0.250	0.291	116*	117*	85-115	1	20
Iron	1.00	1.01	1.00	1.03	101	103	85-115	2	20
Lead	0.150	0.155	0.150	0.158	103	106	85-115	2	20
Manganese	0.500	0.510	0.500	0.513	102	103	85-115	1	20
Nickel	0.500	0.511	0.500	0.516	102	103	85-115	1	20
Zinc	0.500	0.507	0.500	0.513	101	103	85-115	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 19256385802A	Sample number(s): 1148143								
Total Suspended Solids	150	143.9			96		89-105		
Batch number: 19260964901A	Sample number(s): 1148143								
Total Dissolved Solids	200	205			103		74-127		
	Std. Units	Std. Units	Std. Units	Std. Units					
Batch number: 19255007204A	Sample number(s): 1148143								
pH	7.00	7.00			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	Degrees C	Degrees C		
Batch number: 19255007204A	Sample number(s): 1148143 BKG: 1148143			
Temperature of pH	23.59	23.59	0	5
	Std. Units	Std. Units		
Batch number: 19255007204A	Sample number(s): 1148143 BKG: 1148143			
pH	7.69	7.72	0	4

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192601AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1148143	104	102	97	94
1148144	103	104	97	94
Blank	103	104	97	95
LCS	101	103	97	95
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19256WAJ625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1148143	69	79	72	30	42	67
Blank	72	76	96	33	48	64
LCS	71	73	92	41	56	90
LCSD	79	77	96	38	53	92
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192590011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1148143	63	67	71	70
Blank	71	33	76	36
LCS	66	46	71	52
LCSD	77	59	83	67

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2019 13:21

Group Number: 2063543

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192590011A

Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192590012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1148143	67	60	61	56
Blank	77	34	72	30
LCS	60	34	55	32
LCSD	85	50	77	49
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2063543 Sample # 1148143-4

COC #590275

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:

State where samples were collected: New York

For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☒ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settleable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	METALS 200.7 200.8 245.1	TSS SM2540D	Remarks
WWTPEFF091119	09-11-19	1515	X		12	X	X	X	X	X	X	X	X	X	
TB 19220	08-12-19	1700	X		2				X						
Cooler Temp Bottle	09-11-19	1700			1										Cooler Temp bottle

For Lab Use Only

FSC:

SCR#: 247002

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9-26-19	1045			
[signature]	09-11-19	1700			
			[signature]	9/12/19	1033

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx X Other _____

Temperature upon receipt 4.4 °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 259854

Group Number(s): 2063543

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	09/12/2019
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Jessenia Colon Martinez (30 856) at 11:34 on 09/12/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	4.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 27, 2019 13:55

Project: Rensselaer

Account #: 04285
Group Number: 2064758
SDG: RNT05
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF091819 Grab Water	09/18/2019 08:00	1154018
TB19247 Water	09/09/2019 08:00	1154019

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF091819 Grab Water**
COC: 592084

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2019 10:35
Collection Date/Time: 09/18/2019 08:00
SDG#: RNT05-01

BASF Corporation
ELLE Sample #: **RW 1154018**
ELLE Group #: **2064758**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	8.30	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.7	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF091819 Grab Water**
COC: 592084

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2019 10:35
Collection Date/Time: 09/18/2019 08:00
SDG#: RNT05-01

BASF Corporation
ELLE Sample #: RW 1154018
ELLE Group #: 2064758
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0734	0.496	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0734	0.496	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0734	0.496	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0734	0.496	1
14188	PCB-1248	12672-29-6	0.114 JD1	0.0734	0.496	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0734	0.496	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0734	0.496	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0456	0.0992	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D2	0.00595	0.00992	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00823	0.00992	1
13634	p,p-DDE	72-55-9	N.D. D2	0.0198	0.0397	1
13634	p,p-DDT	50-29-3	N.D. D2	0.00992	0.0198	1
13634	Delta BHC	319-86-8	N.D. D2	0.0109	0.0298	1
13634	Endrin Aldehyde	7421-93-4	N.D. D2	0.00903	0.0992	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00496	0.00992	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum	7429-90-5	0.640	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0329	0.0160	0.0300	1
07046	Barium	7440-39-3	0.160	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0061 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.456	0.0400	0.200	1
07055	Lead	7439-92-1	0.0083 J	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.196	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0130 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000057 J	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	646	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	7.14 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF091819 Grab Water**
COC: 592084

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2019 10:35
Collection Date/Time: 09/18/2019 08:00
SDG#: RNT05-01

BASF Corporation
ELLE Sample #: **RW 1154018**
ELLE Group #: **2064758**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.5	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.6	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192672AA	09/24/2019 18:42	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19263WAA625	09/23/2019 18:18	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19263WAA625	09/20/2019 20:25	Laura Duquette	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192630004A	09/23/2019 10:10	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192630005A	09/23/2019 21:24	Lisa A Reinert	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192630005A	09/25/2019 18:53	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192630004A	09/20/2019 16:15	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192630005A	09/20/2019 16:15	Laura Duquette	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07046	Barium	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07053	Copper	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
01754	Iron	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	192620571602	09/23/2019 18:55	Cindy M Gehman	1
00259	Mercury	EPA 245.1 rev 3	1	192670571405	09/25/2019 10:35	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192620571602	09/19/2019 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192620571404	09/19/2019 16:50	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	192670571405	09/24/2019 18:00	Barbara A Kane	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19266964901A	09/23/2019 14:54	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19263385801A	09/20/2019 10:50	Amy L Hankins	1
00215	Settleable Solids	SM 2540 F-2011	1	19262021501A	09/19/2019 18:10	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19263009201A	09/20/2019 16:59	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19263009201A	09/20/2019 16:59	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19247 Water**
COC: 592084

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2019 10:35
Collection Date/Time: 09/09/2019 08:00
SDG#: RNT05-02TB

BASF Corporation
ELLE Sample #: RW 1154019
ELLE Group #: 2064758
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192672AA	09/24/2019 18:19	John Glacken	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2064758
Reported: 09/27/2019 13:55

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192672AA	Sample number(s): 1154018-1154019		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19263WAA625	Sample number(s): 1154018		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192630004A	Sample number(s): 1154018		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2064758
Reported: 09/27/2019 13:55

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192630005A	Sample number(s): 1154018		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192620571602	Sample number(s): 1154018		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 192670571405	Sample number(s): 1154018		
Mercury	N.D.	0.000050	0.00020
Batch number: 19263385801A	Sample number(s): 1154018		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19266964901A	Sample number(s): 1154018		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19262021501A	Sample number(s): 1154018		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/27/2019 13:55

Group Number: 2064758

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192672AA	Sample number(s): 1154018-1154019								
Acetone	150	108.28			72		60-140		
Benzene	20	19.83			99		65-135		
Chlorobenzene	20	20.12			101		65-135		
1,2-Dichlorobenzene	20	19.89			99		65-135		
1,3-Dichlorobenzene	20	19.92			100		70-130		
1,4-Dichlorobenzene	20	20			100		65-135		
1,2-Dichloroethane	20	18.81			94		70-130		
Ethylbenzene	20	19.66			98		60-140		
Methylene Chloride	20	19.15			96		60-140		
Toluene	20	19.76			99		70-130		
Vinyl Chloride	20	17.42			87		10-195		
Xylene (Total)	60	60.04			100		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19263WAA625	Sample number(s): 1154018								
Anthracene	50	44.35	50	43.86	89	88	27-133	1	30
Benzo(a)anthracene	50	41.86	50	44.94	84	90	33-143	7	30
Benzo(a)pyrene	50	41.91	50	44.51	84	89	17-163	6	30
Benzo(b)fluoranthene	50	42.02	50	46.53	84	93	24-159	10	30
Benzo(k)fluoranthene	50	44.6	50	47.19	89	94	11-162	6	30
Butylbenzylphthalate	50	45.88	50	47.76	92	96	10-152	4	30
Di-n-butylphthalate	50	44.39	50	44.99	89	90	10-118	1	30
Carbazole	50	43.88	50	43.69	88	87	79-112	0	30
4-Chloroaniline	50	39.46	50	39.13	79	78	52-105	1	30
2-Chloronaphthalene	50	38.45	50	34.95	77	70	60-118	10	24
Chrysene	50	44.44	50	47.13	89	94	17-168	6	30
Dibenz(a,h)anthracene	50	41.17	50	46.24	82	92	10-200	12	30
bis(2-Ethylhexyl)phthalate	50	45.22	50	48.78	90	98	10-158	8	30
Fluoranthene	50	43.62	50	44.16	87	88	26-137	1	30
Indeno(1,2,3-cd)pyrene	50	42.23	50	44.7	84	89	10-171	6	30
2-Methylnaphthalene	50	38.96	50	35.25	78	70	59-101	10	30
4-Methylphenol	50	41.41	50	41.08	83	82	62-98	1	30
Naphthalene	50	37.86	50	34.96	76	70	21-133	8	30
N-Nitrosodimethylamine	50	26.66	50	28.07	53	56	38-74	5	30
Phenanthrene	50	45.02	50	44.68	90	89	54-120	1	30
Phenol	50	23.9	50	24.37	48	49	10-112	2	30
Pyrene	50	50.23	50	52.09	100	104	52-115	4	30
1,2,4-Trichlorobenzene	50	35.81	50	32.18	72	64	44-142	11	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192630004A	Sample number(s): 1154018								
PCB-1016	5.02	4.38	5.02	4.42	87	88	50-140	1	36
PCB-1260	5.05	4.18	5.05	3.90	83	77	10-140	7	38

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/27/2019 13:55

Group Number: 2064758

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192630005A	Sample number(s): 1154018								
Beta BHC	0.100	0.0925	0.100	0.0811	92	81	17-147	13	44
Alpha Chlordane	0.100	0.0809	0.100	0.0718	81	72	45-140	12	35
Gamma Chlordane	0.100	0.0762	0.100	0.0675	76	68	45-140	12	35
p,p-DDE	0.200	0.146	0.200	0.126	73	63	30-145	15	35
p,p-DDT	0.201	0.158	0.201	0.141	79	70	25-160	12	30
Delta BHC	0.100	0.0854	0.100	0.0779	85	78	19-140	9	52
Endrin Aldehyde	0.200	0.177	0.200	0.160	89	80	60-140	10	30
Heptachlor Epoxide	0.101	0.0900	0.101	0.0807	89	80	37-142	11	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192620571602	Sample number(s): 1154018								
Aluminum	2.00	2.15			107		85-115		
Arsenic	0.150	0.165			110		85-115		
Barium	2.00	2.04			102		85-115		
Chromium	0.200	0.205			103		85-115		
Cobalt	0.500	0.527			105		85-115		
Copper	0.250	0.262			105		85-115		
Iron	1.00	1.06			106		85-115		
Lead	0.150	0.151			100		85-115		
Manganese	0.500	0.527			105		85-115		
Nickel	0.500	0.534			107		85-115		
Zinc	0.500	0.526			105		85-115		
Batch number: 192670571405	Sample number(s): 1154018								
Mercury	0.00100	0.00111			111		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19263385801A	Sample number(s): 1154018								
Total Suspended Solids	150	147			98		89-105		
Batch number: 19266964901A	Sample number(s): 1154018								
Total Dissolved Solids	200	212			106		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19263009201A	Sample number(s): 1154018								
pH	7.00	7.00			100		95-105		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/27/2019 13:55

Group Number: 2064758

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192672AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1154018	104	104	97	92
1154019	104	104	97	92
Blank	103	103	97	93
LCS	103	104	98	93
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19263WAA625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1154018	68	73	91	31	39	75
Blank	80	74	95	35	48	75
LCS	80	77	96	40	55	84
LCSD	79	71	101	40	56	89
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 192630004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1154018	82	61	78	60
Blank	78	41	75	40
LCS	74	48	70	40
LCSD	76	47	73	44
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192630005A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1154018	82	61	70	46
Blank	73	36	68	34
LCS	67	27*	63	27*
LCSD	60	32	56	31*
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2064758 Sample # 1154618-9

COC # 592084

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselear	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#: 247677

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Potable	Ground	NPDES	Surface	Other	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 2540D	Remarks
WWTPEFF091819	09-18-19	0800	X					X					12	X	X	X	X	X	X	X	X	X	
TB 19247	09-09-19	0800	X					X					2				X						
Cooler Temp Bottle	09-18-19	0800						X				X	1										Cooler Temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/9/19	1240			
[signature]	09-18-19	1700			
			[signature]	9/19/19	1035

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt ____ °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 260538

Group Number(s): 2064758

Client: BAFS

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	09/19/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Dana Kauffman (949) at 14:47 on 09/19/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099059	2.7	IR	Ice Pack	Y	Bagged	N

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Lancaster, PA 17605-2425
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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 07, 2019 17:17

Project: Rensselaer

Account #: 04285
Group Number: 2066224
SDG: RNT06
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF092619 Grab Water	09/26/2019 13:00	1161145
TB19233 Grab Water	08/26/2019 13:00	1161146

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF092619 Grab Water**
COC: 577975

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2019 11:35
Collection Date/Time: 09/26/2019 13:00
SDG#: RNT06-01

BASF Corporation
ELLE Sample #: **RW 1161145**
ELLE Group #: **2066224**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.07	5	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.08	5	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	5	1
14669	Carbazole	86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.08	5	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.6	5	1
14669	Chrysene	218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	5	1
14669	Fluoranthene	206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.07	5	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.4	5	1
14669	Phenanthrene	85-01-8	N.D.	0.1	5	1
14669	Phenol[1]	108-95-2	N.D.	0.4	1	1
14669	Pyrene	129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF092619 Grab Water**
COC: 577975

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2019 11:35
Collection Date/Time: 09/26/2019 13:00
SDG#: RNT06-01

BASF Corporation
ELLE Sample #: **RW 1161145**
ELLE Group #: **2066224**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0743	0.502	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0743	0.502	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0743	0.502	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0743	0.502	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0743	0.502	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0743	0.502	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0743	0.502	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.

Pesticides	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0462	0.100	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D2	0.00602	0.0100	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00833	0.0100	1
13634	p,p-DDE	72-55-9	N.D. D2	0.0201	0.0402	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0100	0.0201	1
13634	Delta BHC	319-86-8	N.D. D1	0.0110	0.0301	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00914	0.100	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00502	0.0100	1

The IBlank was analyzed prior to the CCV instead of after.
The batch QC was loaded as LCS, Blank, LCSD instead of LCS, LCSD, Blank.

Metals	**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	1.18	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0643	0.0160	0.0300	1
07046	Barium	7440-39-3	0.137	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0067 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.445	0.0400	0.200	1
07055	Lead	7439-92-1	0.0103 J	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.265	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0522	0.0037	0.0200	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000057 J	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	642	40.0	120	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF092619 Grab Water**
COC: 577975

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2019 11:35
Collection Date/Time: 09/26/2019 13:00
SDG#: RNT06-01

BASF Corporation
ELLE Sample #: RW 1161145
ELLE Group #: 2066224
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	9.00	3.00	9.00	1
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.0	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.5	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192741AA	10/01/2019 19:37	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19276WAE625	10/03/2019 22:16	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19276WAE625	10/03/2019 16:40	Osvaldo R Sanchez	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192730010A	10/01/2019 12:48	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192730009A	10/04/2019 16:30	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192730010A	09/30/2019 15:50	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192730009A	09/30/2019 15:50	Christine E Gleim	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192750571604	10/04/2019 07:32	Patrick J Engle	1
07046	Barium	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	192750571604	10/03/2019 19:05	Elaine F Stoltzfus	1
00259	Mercury	EPA 245.1 rev 3	2	192740571401	10/01/2019 09:09	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192730571601	09/30/2019 02:29	James L Mertz	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	2	192750571604	10/03/2019 03:32	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192730571401	09/30/2019 05:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	192740571401	10/01/2019 06:00	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19274964901A	10/01/2019 15:51	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19274385801A	10/01/2019 14:05	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19270021501A	09/27/2019 13:50	Luz M Groff	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPEFF092619 Grab Water**
COC: 577975

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2019 11:35
Collection Date/Time: 09/26/2019 13:00
SDG#: RNT06-01

BASF Corporation
ELLE Sample #: RW 1161145
ELLE Group #: 2066224
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12151	Temperature of pH	SM 2550 B-2010	1	19270002201A	09/27/2019 16:02	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19270002201A	09/27/2019 16:02	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19233 Grab Water**
COC: 577975

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2019 11:35
Collection Date/Time: 08/26/2019 13:00
SDG#: RNT06-02TB

BASF Corporation
ELLE Sample #: RW 1161146
ELLE Group #: 2066224
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192741AA	10/01/2019 19:13	John Glacken	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192741AA	Sample number(s): 1161145-1161146		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19276WAE625	Sample number(s): 1161145		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192730010A	Sample number(s): 1161145		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192730009A	Sample number(s): 1161145		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192740571401	Sample number(s): 1161145		
Mercury	N.D.	0.000050	0.00020
Batch number: 192750571604	Sample number(s): 1161145		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19274385801A	Sample number(s): 1161145		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19274964901A	Sample number(s): 1161145		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19270021501A	Sample number(s): 1161145		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192741AA	Sample number(s): 1161145-1161146								
Acetone	150	132.54			88		60-140		
Benzene	20	20.62			103		65-135		
Chlorobenzene	20	20.82			104		65-135		
1,2-Dichlorobenzene	20	20.46			102		65-135		
1,3-Dichlorobenzene	20	20.35			102		70-130		
1,4-Dichlorobenzene	20	20.49			102		65-135		
1,2-Dichloroethane	20	19.28			96		70-130		
Ethylbenzene	20	19.99			100		60-140		
Methylene Chloride	20	20.02			100		60-140		
Toluene	20	20.14			101		70-130		
Vinyl Chloride	20	19.3			96		10-195		
Xylene (Total)	60	61.23			102		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19276WAE625	Sample number(s): 1161145								
Anthracene	50	44.04	50	47.15	88	94	27-133	7	30
Benzo(a)anthracene	50	43.13	50	47	86	94	33-143	9	30
Benzo(a)pyrene	50	44.06	50	46.12	88	92	17-163	5	30
Benzo(b)fluoranthene	50	42.05	50	45.72	84	91	24-159	8	30
Benzo(k)fluoranthene	50	49.88	50	51.13	100	102	11-162	2	30
Butylbenzylphthalate	50	39.7	50	40.9	79	82	10-152	3	30
Di-n-butylphthalate	50	39.63	50	42.02	79	84	10-118	6	30
Carbazole	50	44.38	50	48.42	89	97	79-112	9	30
4-Chloroaniline	50	40.32	50	41.81	81	84	52-105	4	30
2-Chloronaphthalene	50	43.52	50	47.54	87	95	60-118	9	24
Chrysene	50	46.72	50	49.02	93	98	17-168	5	30
Dibenz(a,h)anthracene	50	44.43	50	49.28	89	99	10-200	10	30
bis(2-Ethylhexyl)phthalate	50	36.75	50	38.99	73	78	10-158	6	30
Fluoranthene	50	44.98	50	49.32	90	99	26-137	9	30
Indeno(1,2,3-cd)pyrene	50	42.82	50	47.07	86	94	10-171	9	30
2-Methylnaphthalene	50	38.15	50	40.94	76	82	59-101	7	30
4-Methylphenol	50	39.69	50	40.22	79	80	62-98	1	30
Naphthalene	50	38.49	50	40.68	77	81	21-133	6	30
N-Nitrosodimethylamine	50	26.3	50	25.41	53	51	38-74	3	30
Phenanthrene	50	44.97	50	48.24	90	96	54-120	7	30
Phenol	50	24.14	50	23.81	48	48	10-112	1	30
Pyrene	50	47.68	50	48.75	95	98	52-115	2	30
1,2,4-Trichlorobenzene	50	35.7	50	37.91	71	76	44-142	6	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192730010A	Sample number(s): 1161145								
PCB-1016	5.02	3.42	5.02	3.37	68	67	50-140	2	36
PCB-1260	5.05	3.93	5.05	3.76	78	74	10-140	5	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192730009A	Sample number(s): 1161145								
Beta BHC	0.100	0.0839	0.100	0.0824	84	82	17-147	2	44
Alpha Chlordane	0.100	0.0703	0.100	0.0753	70	75	45-140	7	35
Gamma Chlordane	0.100	0.0610	0.100	0.0673	61	67	45-140	10	35
p,p-DDE	0.200	0.113	0.200	0.131	56	65	30-145	15	35
p,p-DDT	0.201	0.167	0.201	0.151	83	75	25-160	10	30
Delta BHC	0.100	0.0818	0.100	0.0795	82	80	19-140	3	52
Endrin Aldehyde	0.200	0.147	0.200	0.145	73	72	60-140	1	30
Heptachlor Epoxide	0.101	0.0825	0.101	0.0801	81	79	37-142	3	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192740571401	Sample number(s): 1161145								
Mercury	0.00100	0.00109			109		85-115		
Batch number: 192750571604	Sample number(s): 1161145								
Aluminum	0.400	0.416			104		80-120		
Arsenic	0.0600	0.0669			111		80-120		
Barium	0.0100	0.00923			92		80-120		
Chromium	0.0300	0.0309			103		80-120		
Cobalt	0.0100	0.00947			95		80-120		
Copper	0.0400	0.0374			94		80-120		
Iron	0.400	0.415			104		80-120		
Lead	0.0300	0.0334			111		80-120		
Manganese	0.0200	0.0205			103		80-120		
Nickel	0.0200	0.0204			102		80-120		
Zinc	0.0400	0.0438			109		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19274385801A	Sample number(s): 1161145								
Total Suspended Solids	150	146.4			98		89-105		
Batch number: 19274964901A	Sample number(s): 1161145								
Total Dissolved Solids	200	208			104		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19270002201A	Sample number(s): 1161145								
pH	7.00	6.99			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192740571401	Sample number(s): 1161145 UNSPK: 1161145									
Mercury	0.0000566	0.00100	0.00102			96		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19274964901A	Sample number(s): 1161145 UNSPK: 1161145									
Total Dissolved Solids	642	800	1406			96		74-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192740571401	Sample number(s): 1161145 BKG: 1161145			
Mercury	0.0000566	0.0000594	5 (1)	20
	mg/l	**mg/l**		
Batch number: 19274964901A	Sample number(s): 1161145 BKG: 1161145			
Total Dissolved Solids	642	636	1	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192741AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1161145	105	102	97	91
1161146	106	101	96	92
Blank	106	104	96	91
LCS	104	102	97	92
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19276WAE625

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/07/2019 17:17

Group Number: 2066224

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Method 625.1 MINI
Batch number: 19276WAE625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1161145	60	70	71	32	41	56
Blank	74	75	90	31	43	60
LCS	74	76	77	38	48	72
LCSD	77	79	86	36	50	78
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192730009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1161145	59	52	62	53
Blank	62	39	65	41
LCS	55	33	58	35
LCSD	44	61	46	64
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192730010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1161145	56	47	57	49
Blank	68	36	70	38
LCS	16*	53	15*	55
LCSD	17*	57	17*	59
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2066224 Sample # 116145-6

COC # 577975

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	metals 200.7 200.8 245.1	TSSM 2540D	Remarks
WWTPEFF092619	9.26.19	1300	X		12										
TB 19233	8.26.19	1300	X		2										
Cooler Temp Bottle	9.26.19	1300			1										Cooler Temp bottle

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)

Type III (Reduced non-CLP)

NYSDEC Category A or B

Type VI (Raw Data Only)

NJ DKQP

MA MCP

TX TRRP-13

CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	9.26.19	1700			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
			[signature]	9/27/19	1135

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 261341

Group Number(s): 2066224

Client: BASF Corp

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	09/27/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Zane Hollinger (10 251) at 12:17 on 09/27/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	2.8	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 14, 2019 10:12

Project: Rensselaer

Account #: 04285
Group Number: 2067256
SDG: RNT07
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF-100219 Grab Water	10/02/2019 08:00	1165972
TB-19247 Grab Water	09/09/2019 08:00	1165973

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF-100219 Grab Water**
COC: 577967

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2019 10:41
Collection Date/Time: 10/02/2019 08:00
SDG#: RNT07-01

BASF Corporation
ELLE Sample #: **RW 1165972**
ELLE Group #: **2067256**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	6.10	2.00	5.00	1
14687	Benzene		71-43-2	0.12 J	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	3.29	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	6	1
14669	Carbazole		86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.7	6	1
14669	Chrysene		218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	6	1
14669	Fluoranthene		206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.5	6	1
14669	Phenanthrene		85-01-8	N.D.	0.1	6	1
14669	Phenol[1]		108-95-2	N.D.	0.5	1	1
14669	Pyrene		129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-100219 Grab Water**
COC: 577967

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2019 10:41
Collection Date/Time: 10/02/2019 08:00
SDG#: RNT07-01

BASF Corporation
ELLE Sample #: RW 1165972
ELLE Group #: 2067256
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0833	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0833	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0833	0.563	1
14188	PCB-1242	53469-21-9	0.127 JD1	0.0833	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0833	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0833	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0833	0.563	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0518	0.113	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00676	0.0113	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00935	0.0113	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0225	0.0450	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0113	0.0225	1
13634	Delta BHC	319-86-8	N.D. D1	0.0124	0.0338	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.0102	0.113	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00770	0.0113	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	1.15	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0406	0.0160	0.0300	1
07046	Barium	7440-39-3	0.122	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0040 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.438	0.0400	0.200	1
07055	Lead	7439-92-1	0.0110 J	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.432	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0025 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0363	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	662	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	16.4	4.00	12.0	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF-100219 Grab Water**
COC: 577967

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2019 10:41
Collection Date/Time: 10/02/2019 08:00
SDG#: RNT07-01

BASF Corporation
ELLE Sample #: **RW 1165972**
ELLE Group #: **2067256**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.1	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192771AA	10/04/2019 12:58	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19280WAC625	10/08/2019 14:06	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19280WAC625	10/07/2019 17:17	Logan M Brosemer	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192770043A	10/09/2019 22:13	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192770042A	10/10/2019 18:12	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192770043A	10/07/2019 11:00	David S Schrum	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192770042A	10/07/2019 11:00	David S Schrum	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 21:13	Cindy M Gehman	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07046	Barium	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07051	Chromium	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07053	Copper	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
01754	Iron	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 21:13	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 21:13	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07061	Nickel	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
07072	Zinc	EPA 200.7 rev 4.4	1	192760571601	10/04/2019 11:59	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	192760571401	10/07/2019 10:14	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192760571601	10/03/2019 14:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192760571401	10/03/2019 14:50	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19280964901A	10/07/2019 13:57	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19277385801A	10/04/2019 13:22	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19276021501A	10/03/2019 15:30	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19277003101A	10/04/2019 16:05	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19277003101A	10/04/2019 16:05	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB-19247 Grab Water**
COC: 577967

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2019 10:41
Collection Date/Time: 09/09/2019 08:00
SDG#: RNT07-02TB

BASF Corporation
ELLE Sample #: RW 1165973
ELLE Group #: 2067256
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192771AA	10/04/2019 12:35	John Glacken	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192771AA	Sample number(s): 1165972-1165973		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19280WAC625	Sample number(s): 1165972		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192770043A	Sample number(s): 1165972		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192770042A	Sample number(s): 1165972		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192760571401	Sample number(s): 1165972		
Mercury	N.D.	0.000050	0.00020
Batch number: 192760571601	Sample number(s): 1165972		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19277385801A	Sample number(s): 1165972		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19280964901A	Sample number(s): 1165972		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19276021501A	Sample number(s): 1165972		
Settleable Solids	N.D.	0.10	0.10

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192771AA	Sample number(s): 1165972-1165973								
Acetone	150	163.39			109		60-140		
Benzene	20	21.45			107		65-135		
Chlorobenzene	20	21.17			106		65-135		
1,2-Dichlorobenzene	20	20.9			105		65-135		
1,3-Dichlorobenzene	20	20.81			104		70-130		
1,4-Dichlorobenzene	20	21.04			105		65-135		
1,2-Dichloroethane	20	20.08			100		70-130		
Ethylbenzene	20	21.02			105		60-140		
Methylene Chloride	20	20.46			102		60-140		
Toluene	20	21.29			106		70-130		
Vinyl Chloride	20	20.77			104		10-195		
Xylene (Total)	60	63.85			106		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19280WAC625	Sample number(s): 1165972								
Anthracene	50	47.31	50	46.4	95	93	27-133	2	30
Benzo(a)anthracene	50	48.2	50	47.11	96	94	33-143	2	30
Benzo(a)pyrene	50	49.03	50	47.86	98	96	17-163	2	30
Benzo(b)fluoranthene	50	46.93	50	47.08	94	94	24-159	0	30
Benzo(k)fluoranthene	50	49.99	50	49.96	100	100	11-162	0	30
Butylbenzylphthalate	50	40.03	50	38.81	80	78	10-152	3	30
Di-n-butylphthalate	50	39.41	50	38.58	79	77	10-118	2	30
Carbazole	50	49.3	50	48.9	99	98	79-112	1	30
4-Chloroaniline	50	37.59	50	36.92	75	74	52-105	2	30
2-Chloronaphthalene	50	46.65	50	41.59	93	83	60-118	11	24
Chrysene	50	48.41	50	48.14	97	96	17-168	1	30
Dibenz(a,h)anthracene	50	48.52	50	47.91	97	96	10-200	1	30
bis(2-Ethylhexyl)phthalate	50	36.37	50	38.28	73	77	10-158	5	30
Fluoranthene	50	47.08	50	46.13	94	92	26-137	2	30
Indeno(1,2,3-cd)pyrene	50	47.23	50	46.16	94	92	10-171	2	30
2-Methylnaphthalene	50	44.87	50	41.91	90	84	59-101	7	30
4-Methylphenol	50	42.81	50	39.63	86	79	62-98	8	30
Naphthalene	50	44.13	50	40.14	88	80	21-133	9	30
N-Nitrosodimethylamine	50	30.95	50	29.15	62	58	38-74	6	30
Phenanthrene	50	48.18	50	46.43	96	93	54-120	4	30
Phenol	50	26.52	50	25.28	53	51	10-112	5	30
Pyrene	50	50.9	50	50.55	102	101	52-115	1	30
1,2,4-Trichlorobenzene	50	43.11	50	38.7	86	77	44-142	11	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192770043A	Sample number(s): 1165972								
PCB-1016	5.02	3.47	5.02	4.12	69	82	50-140	17	36
PCB-1260	5.05	3.43	5.05	4.07	68	81	10-140	17	38

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192770042A	Sample number(s): 1165972								
Beta BHC	0.100	0.0928	0.100	0.0899	93	90	17-147	3	44
Alpha Chlordane	0.100	0.0770	0.100	0.0710	77	71	45-140	8	35
Gamma Chlordane	0.100	0.0779	0.100	0.0720	78	72	45-140	8	35
p,p-DDE	0.200	0.147	0.200	0.135	73	67	30-145	8	35
p,p-DDT	0.201	0.163	0.201	0.150	81	74	25-160	9	30
Delta BHC	0.100	0.0806	0.100	0.0752	81	75	19-140	7	52
Endrin Aldehyde	0.200	0.148	0.200	0.138	74	69	60-140	7	30
Heptachlor Epoxide	0.101	0.0778	0.101	0.0731	77	72	37-142	6	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192760571401	Sample number(s): 1165972								
Mercury	0.00100	0.00102	0.00100	0.00102	102	102	85-115	0	20
Batch number: 192760571601	Sample number(s): 1165972								
Aluminum	0.400	0.428			107		80-120		
Arsenic	0.0600	0.0652			109		80-120		
Barium	0.0100	0.0103			103		80-120		
Chromium	0.0300	0.0328			109		80-120		
Cobalt	0.0100	0.0108			108		80-120		
Copper	0.0400	0.0424			106		80-120		
Iron	0.400	0.435			109		80-120		
Lead	0.0300	0.0315			105		80-120		
Manganese	0.0200	0.0207			104		80-120		
Nickel	0.0200	0.0215			108		80-120		
Zinc	0.0400	0.0454			114		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19277385801A	Sample number(s): 1165972								
Total Suspended Solids	150	144.2			96		89-105		
Batch number: 19280964901A	Sample number(s): 1165972								
Total Dissolved Solids	200	208			104		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19277003101A	Sample number(s): 1165972								
pH	7.00	6.99			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: U192771AA	Sample number(s): 1165972-1165973 UNSPK: 1165972									
Acetone	6.10	150	125.12	150	129.53	79	82	60-140	3	30
Benzene	0.125	20	21.29	20	21.76	106	108	37-151	2	30
Chlorobenzene	N.D.	20	20.7	20	21.5	104	107	37-160	4	30
1,2-Dichlorobenzene	N.D.	20	20.19	20	20.88	101	104	18-190	3	30
1,3-Dichlorobenzene	N.D.	20	19.95	20	20.96	100	105	59-156	5	30
1,4-Dichlorobenzene	N.D.	20	20.3	20	21.25	102	106	18-190	5	30
1,2-Dichloroethane	3.29	20	21.9	20	22.46	93	96	49-155	2	30
Ethylbenzene	N.D.	20	20.6	20	21.34	103	107	37-162	4	30
Methylene Chloride	N.D.	20	20.41	20	20.69	102	103	10-200	1	28
Toluene	N.D.	20	20.59	20	21.35	103	107	47-150	4	30
Vinyl Chloride	N.D.	20	19.49	20	22.26	97	111	10-200	13	30
Xylene (Total)	N.D.	60	61.87	60	64.86	103	108	60-140	5	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192771AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1165972	107	105	96	88
1165973	106	104	96	88
Blank	107	105	96	89
LCS	104	107	97	90
MS	103	102	97	88
MSD	103	103	97	90
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19280WAC625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1165972	73	75	43	38	53	73
Blank	80	79	86	36	53	71
LCS	80	83	81	41	59	79
LCSD	74	76	83	41	55	76
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/14/2019 10:12

Group Number: 2067256

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192770042A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1165972	67	49	74	53
Blank	78	85	75	100
LCS	76	84	76	97
LCSD	70	76	72	86
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192770043A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1165972	74	50	70	53
Blank	88	87	84	88
LCS	66	51	64	52
LCSD	75	71	71	71
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2067256 Sample # 1165972-73

COC # 577967

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Potable	Ground	NPDES	Surface	Other: Cooler Temp Bottle	Total # of Containers	pH 150.1	Settleable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 25407	Remarks
WWTPEFF100219	10.02.19	0800	X					X						12	X	X	X	X	X	X	X	X	X	
TB 19247	09.09.19	0800	X					X						2				X						
Cooler Temp Bottle	10.02.19	0800						X					X	1										Cooler Temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	10.02.19	1700			
				10/3/19	1041

EDD Required? Yes No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx Y Other ____

Temperature upon receipt 3.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 261830

Group Number(s): 2067256

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/03/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099059	3.4	IR	Wet	Y	Loose/Bag	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 18, 2019 10:32

Project: Rensselaer

Account #: 04285
Group Number: 2068454
SDG: RNT08
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF100919 Grab Water	10/09/2019 09:30	1171707
TB18340 Grab Water	12/13/2018 09:30	1171708

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF100919 Grab Water**
COC: 577968

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2019 10:35
Collection Date/Time: 10/09/2019 09:30
SDG#: RNT08-01

BASF Corporation
ELLE Sample #: **RW 1171707**
ELLE Group #: **2068454**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	21.3	2.00	5.00	1
14687	Benzene	71-43-2	2.60	0.050	1.00	1
14687	Chlorobenzene	108-90-7	0.83 J	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	9.17	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.4	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.4	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF100919 Grab Water**
COC: 577968

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2019 10:35
Collection Date/Time: 10/09/2019 09:30
SDG#: RNT08-01

BASF Corporation
ELLE Sample #: RW 1171707
ELLE Group #: 2068454
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0841	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0841	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0841	0.568	1
14188	PCB-1242	53469-21-9	0.292 JD1	0.0841	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0841	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0841	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0841	0.568	1
Pesticides	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0523	0.114	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00682	0.0114	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00943	0.0114	1
13634	p,p-DDE	72-55-9	0.0280 JD1	0.0227	0.0455	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0114	0.0227	1
13634	Delta BHC	319-86-8	N.D. D1	0.0125	0.0341	1
13634	Endrin Aldehyde	7421-93-4	N.D. D2	0.0103	0.114	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00568	0.0114	1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.					
Metals	**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	1.05	0.107	0.300	1
07035	Arsenic	7440-38-2	0.0256 J	0.0160	0.0300	1
07046	Barium	7440-39-3	0.103	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0049 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.854	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.429	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0067 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0083 J	0.0037	0.0200	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00012 J	0.000050	0.00020	1
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	658	40.0	120	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	12.0	4.00	12.0	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF100919 Grab Water**
COC: 577968

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2019 10:35
Collection Date/Time: 10/09/2019 09:30
SDG#: RNT08-01

BASF Corporation
ELLE Sample #: **RW 1171707**
ELLE Group #: **2068454**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.9	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192871AA	10/14/2019 23:01	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19284WAA625	10/12/2019 02:01	Brandon K Cordova	1
08108	625 Water Extraction	EPA 625.1	1	19284WAA625	10/11/2019 15:45	Laura Duquette	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192840011A	10/14/2019 23:05	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192840010A	10/15/2019 02:36	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192840011A	10/11/2019 15:45	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192840010A	10/11/2019 15:45	Laura Duquette	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07046	Barium	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07051	Chromium	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07053	Copper	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
01754	Iron	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07055	Lead	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07058	Manganese	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07061	Nickel	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
07072	Zinc	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 13:18	Lisa J Cooke	1
00259	Mercury	EPA 245.1 rev 3	1	192880571402	10/16/2019 09:25	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192870571601	10/15/2019 02:41	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192880571402	10/16/2019 03:05	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19284964902A	10/11/2019 15:04	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19287385803A	10/14/2019 11:14	Amy L Cramer	1
00215	Settleable Solids	SM 2540 F-2011	1	19283021501A	10/10/2019 17:50	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19284002103A	10/11/2019 19:42	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19284002103A	10/11/2019 19:42	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18340 Grab Water**
COC: 577968

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2019 10:35
Collection Date/Time: 12/13/2018 09:30
SDG#: RNT08-02TB

BASF Corporation
ELLE Sample #: **RW 1171708**
ELLE Group #: **2068454**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192871AA	10/14/2019 22:38	John Glacken	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2068454
Reported: 10/18/2019 10:32

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192871AA	Sample number(s): 1171707-1171708		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19284WAA625	Sample number(s): 1171707		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192840011A	Sample number(s): 1171707		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2068454
Reported: 10/18/2019 10:32

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192840010A	Sample number(s): 1171707		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192870571601	Sample number(s): 1171707		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 192880571402	Sample number(s): 1171707		
Mercury	N.D.	0.000050	0.00020
Batch number: 19284964902A	Sample number(s): 1171707		
Total Dissolved Solids	N.D.	10.0	30.0
Batch number: 19287385803A	Sample number(s): 1171707		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19283021501A	Sample number(s): 1171707		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2019 10:32

Group Number: 2068454

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192871AA	Sample number(s): 1171707-1171708								
Acetone	150	107.27			72		60-140		
Benzene	20	21.57			108		65-135		
Chlorobenzene	20	20.25			101		65-135		
1,2-Dichlorobenzene	20	19.91			100		65-135		
1,3-Dichlorobenzene	20	19.69			98		70-130		
1,4-Dichlorobenzene	20	20.07			100		65-135		
1,2-Dichloroethane	20	19.99			100		70-130		
Ethylbenzene	20	19.83			99		60-140		
Methylene Chloride	20	20.5			103		60-140		
Toluene	20	20.39			102		70-130		
Vinyl Chloride	20	19.45			97		10-195		
Xylene (Total)	60	59.98			100		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19284WAA625	Sample number(s): 1171707								
Anthracene	50	45.91	50	44.45	92	89	27-133	3	30
Benzo(a)anthracene	50	47.35	50	44.77	95	90	33-143	6	30
Benzo(a)pyrene	50	45.01	50	44.84	90	90	17-163	0	30
Benzo(b)fluoranthene	50	47.5	50	48.27	95	97	24-159	2	30
Benzo(k)fluoranthene	50	47.6	50	45.92	95	92	11-162	4	30
Butylbenzylphthalate	50	41.46	50	39.33	83	79	10-152	5	30
Di-n-butylphthalate	50	39.79	50	37.5	80	75	10-118	6	30
Carbazole	50	47.86	50	47.11	96	94	79-112	2	30
4-Chloroaniline	50	42.49	50	42.26	85	85	52-105	1	30
2-Chloronaphthalene	50	41.52	50	37	83	74	60-118	11	24
Chrysene	50	48.53	50	48.55	97	97	17-168	0	30
Dibenz(a,h)anthracene	50	44.16	50	42.94	88	86	10-200	3	30
bis(2-Ethylhexyl)phthalate	50	37.72	50	36.58	75	73	10-158	3	30
Fluoranthene	50	47.71	50	45.17	95	90	26-137	5	30
Indeno(1,2,3-cd)pyrene	50	42.96	50	43.2	86	86	10-171	1	30
2-Methylnaphthalene	50	40.3	50	35.51	81	71	59-101	13	30
4-Methylphenol	50	41.45	50	42.36	83	85	62-98	2	30
Naphthalene	50	40.27	50	34.48	81	69	21-133	15	30
N-Nitrosodimethylamine	50	26.42	50	26.48	53	53	38-74	0	30
Phenanthrene	50	47.52	50	44.57	95	89	54-120	6	30
Phenol	50	24.81	50	24.79	50	50	10-112	0	30
Pyrene	50	50.73	50	48.97	101	98	52-115	4	30
1,2,4-Trichlorobenzene	50	33.98	50	32.07	68	64	44-142	6	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192840011A	Sample number(s): 1171707								
PCB-1016	5.02	3.70	5.02	4.22	74	84	50-140	13	36
PCB-1260	5.05	3.75	5.05	4.47	74	89	10-140	17	38

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2019 10:32

Group Number: 2068454

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192840010A	Sample number(s): 1171707								
Beta BHC	0.100	0.109	0.100	0.102	109	102	17-147	7	44
Alpha Chlordane	0.100	0.0818	0.100	0.0699	82	70	45-140	16	35
Gamma Chlordane	0.100	0.0750	0.100	0.0630	75	63	45-140	17	35
p,p-DDE	0.200	0.144	0.200	0.112	72	56	30-145	25	35
p,p-DDT	0.201	0.152	0.201	0.132	75	66	25-160	14	30
Delta BHC	0.100	0.0936	0.100	0.0888	94	89	19-140	5	52
Endrin Aldehyde	0.200	0.177	0.200	0.164	88	82	60-140	7	30
Heptachlor Epoxide	0.101	0.0898	0.101	0.0835	89	82	37-142	7	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192870571601	Sample number(s): 1171707								
Aluminum	0.400	0.404			101		85-115		
Arsenic	0.0600	0.0618			103		85-115		
Barium	0.0100	0.0103			103		85-115		
Chromium	0.0300	0.0292			97		85-115		
Cobalt	0.0100	0.0106			106		85-115		
Copper	0.0400	0.0446			112		85-115		
Iron	0.400	0.422			105		85-115		
Lead	0.0300	0.0264			88		85-115		
Manganese	0.0200	0.0205			103		85-115		
Nickel	0.0200	0.0220			110		85-115		
Zinc	0.0400	0.0431			108		85-120		
Batch number: 192880571402	Sample number(s): 1171707								
Mercury	0.00100	0.00111			111		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19284964902A	Sample number(s): 1171707								
Total Dissolved Solids	200	211			106		74-127		
Batch number: 19287385803A	Sample number(s): 1171707								
Total Suspended Solids	150	146.8			98		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19284002103A	Sample number(s): 1171707								
pH	7.00	7.01			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2019 10:32

Group Number: 2068454

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 19284964902A	Sample number(s): 1171707 UNSPK: 1171707									
Total Dissolved Solids	658	800	1442			98		74-127		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 19284964902A	Sample number(s): 1171707 BKG: 1171707			
Total Dissolved Solids	658	672	2	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192871AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1171707	111	108	92	87
1171708	111	108	92	86
Blank	110	108	93	87
LCS	106	104	95	88
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19284WAA625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1171707	63	58	72	37	37	63
Blank	67	65	85	32	46	69
LCS	79	80	86	39	53	79
LCSD	75	69	81	39	51	83
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2019 10:32

Group Number: 2068454

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192840010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1171707	55	48	58	51
Blank	39	70	42	84
LCS	60	40	62	46
LCSD	49	42	50	50
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 192840011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1171707	44	44	44	45
Blank	44	74	41	70
LCS	32	63	30	58
LCSD	46	68	43	66
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 04286 Group # 2068497 Sample # 171707-08

COC # 577968

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler Temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settleable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.9 245.1 200.8	TSS SM 2540 D	Remarks
WWTPEFF100919	10-9-19	0930	X		12	X	X	X	X	X	X	X	X	X	
TB 18340	12.13.18	0930	X		2				X						
Cooler Temp Bottle	10.9.19	0930			1										Cooler Temp bottle

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	10-9-19	1700			
			CM Wells	10/10/19	10:35

EDD Required? (Yes) No

If yes, format: AECOM EQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx 4 Other ____

Temperature upon receipt 2.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 262494

Group Number(s): 2060454

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/10/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099059	2.3	IR	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 25, 2019 10:08

Project: Rensselaer

Account #: 04285
Group Number: 2069613
SDG: RNT09
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF101619 Grab Water	10/16/2019 10:00	1176917
TB 19233-082619 Water	08/26/2019 10:00	1176918

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF101619 Grab Water**
COC: 577969

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2019 11:17
Collection Date/Time: 10/16/2019 10:00
SDG#: RNT09-01

BASF Corporation
ELLE Sample #: RW 1176917
ELLE Group #: 2069613
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	33.2	2.00	5.00	1
14687	Benzene	71-43-2	1.51	0.050	1.00	1
14687	Chlorobenzene	108-90-7	0.96 J	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	9.51	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.4	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.4	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF101619 Grab Water**
COC: 577969

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2019 11:17
Collection Date/Time: 10/16/2019 10:00
SDG#: RNT09-01

BASF Corporation
ELLE Sample #: **RW 1176917**
ELLE Group #: **2069613**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
action was taken.						
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0777	0.525	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0777	0.525	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0777	0.525	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0777	0.525	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0777	0.525	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0777	0.525	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0777	0.525	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0483	0.105	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D2	0.00630	0.0105	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00872	0.0105	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0210	0.0420	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0105	0.0210	1
13634	Delta BHC	319-86-8	N.D. D1	0.0116	0.0315	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00956	0.105	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00525	0.0105	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	N.D. K2	0.107	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0984	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0016 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.404	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.470	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0023 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0049 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	520	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.52 J	2.00	6.00	1
	Reporting limits were raised due to interference from the sample matrix.					

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF101619 Grab Water**
COC: 577969

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2019 11:17
Collection Date/Time: 10/16/2019 10:00
SDG#: RNT09-01

BASF Corporation
ELLE Sample #: RW 1176917
ELLE Group #: 2069613
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.5	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192952AA	10/23/2019 01:32	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19290WAJ625	10/18/2019 22:57	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19290WAJ625	10/18/2019 02:00	Mathias Okpo	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	192910011A	10/21/2019 23:31	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	192910012A	10/21/2019 23:27	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	192910011A	10/18/2019 16:25	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	192910012A	10/18/2019 16:25	Christine E Gleim	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07046	Barium	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07051	Chromium	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07053	Copper	EPA 200.7 rev 4.4	1	192900571606	10/20/2019 20:20	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	192900571606	10/20/2019 20:20	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07058	Manganese	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07061	Nickel	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
07072	Zinc	EPA 200.7 rev 4.4	1	192900571606	10/18/2019 10:05	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	192900571404	10/19/2019 09:05	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192900571606	10/17/2019 15:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192900571404	10/17/2019 16:35	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19291964901A	10/18/2019 14:10	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19294385801A	10/21/2019 12:46	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19290021501A	10/17/2019 16:20	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19290003101A	10/17/2019 18:32	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19290003101A	10/17/2019 18:32	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 19233-082619 Water**
COC: 577969

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2019 11:17
Collection Date/Time: 08/26/2019 10:00
SDG#: RNT09-02TB

BASF Corporation
ELLE Sample #: RW 1176918
ELLE Group #: 2069613
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U192952AA	10/23/2019 01:08	John Glacken	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U192952AA	Sample number(s): 1176917-1176918		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19290WAJ625	Sample number(s): 1176917		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 192910011A	Sample number(s): 1176917		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 192910012A	Sample number(s): 1176917		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192900571404	Sample number(s): 1176917		
Mercury	N.D.	0.000050	0.00020
Batch number: 192900571606	Sample number(s): 1176917		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19291964901A	Sample number(s): 1176917		
Total Dissolved Solids	N.D.	10.0	30.0
Batch number: 19294385801A	Sample number(s): 1176917		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19290021501A	Sample number(s): 1176917		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U192952AA	Sample number(s): 1176917-1176918								
Acetone	150	110.94			74		60-140		
Benzene	20	20.53			103		65-135		
Chlorobenzene	20	21.61			108		65-135		
1,2-Dichlorobenzene	20	20.97			105		65-135		
1,3-Dichlorobenzene	20	20.88			104		70-130		
1,4-Dichlorobenzene	20	21.06			105		65-135		
1,2-Dichloroethane	20	19.53			98		70-130		
Ethylbenzene	20	20.49			102		60-140		
Methylene Chloride	20	19.69			98		60-140		
Toluene	20	20.92			105		70-130		
Vinyl Chloride	20	19.45			97		10-195		
Xylene (Total)	60	62.32			104		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19290WAJ625	Sample number(s): 1176917								
Anthracene	50	41.45	50	44.21	83	88	27-133	6	30
Benzo(a)anthracene	50	40.89	50	44.7	82	89	33-143	9	30
Benzo(a)pyrene	50	42.63	50	43.1	85	86	17-163	1	30
Benzo(b)fluoranthene	50	45.03	50	46.93	90	94	24-159	4	30
Benzo(k)fluoranthene	50	46.37	50	47.46	93	95	11-162	2	30
Butylbenzylphthalate	50	24.85	50	30.33	50	61	10-152	20	30
Di-n-butylphthalate	50	31.82	50	36.15	64	72	10-118	13	30
Carbazole	50	42.88	50	45.62	86	91	79-112	6	30
4-Chloroaniline	50	33.6	50	36.61	67	73	52-105	9	30
2-Chloronaphthalene	50	37.63	50	41.63	75	83	60-118	10	24
Chrysene	50	43.17	50	46.43	86	93	17-168	7	30
Dibenz(a,h)anthracene	50	41.65	50	41.13	83	82	10-200	1	30
bis(2-Ethylhexyl)phthalate	50	34.32	50	38.02	69	76	10-158	10	30
Fluoranthene	50	41.19	50	44.15	82	88	26-137	7	30
Indeno(1,2,3-cd)pyrene	50	39.91	50	39.66	80	79	10-171	1	30
2-Methylnaphthalene	50	34.32	50	37.64	69	75	59-101	9	30
4-Methylphenol	50	30.31	50	33.55	61*	67	62-98	10	30
Naphthalene	50	34.19	50	37.35	68	75	21-133	9	30
N-Nitrosodimethylamine	50	22.27	50	24.93	45	50	38-74	11	30
Phenanthrene	50	42.44	50	44.92	85	90	54-120	6	30
Phenol	50	18.13	50	19.18	36	38	10-112	6	30
Pyrene	50	45.97	50	50.08	92	100	52-115	9	30
1,2,4-Trichlorobenzene	50	29.71	50	32.38	59	65	44-142	9	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 192910011A	Sample number(s): 1176917								
PCB-1016	5.02	4.16	5.02	3.82	83	76	50-140	8	36
PCB-1260	5.05	4.33	5.05	4.13	86	82	10-140	5	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 192910012A	Sample number(s): 1176917								
Beta BHC	0.100	0.0962	0.100	0.102	96	102	17-147	6	44
Alpha Chlordane	0.100	0.0851	0.100	0.0848	85	85	45-140	0	35
Gamma Chlordane	0.100	0.0826	0.100	0.0789	83	79	45-140	5	35
p,p-DDE	0.200	0.151	0.200	0.150	75	75	30-145	1	35
p,p-DDT	0.201	0.173	0.201	0.167	86	83	25-160	4	30
Delta BHC	0.100	0.0849	0.100	0.0883	85	88	19-140	4	52
Endrin Aldehyde	0.200	0.167	0.200	0.166	83	83	60-140	0	30
Heptachlor Epoxide	0.101	0.0887	0.101	0.0915	88	90	37-142	3	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192900571404	Sample number(s): 1176917								
Mercury	0.00100	0.00107			107		85-115		
Batch number: 192900571606	Sample number(s): 1176917								
Aluminum	0.400	0.486			121*		85-115		
Arsenic	0.0600	0.0634			106		85-115		
Barium	0.0100	0.0103			103		85-115		
Chromium	0.0300	0.0313			104		85-115		
Cobalt	0.0100	0.0111			111		85-115		
Copper	0.0400	0.0451			113		85-115		
Iron	0.400	0.420			105		85-115		
Lead	0.0300	0.0343			114		85-115		
Manganese	0.0200	0.0202			101		85-115		
Nickel	2.02	2.25			111		85-115		
Zinc	0.440	0.470			107		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19291964901A	Sample number(s): 1176917								
Total Dissolved Solids	200	209			105		74-127		
Batch number: 19294385801A	Sample number(s): 1176917								
Total Suspended Solids	150	143.1			95		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19290003101A	Sample number(s): 1176917								
pH	7.00	6.99			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 192900571404	Sample number(s): 1176917 UNSPK: 1176917									
Mercury	N.D.	0.00100	0.000985			98		80-120		
Batch number: 192900571606	Sample number(s): 1176917 UNSPK: 1176917									
Aluminum	N.D.	0.400	0.451			113		70-130		
Arsenic	N.D.	0.0600	0.0833			139*		70-130		
Barium	0.0984	0.0100	0.110			116 (2)		70-130		
Chromium	0.00161	0.0300	0.0331			105		70-130		
Cobalt	N.D.	0.0100	0.0118			118		70-130		
Copper	N.D.	0.0400	0.0471			118		70-130		
Iron	0.404	0.400	0.821			104		70-130		
Lead	N.D.	0.0300	0.0336			112		70-130		
Manganese	0.470	0.0200	0.493			116 (2)		70-130		
Nickel	0.00232	2.02	2.20			109		70-130		
Zinc	0.00485	0.440	0.478			108		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 192900571404	Sample number(s): 1176917 BKG: 1176917			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 192900571606	Sample number(s): 1176917 BKG: 1176917			
Aluminum	N.D.	N.D.	0 (1)	20
Arsenic	N.D.	0.0190	200* (1)	20
Barium	0.0984	0.101	3	20
Chromium	0.00161	0.00171	6 (1)	20
Cobalt	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	0.404	0.417	3 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Manganese	0.470	0.480	2	20
Nickel	0.00232	N.D.	200* (1)	20
Zinc	0.00485	0.00519	7 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/25/2019 10:08

Group Number: 2069613

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U192952AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1176917	111	110	97	86
1176918	109	111	97	86
Blank	110	108	97	86
LCS	105	104	101	86
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19290WAJ625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1176917	67	68	70	25	34	66
Blank	76	76	98	26	37	63
LCS	70	68	82	29	40	69
LCSD	78	75	85	32	43	74
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 192910011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1176917	75	68	70	66
Blank	77	65	74	63
LCS	41	89	38	83
LCSD	42	59	40	58
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 192910012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1176917	65	54	68	57
Blank	64	55	69	61
LCS	51	34	53	38
LCSD	58	77	63	84
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 206963 Sample # 176917-8

COC # 577969

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff Denman	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: Cooler Temp bottles

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	PCB EPA 608	Metals 200.7 200.8 245.1	TSS SM 2540D	Remarks
WWTPEFF101619	10.16.19	1000	X		12	X	X	X	X	X	X	X	X	X	
TB 19233	9.26.19	1600	X		2				X						
Cooler Temp Bottle	10.16.19	1000			1										Cooler Temp bottle

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	10.16.19	1700			
			CM Wells	10/17/19	11:17

EDD Required? (Yes) No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 5.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 263168

Group Number(s): 2069613

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/17/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	UNP
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Zane Hollinger

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099059	5.7	IR	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 01, 2019 10:26

Project: Rensselaer

Account #: 04285
Group Number: 2070626
SDG: RNT10
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF102319 Grab Water	10/23/2019 07:30	1182129
TB18285 Grab Water	10/18/2019 07:30	1182130

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF102319 Grab Water**
COC: 593631

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2019 10:14
Collection Date/Time: 10/23/2019 07:30
SDG#: RNT10-01

BASF Corporation
ELLE Sample #: **RW 1182129**
ELLE Group #: **2070626**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	5	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	5	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	5	1
14669	Carbazole	86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.6	5	1
14669	Chrysene	218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	5	1
14669	Fluoranthene	206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	5	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.4	5	1
14669	Phenanthrene	85-01-8	N.D.	0.1	5	1
14669	Phenol[1]	108-95-2	N.D.	0.4	1	1
14669	Pyrene	129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1

The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. The recovery for a target

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF102319 Grab Water**
COC: 593631

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2019 10:14
Collection Date/Time: 10/23/2019 07:30
SDG#: RNT10-01

BASF Corporation
ELLE Sample #: RW 1182129
ELLE Group #: 2070626
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.					
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0553	0.120	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00721	0.0120	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00998	0.0120	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0240	0.0481	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0120	0.0240	1
13634	Delta BHC	319-86-8	N.D. D1	0.0132	0.0361	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.0109	0.120	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00601	0.0120	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	N.D.	0.107	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0879	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D. K2	0.0016	0.0150	1
07052	Cobalt	7440-48-4	0.0016 J	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	N.D.	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.603	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0032 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0091 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	550	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.50 J	3.00	9.00	1
	Reporting limits were raised due to interference from the sample matrix.					
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
		SM 2550 B-2010	**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.7	0.010	0.010	1
		SM 4500-H+ B-2011	**Std. Units**	**Std. Units**	**Std. Units**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF102319 Grab Water**
COC: 593631

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2019 10:14
Collection Date/Time: 10/23/2019 07:30
SDG#: RNT10-01

BASF Corporation
ELLE Sample #: **RW 1182129**
ELLE Group #: **2070626**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 4500-H+ B-2011**		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.9	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193012AA	10/29/2019 06:06	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19302WAF625	10/30/2019 11:28	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19302WAF625	10/29/2019 17:08	Osvaldo R Sanchez	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193010004A	10/30/2019 22:13	Dylan Schreiner	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193010004A	10/28/2019 18:53	Laura Duquette	1
01743	Aluminum	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07035	Arsenic	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	192970571613	10/26/2019 15:59	Elaine F Stoltzfus	1
00259	Mercury	EPA 245.1 rev 3	1	192970571402	10/25/2019 07:43	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	192970571613	10/25/2019 01:40	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	192970571402	10/24/2019 17:10	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19301964901A	10/28/2019 13:57	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19301385801A	10/28/2019 14:06	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19297021501A	10/24/2019 21:30	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19297012202A	10/24/2019 20:53	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19297012202A	10/24/2019 20:53	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB18285 Grab Water**
COC: 593631

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2019 10:14
Collection Date/Time: 10/18/2019 07:30
SDG#: RNT10-02TB

BASF Corporation
ELLE Sample #: RW 1182130
ELLE Group #: 2070626
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193012AA	10/29/2019 05:42	John Glacken	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2070626
Reported: 11/01/2019 10:26

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193012AA	Sample number(s): 1182129-1182130		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19302WAF625	Sample number(s): 1182129		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193010004A	Sample number(s): 1182129		
Beta BHC	N.D.	0.0460	0.100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2019 10:26

Group Number: 2070626

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 192970571402	Sample number(s): 1182129		
Mercury	N.D.	0.000050	0.00020
Batch number: 192970571613	Sample number(s): 1182129		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19301385801A	Sample number(s): 1182129		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19301964901A	Sample number(s): 1182129		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19297021501A	Sample number(s): 1182129		
Settleable Solids	N.D.	0.10	0.10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193012AA	Sample number(s): 1182129-1182130								
Acetone	150	112.46			75		60-140		
Benzene	20	20.11			101		65-135		
Chlorobenzene	20	20.55			103		65-135		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2019 10:26

Group Number: 2070626

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	20	20.24			101		65-135		
1,3-Dichlorobenzene	20	19.95			100		70-130		
1,4-Dichlorobenzene	20	20.6			103		65-135		
1,2-Dichloroethane	20	18.76			94		70-130		
Ethylbenzene	20	19.83			99		60-140		
Methylene Chloride	20	19.59			98		60-140		
Toluene	20	20.14			101		70-130		
Vinyl Chloride	20	18.72			94		10-195		
Xylene (Total)	60	59.94			100		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19302WAF625	Sample number(s): 1182129								
Anthracene	50	44.59	50	28.99	89	58	27-133	42*	30
Benzo(a)anthracene	50	43.08	50	33.31	86	67	33-143	26	30
Benzo(a)pyrene	50	45.21	50	32.77	90	66	17-163	32*	30
Benzo(b)fluoranthene	50	44.05	50	31.11	88	62	24-159	34*	30
Benzo(k)fluoranthene	50	47.65	50	37.25	95	75	11-162	24	30
Butylbenzylphthalate	50	39.38	50	27.43	79	55	10-152	36*	30
Di-n-butylphthalate	50	40.97	50	26.13	82	52	10-118	44*	30
Carbazole	50	46.97	50	28.85	94	58*	79-112	48*	30
4-Chloroaniline	50	41.39	50	32.09	83	64	52-105	25	30
2-Chloronaphthalene	50	38.19	50	23.53	76	47*	60-118	47*	24
Chrysene	50	46.08	50	34.59	92	69	17-168	28	30
Dibenz(a,h)anthracene	50	45.23	50	34.25	90	68	10-200	28	30
bis(2-Ethylhexyl)phthalate	50	39.01	50	27.77	78	56	10-158	34*	30
Fluoranthene	50	46.18	50	31.98	92	64	26-137	36*	30
Indeno(1,2,3-cd)pyrene	50	44.14	50	33.16	88	66	10-171	28	30
2-Methylnaphthalene	50	38.08	50	23.92	76	48*	59-101	46*	30
4-Methylphenol	50	42.74	50	35.48	85	71	62-98	19	30
Naphthalene	50	38.37	50	22.88	77	46	21-133	51*	30
N-Nitrosodimethylamine	50	26.34	50	19.5	53	39	38-74	30	30
Phenanthrene	50	45.18	50	29.11	90	58	54-120	43*	30
Phenol	50	24.3	50	19.59	49	39	10-112	21	30
Pyrene	50	45.41	50	32.08	91	64	52-115	34*	30
1,2,4-Trichlorobenzene	50	34.83	50	20.49	70	41*	44-142	52*	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193010004A	Sample number(s): 1182129								
Beta BHC	0.100	0.0961			96		17-147		
Alpha Chlordane	0.100	0.0720			72		45-140		
Gamma Chlordane	0.100	0.0636			64		45-140		
p,p-DDE	0.200	0.101			51		30-145		
p,p-DDT	0.201	0.167			83		25-160		
Delta BHC	0.100	0.0923			92		19-140		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2019 10:26

Group Number: 2070626

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Endrin Aldehyde	0.200	0.181			90		60-140		
Heptachlor Epoxide	0.101	0.0870			86		37-142		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 192970571402	Sample number(s): 1182129								
Mercury	0.00100	0.00126			126*		85-115		
Batch number: 192970571613	Sample number(s): 1182129								
Aluminum	0.400	0.368			92		85-115		
Arsenic	0.0600	0.0607			101		85-115		
Barium	0.0100	0.0103			103		85-115		
Chromium	0.0300	0.0308			103		85-115		
Cobalt	0.0100	0.0108			108		85-115		
Copper	0.0400	0.0402			101		85-115		
Iron	0.400	0.412			103		85-115		
Lead	0.0300	0.0339			113		85-115		
Manganese	0.0200	0.0207			103		85-115		
Nickel	2.02	2.18			108		85-115		
Zinc	0.440	0.469			107		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19301385801A	Sample number(s): 1182129								
Total Suspended Solids	150	147.6			98		89-105		
Batch number: 19301964901A	Sample number(s): 1182129								
Total Dissolved Solids	200	204			102		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19297012202A	Sample number(s): 1182129								
pH	7.00	7.02			100		95-105		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193012AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1182129	113	112	96	87
1182130	111	109	97	87
Blank	110	111	95	86

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2019 10:26

Group Number: 2070626

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193012AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	105	104	99	86
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19302WAF625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1182129	72	72	86	38	46	69
Blank	74	71	78	39	52	69
LCS	76	75	78	45	57	86
LCSD	48	43*	65	36	44	69
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193010004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1182129	59	70	59	69
Blank	54	53	54	55
LCS	55	56	56	60
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 207626 Sample # 1182129-30

COC #593631

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: JEFF DENMAN	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other: Cooler Temp bottle	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.7 200.8 200.9 245.1	TSS SM 2540 D			Remarks
WWTPEFF102319	10.23.19	0730	X					X					12	X	X	X	X	X	X	X	X			
TB 18285	10.18.18	0730	X					X					2				X							
Cooler Temp Bottle	10.23.19	0730						X				X	1											Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#: 2499928

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Edwin Hernandez	10/3/19	11:35			
Jeff Denman	10.23.19	0830			
			Cal Wells	10/24/19	10:14

EDD Required? (Yes) No

If yes, format: AECOM EQuIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 263874

Group Number(s): 2070626

Client: BASF

Rensselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/24/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Zane Hollinger

Samples Chilled Details: Rensselaer

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.4	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 08, 2019 10:14

Project: Rensselaer

Account #: 04285
Group Number: 2071976
SDG: RNT11
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF103019 Grab Water	10/30/2019 07:30	1188907
TB 18307 Water	11/06/2018 07:30	1188908

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF103019 Grab Water**
COC: 593635

Project Name: **Rensselaer**

Submittal Date/Time: 10/31/2019 10:51
Collection Date/Time: 10/30/2019 07:30
SDG#: RNT11-01

BASF Corporation
ELLE Sample #: **RW 1188907**
ELLE Group #: **2071976**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	4.58 J	2.00	5.00	1
14687	Benzene	71-43-2	0.051 J	0.050	1.00	1
14687	Chlorobenzene	108-90-7	0.15 J	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	0.21 J	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.5	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.5	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
Pesticides	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF103019 Grab Water**
COC: 593635

Project Name: **Rensselaer**

Submittal Date/Time: 10/31/2019 10:51
Collection Date/Time: 10/30/2019 07:30
SDG#: RNT11-01

BASF Corporation
ELLE Sample #: **RW 1188907**
ELLE Group #: **2071976**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0564	0.123	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00735	0.0123	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.0102	0.0123	1
13634	p,p-DDE	72-55-9	N.D. D2	0.0245	0.0490	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0123	0.0245	1
13634	Delta BHC	319-86-8	N.D. D1	0.0135	0.0368	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.0112	0.123	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00613	0.0123	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	N.D.	0.107	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.108	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07052	Cobalt	7440-48-4	0.0023 J	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.166 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.927	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0035 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0192 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	471	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.39 J	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
		SM 2550 B-2010	**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.9	0.010	0.010	1
		SM 4500-H+ B-2011	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF103019 Grab Water**
COC: 593635

Project Name: **Rensselaer**

Submittal Date/Time: 10/31/2019 10:51
Collection Date/Time: 10/30/2019 07:30
SDG#: RNT11-01

BASF Corporation
ELLE Sample #: RW 1188907
ELLE Group #: 2071976
Matrix: Water

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193101AA	11/06/2019 20:06	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19305WAG625	11/05/2019 01:00	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19305WAG625	11/01/2019 16:35	Osvaldo R Sanchez	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193050031A	11/04/2019 19:14	Dylan Schreiner	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193050031A	11/03/2019 15:15	Osvaldo R Sanchez	1
01743	Aluminum	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07035	Arsenic	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	193040571608	11/03/2019 19:51	Elaine F Stoltzfus	1
00259	Mercury	EPA 245.1 rev 3	1	193040571402	11/02/2019 09:21	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	193040571608	11/01/2019 05:20	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	193040571402	11/02/2019 03:37	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19305964903A	11/01/2019 13:08	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19305385801A	11/01/2019 12:49	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19304021501A	10/31/2019 16:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19305007203A	11/02/2019 04:36	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19305007203A	11/02/2019 04:36	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18307 Water**
COC: 593635

Project Name: **Rensselaer**

Submittal Date/Time: 10/31/2019 10:51
Collection Date/Time: 11/06/2018 07:30
SDG#: RNT11-02TB

BASF Corporation
ELLE Sample #: RW 1188908
ELLE Group #: 2071976
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193101AA	11/06/2019 19:43	John Glacken	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2071976
Reported: 11/08/2019 10:14

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193101AA	Sample number(s): 1188907-1188908		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19305WAG625	Sample number(s): 1188907		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193050031A	Sample number(s): 1188907		
Beta BHC	N.D.	0.0460	0.100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/08/2019 10:14

Group Number: 2071976

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 193040571402	Sample number(s): 1188907		
Mercury	N.D.	0.000050	0.00020
Batch number: 193040571608	Sample number(s): 1188907		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 19305385801A	Sample number(s): 1188907		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19305964903A	Sample number(s): 1188907		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19304021501A	Sample number(s): 1188907		
Settleable Solids	N.D.	0.10	0.10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193101AA	Sample number(s): 1188907-1188908								
Acetone	150	191.93			128		60-140		
Benzene	20	20.87			104		65-135		
Chlorobenzene	20	20.84			104		65-135		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/08/2019 10:14

Group Number: 2071976

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	20	20.36			102		65-135		
1,3-Dichlorobenzene	20	20.2			101		70-130		
1,4-Dichlorobenzene	20	20.72			104		65-135		
1,2-Dichloroethane	20	19.18			96		70-130		
Ethylbenzene	20	20.12			101		60-140		
Methylene Chloride	20	20.68			103		60-140		
Toluene	20	20.42			102		70-130		
Vinyl Chloride	20	19.22			96		10-195		
Xylene (Total)	60	60.5			101		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19305WAG625	Sample number(s): 1188907								
Anthracene	50	45.29	50	45.69	91	91	27-133	1	30
Benzo(a)anthracene	50	46.02	50	46.99	92	94	33-143	2	30
Benzo(a)pyrene	50	45.74	50	46.36	91	93	17-163	1	30
Benzo(b)fluoranthene	50	49.26	50	44.52	99	89	24-159	10	30
Benzo(k)fluoranthene	50	44.65	50	49.53	89	99	11-162	10	30
Butylbenzylphthalate	50	27.43	50	28.77	55	58	10-152	5	30
Di-n-butylphthalate	50	36.94	50	38.17	74	76	10-118	3	30
Carbazole	50	46.22	50	48.24	92	96	79-112	4	30
4-Chloroaniline	50	39.04	50	39.87	78	80	52-105	2	30
2-Chloronaphthalene	50	37.05	50	38.96	74	78	60-118	5	24
Chrysene	50	45.23	50	47.17	90	94	17-168	4	30
Dibenz(a,h)anthracene	50	44.09	50	45.32	88	91	10-200	3	30
bis(2-Ethylhexyl)phthalate	50	41.9	50	42.83	84	86	10-158	2	30
Fluoranthene	50	45.37	50	45.6	91	91	26-137	1	30
Indeno(1,2,3-cd)pyrene	50	42.57	50	43.76	85	88	10-171	3	30
2-Methylnaphthalene	50	38.22	50	37.82	76	76	59-101	1	30
4-Methylphenol	50	40.14	50	41.16	80	82	62-98	3	30
Naphthalene	50	36.97	50	37.34	74	75	21-133	1	30
N-Nitrosodimethylamine	50	26.4	50	28.1	53	56	38-74	6	30
Phenanthrene	50	44.63	50	45.75	89	92	54-120	2	30
Phenol	50	22.1	50	23.53	44	47	10-112	6	30
Pyrene	50	48.54	50	50.62	97	101	52-115	4	30
1,2,4-Trichlorobenzene	50	35.17	50	34.39	70	69	44-142	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193050031A	Sample number(s): 1188907								
Beta BHC	0.100	0.0899	0.100	0.0833	90	83	17-147	8	44
Alpha Chlordane	0.100	0.0792	0.100	0.0755	79	75	45-140	5	35
Gamma Chlordane	0.100	0.0754	0.100	0.0697	75	70	45-140	8	35
p,p-DDE	0.200	0.153	0.200	0.142	77	71	30-145	8	35
p,p-DDT	0.201	0.194	0.201	0.193	96	96	25-160	1	30
Delta BHC	0.100	0.0889	0.100	0.0873	89	87	19-140	2	52

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/08/2019 10:14

Group Number: 2071976

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Endrin Aldehyde	0.200	0.166	0.200	0.163	83	81	60-140	2	30
Heptachlor Epoxide	0.101	0.0888	0.101	0.0798	88	79	37-142	11	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193040571402	Sample number(s): 1188907								
Mercury	0.00100	0.000994			99		85-115		
Batch number: 193040571608	Sample number(s): 1188907								
Aluminum	0.400	0.401			100		85-115		
Arsenic	0.0600	0.0565			94		85-115		
Barium	0.0100	0.0104			104		85-115		
Chromium	0.0300	0.0296			99		85-115		
Cobalt	0.0100	0.0106			106		85-115		
Copper	0.0400	0.0399			100		85-115		
Iron	0.400	0.411			103		85-115		
Lead	0.0300	0.0325			108		85-115		
Manganese	0.0200	0.0203			101		85-115		
Nickel	2.02	2.12			105		85-115		
Zinc	0.440	0.446			101		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19305385801A	Sample number(s): 1188907								
Total Suspended Solids	150	143.1			95		89-105		
Batch number: 19305964903A	Sample number(s): 1188907								
Total Dissolved Solids	200	197			99		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19305007203A	Sample number(s): 1188907								
pH	7.00	7.02			100		95-105		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193101AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1188907	110	105	95	86
1188908	112	110	95	85
Blank	111	110	95	86

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/08/2019 10:14

Group Number: 2071976

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193101AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	105	104	99	88
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19305WAG625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1188907	80	77	66	37	48	66
Blank	75	74	82	34	49	63
LCS	76	72	83	40	57	79
LCSD	79	74	85	42	59	83
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193050031A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1188907	81	90	69	75
Blank	69	60	57	54
LCS	67	37	60	38
LCSD	54	58	45	56
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2071976 Sample # 1168907-08

COC #593635

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: RENSSELAER	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Jeff DENMAN	Quote #:
State where samples were collected: New York	For Compliance: Yes [X] No [ ]

Matrix

Soil [ ] Sediment [ ] Tissue [ ] | Water: Potable [ ] Ground [ ] NPDES [ ] Surface [/] | Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settleable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	200.7 metals 200.8 245.1	TSS SM 2540 D	Remarks
WWTPEFF103019	10.30.19	0730	X		12	X	X	X	X	X	X	X	X	
TB 18307	11.6.18	0730	X		2				X					
Cooler Temp Bottle	10.30.19	0730			1									Cooler Temp Bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	10.30.19	1730			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by MA	Date 10/31/19	Time 1051

EDD Required? (Yes) No
If yes, format: AECOMEQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 264717

Group Number(s): 2071976

Client: BASF CORPORATION

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 14, 2019 12:09

Project: Rensselaer

Account #: 04285
Group Number: 2073187
SDG: RNT12
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF110619 Grab Water	11/06/2019 16:15	1194931
TB 18340 Grab Water	12/13/2018 16:15	1194932

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF110619 Grab Water**
COC: 593633

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2019 10:34
Collection Date/Time: 11/06/2019 16:15
SDG#: RNT12-01

BASF Corporation
ELLE Sample #: **RW 1194931**
ELLE Group #: **2073187**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	11.3	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.4	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.4	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF110619 Grab Water**
COC: 593633

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2019 10:34
Collection Date/Time: 11/06/2019 16:15
SDG#: RNT12-01

BASF Corporation
ELLE Sample #: RW 1194931
ELLE Group #: 2073187
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0804	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0804	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0804	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0804	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0804	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0804	0.543	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0804	0.543	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0500	0.109	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D2	0.00652	0.0109	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00902	0.0109	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0217	0.0435	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0109	0.0217	1
13634	Delta BHC	319-86-8	N.D. D1	0.0120	0.0326	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00989	0.109	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00544	0.0109	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
01743	Aluminum[1]	7429-90-5	N.D.	0.107	0.300	1
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0621	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07052	Cobalt	7440-48-4	0.0030 J	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	3.13	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	1.11	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0050 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0146 J	0.0037	0.0200	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	447	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	9.25	1.00	3.00	1
		SM 2540 F-2011	**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF110619 Grab Water**
COC: 593633

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2019 10:34
Collection Date/Time: 11/06/2019 16:15
SDG#: RNT12-01

BASF Corporation
ELLE Sample #: **RW 1194931**
ELLE Group #: **2073187**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2550 B-2010**		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.6	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193152AA	11/12/2019 04:06	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19315WAC625	11/12/2019 09:11	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19315WAC625	11/11/2019 15:20	Osvaldo R Sanchez	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	193150007A	11/12/2019 12:41	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193150008A	11/13/2019 00:52	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	193150007A	11/11/2019 19:44	Osvaldo R Sanchez	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193150008A	11/11/2019 19:44	Laura Duquette	1
01743	Aluminum	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07035	Arsenic	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 23:47	Elaine F Stoltzfus	1
00259	Mercury	EPA 245.1 rev 3	1	193110571402	11/11/2019 07:49	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	193110571604	11/07/2019 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	193110571402	11/09/2019 03:07	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19312964901A	11/08/2019 15:11	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19312385802A	11/08/2019 10:37	Amy L Cramer	1
00215	Settleable Solids	SM 2540 F-2011	1	19311021501A	11/07/2019 18:20	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19315003101A	11/11/2019 17:24	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19315003101A	11/11/2019 17:24	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB 18340 Grab Water**
COC: 593633

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2019 10:34
Collection Date/Time: 12/13/2018 16:15
SDG#: RNT12-02TB

BASF Corporation
ELLE Sample #: RW 1194932
ELLE Group #: 2073187
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193171AA	11/13/2019 10:33	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193152AA	Sample number(s): 1194931		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: U193171AA	Sample number(s): 1194932		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19315WAC625	Sample number(s): 1194931		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193150007A	Sample number(s): 1194931		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 193150008A	Sample number(s): 1194931		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 193110571402	Sample number(s): 1194931		
Mercury	N.D.	0.000050	0.00020
Batch number: 193110571604	Sample number(s): 1194931		
Aluminum	N.D.	0.107	0.300
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 19312385802A	Sample number(s): 1194931		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19312964901A	Sample number(s): 1194931		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19311021501A	Sample number(s): 1194931		
Settleable Solids	N.D.	0.10	0.10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193152AA	Sample number(s): 1194931								
Acetone	150	140.28			94		60-140		
Benzene	20	21.94			110		65-135		
Chlorobenzene	20	21.03			105		65-135		
1,2-Dichlorobenzene	20	20.41			102		65-135		
1,3-Dichlorobenzene	20	20.34			102		70-130		
1,4-Dichlorobenzene	20	20.82			104		65-135		
1,2-Dichloroethane	20	20.81			104		70-130		
Ethylbenzene	20	21.15			106		60-140		
Methylene Chloride	20	21.31			107		60-140		
Toluene	20	21.26			106		70-130		
Vinyl Chloride	20	20.34			102		10-195		
Xylene (Total)	60	61.98			103		60-140		
Batch number: U193171AA	Sample number(s): 1194932								
Acetone	150	149.23			99		60-140		
Benzene	20	23.12			116		65-135		
Chlorobenzene	20	22.4			112		65-135		
1,2-Dichlorobenzene	20	21.68			108		65-135		
1,3-Dichlorobenzene	20	21.67			108		70-130		
1,4-Dichlorobenzene	20	22.14			111		65-135		
1,2-Dichloroethane	20	22			110		70-130		
Ethylbenzene	20	22			110		60-140		
Methylene Chloride	20	22.54			113		60-140		
Toluene	20	22.38			112		70-130		
Vinyl Chloride	20	20.68			103		10-195		
Xylene (Total)	60	65.07			108		60-140		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19315WAC625	Sample number(s): 1194931								
Anthracene	50	47.76			96		27-133		
Benzo(a)anthracene	50	46.57			93		33-143		
Benzo(a)pyrene	50	46.94			94		17-163		
Benzo(b)fluoranthene	50	50.76			102		24-159		
Benzo(k)fluoranthene	50	47.64			95		11-162		
Butylbenzylphthalate	50	43.57			87		10-152		
Di-n-butylphthalate	50	43.04			86		10-118		
Carbazole	50	49.07			98		79-112		
4-Chloroaniline	50	40.07			80		52-105		
2-Chloronaphthalene	50	36.44			73		60-118		
Chrysene	50	49.58			99		17-168		
Dibenz(a,h)anthracene	50	45.52			91		10-200		
bis(2-Ethylhexyl)phthalate	50	41.56			83		10-158		
Fluoranthene	50	49.58			99		26-137		
Indeno(1,2,3-cd)pyrene	50	43.7			87		10-171		
2-Methylnaphthalene	50	39.92			80		59-101		
4-Methylphenol	50	44.44			89		62-98		
Naphthalene	50	39.82			80		21-133		
N-Nitrosodimethylamine	50	26.29			53		38-74		
Phenanthrene	50	47.46			95		54-120		
Phenol	50	26.54			53		10-112		
Pyrene	50	47.9			96		52-115		
1,2,4-Trichlorobenzene	50	36.69			73		44-142		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193150007A	Sample number(s): 1194931								
PCB-1016	5.02	3.55	5.02	3.80	71	76	50-140	7	36
PCB-1260	5.05	4.80	5.05	4.43	95	88	10-140	8	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193150008A	Sample number(s): 1194931								
Beta BHC	0.100	0.0846	0.100	0.0933	85	93	17-147	10	44
Alpha Chlordane	0.100	0.0832	0.100	0.0962	83	96	45-140	14	35
Gamma Chlordane	0.100	0.0794	0.100	0.0919	79	92	45-140	15	35
p,p-DDE	0.200	0.150	0.200	0.176	75	88	30-145	16	35
p,p-DDT	0.201	0.176	0.201	0.204	87	101	25-160	15	30
Delta BHC	0.100	0.0849	0.100	0.0880	85	88	19-140	4	52
Endrin Aldehyde	0.200	0.168	0.200	0.185	84	93	60-140	10	30
Heptachlor Epoxide	0.101	0.0855	0.101	0.100	84	99	37-142	16	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193110571402	Sample number(s): 1194931								
Mercury	0.00100	0.00110			110		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 193110571604	Sample number(s): 1194931								
Aluminum	0.400	0.397			99		85-115		
Arsenic	0.0600	0.0612			102		85-115		
Barium	0.0100	0.00992			99		85-115		
Chromium	0.0300	0.0307			102		85-115		
Cobalt	0.0100	0.0102			102		85-115		
Copper	0.0400	0.0396			99		85-115		
Iron	0.400	0.408			102		85-115		
Lead	0.0300	0.0311			104		85-115		
Manganese	0.0200	0.0211			106		85-115		
Nickel	2.02	2.09			103		85-115		
Zinc	0.440	0.449			102		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19312385802A	Sample number(s): 1194931								
Total Suspended Solids	150	148.5			99		89-105		
Batch number: 19312964901A	Sample number(s): 1194931								
Total Dissolved Solids	200	205			103		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19315003101A	Sample number(s): 1194931								
pH	7.00	6.99			100		95-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 193110571402	Sample number(s): 1194931 UNSPK: 1194931									
Mercury	N.D.	0.00100	0.000951			95		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 193110571402	Sample number(s): 1194931 BKG: 1194931			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1194931	110	109	96	95
Blank	108	108	96	96
LCS	102	101	100	98
Limits:	60-140	60-140	60-140	60-140

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193171AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1194932	109	109	95	95
Blank	110	107	95	94
LCS	100	100	99	96
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19315WAC625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1194931	66	74	49	25	31	59
Blank	77	80	87	39	48	80
LCS	78	78	80	45	52	82
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 193150007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1194931	46	53	54	62
Blank	62	59	71	72
LCS	28	61	34	83

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/14/2019 12:09

Group Number: 2073187

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 193150007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCSD	31	57	36	71
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193150008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1194931	50	51	50	53
Blank	57	61	58	58
LCS	49	62	51	61
LCSD	57	55	58	52
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4286 Group # 2073187 Sample # 1194731-32

COC #593633

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: JEFF DENMAN	Quote #:
State where samples were collected: New York	For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☐ NPDES ☒ Surface ☐ Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settleable Solids 160.5	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.8 200.8 245.1	PCB EPA 608	TSS SM 2540 D	Remarks
WWTPEFF110619	11.06.19	1615	X		12	X	X	X	X	X	X	X	X	X	
TB 18340	12.13.18	1615	X		2				X						
Cooler Temp Bottle	11.06.19				1										Cooler Temp Bottle

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	11.06.19	1730			
				11/7/19	1034

EDD Required? Yes No

If yes, format: AECOM EQuIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 4.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 265578

Group Number(s): 2073187

Client: BASF CORPORATION

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/07/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	4.4	IR	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 14, 2019 10:10

Project: Rensselaer

Account #: 04285
Group Number: 2073580
SDG: RNT13
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPWFF103019 Grab Water	10/30/2019 07:30	1196748

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPWFF103019 Grab Water**
COC: 593635

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2019 21:19
Collection Date/Time: 10/30/2019 07:30
SDG#: RNT13-01

BASF Corporation
ELLE Sample #: RW 1196748
ELLE Group #: 2073580
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0819	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0819	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0819	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0819	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0819	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0819	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0819	0.553	1

Sample Comments

This sample was originally submitted to the laboratory on 10/31/19 at 10:51. We received authorization for further testing on 11/08/19.
State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	193150007A	11/12/2019 12:51	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	193150007A	11/11/2019 19:44	Osvaldo R Sanchez	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2073580
Reported: 11/14/2019 10:10

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 193150007A	Sample number(s): 1196748		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 193150007A	Sample number(s): 1196748								
PCB-1016	5.02	3.55	5.02	3.80	71	76	50-140	7	36
PCB-1260	5.05	4.80	5.05	4.43	95	88	10-140	8	38

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 193150007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1196748	50	80	59	90
Blank	62	59	71	72
LCS	28	61	34	83
LCSD	31	57	36	71
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2071976 2073580 Sample # 468907-08 1186248 pH 1/25 11/9/18 (8) re-submit

COC #593635

Client Information

Client: BASF Corp
Acct. #:
Project Name/#: RENSSELAER
PWSID #:
Project Manager: John Bleiler
P.O. #:
Sampler: Jeff Denman
Quote #:
State where samples were collected: New York
For Compliance: Yes [X] No [ ]

Matrix

Soil [ ] Sediment [ ] Tissue [ ] Water: Potable [ ] Ground [ ] NPDES [/] Surface Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Potable	Ground	NPDES	Surface	Other	Total # of Containers	pH 150.1	Settleable Solids 160.2	TDS 160.1	VOC 624	DAH 625	Pesticides 608	Metals 200.7 200.8 245.1	TSS SM 2540D	Remarks
WWTPEFF103019	10.30.19	0730	X					X						12	X	X	X	X	X	X	X	X	
TB 18307	11.6.18	0730	X					X						2				X					
Cooler Temp Bottle	10.30.19	0730						X					X	1									Cooler Temp Bottle

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: John.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP)
Type VI (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	10.30.19	1730			
			NA	10/31/19	1051

EDD Required? (Yes) No
If yes, format: AECOM EQUIS 4
Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____
Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 264717

Group Number(s): 2073580

Client: BASF CORPORATION

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	1.3	IR	Wet	Y	Bagged	N

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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 25, 2019 09:44

Project: Rensselaer

Account #: 04285
Group Number: 2074510
SDG: RNT14
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF111319 Grab Water	11/13/2019 10:40	1201125
TB19303 Grab Water	11/04/2019 10:40	1201126

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF111319 Grab Water**
COC: 577970

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2019 11:02
Collection Date/Time: 11/13/2019 10:40
SDG#: RNT14-01

BASF Corporation
ELLE Sample #: **RW 1201125**
ELLE Group #: **2074510**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	16.9	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	0.22 J	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	6	1
14669	Carbazole		86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.7	6	1
14669	Chrysene		218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	6	1
14669	Fluoranthene		206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	6	1
14669	Phenanthrene		85-01-8	N.D.	0.1	6	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF111319 Grab Water**
COC: 577970

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2019 11:02
Collection Date/Time: 11/13/2019 10:40
SDG#: RNT14-01

BASF Corporation
ELLE Sample #: RW 1201125
ELLE Group #: 2074510
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0784	0.530	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0784	0.530	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0784	0.530	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0784	0.530	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0784	0.530	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0784	0.530	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0784	0.530	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0487	0.106	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00636	0.0106	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00879	0.0106	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0212	0.0424	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0106	0.0212	1
13634	Delta BHC	319-86-8	N.D. D1	0.0117	0.0318	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00964	0.106	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00530	0.0106	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0322	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.604	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.718	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0067 J	0.0037	0.0200	1
		EPA 200.8 rev 5.4	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	N.D.	0.0985	0.125	5
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	396	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	1.04 J	1.00	3.00	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF111319 Grab Water**
COC: 577970

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2019 11:02
Collection Date/Time: 11/13/2019 10:40
SDG#: RNT14-01

BASF Corporation
ELLE Sample #: RW 1201125
ELLE Group #: 2074510
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.1	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	8.0	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193193AA	11/16/2019 03:54	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19318WAK625	11/18/2019 22:56	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19318WAK625	11/15/2019 09:00	Joshua S Ruth	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	193220033A	11/21/2019 02:23	Jessica L Miller	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193220032A	11/20/2019 00:28	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	193220033A	11/19/2019 09:30	Joshua S Ruth	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193220032A	11/19/2019 09:30	Joshua S Ruth	1
07035	Arsenic	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07046	Barium	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07051	Chromium	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07052	Cobalt	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07053	Copper	EPA 200.7 rev 4.4	1	193180571605	11/16/2019 12:10	Christina Termini	1
01754	Iron	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07055	Lead	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07058	Manganese	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07061	Nickel	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
07072	Zinc	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 18:17	Patrick J Engle	1
06023	Aluminum	EPA 200.8 rev 5.4	1	193230705004A	11/20/2019 10:19	Janeyah Rivers-Hamilton	5
00259	Mercury	EPA 245.1 rev 3	1	193180571403	11/18/2019 08:57	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	193180571605	11/15/2019 06:00	Annamaria Kuhns	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	193230705004	11/19/2019 14:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	193180571403	11/18/2019 03:41	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19319964902A	11/15/2019 16:30	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19319385801A	11/15/2019 09:28	Amy L Cramer	1
00215	Settleable Solids	SM 2540 F-2011	1	19318021501A	11/14/2019 17:05	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19322002102A	11/18/2019 19:45	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19322002102A	11/18/2019 19:45	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19303 Grab Water**
COC: 577970

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2019 11:02
Collection Date/Time: 11/04/2019 10:40
SDG#: RNT14-02TB

BASF Corporation
ELLE Sample #: RW 1201126
ELLE Group #: 2074510
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193193AA	11/16/2019 03:31	John Glacken	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2074510
Reported: 11/25/2019 09:44

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193193AA	Sample number(s): 1201125-1201126		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19318WAK625	Sample number(s): 1201125		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193220033A	Sample number(s): 1201125		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/25/2019 09:44

Group Number: 2074510

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 193220032A	Sample number(s): 1201125		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 193180571403	Sample number(s): 1201125		
Mercury	N.D.	0.000050	0.00020
Batch number: 193180571605	Sample number(s): 1201125		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 193230705004A	Sample number(s): 1201125		
Aluminum	N.D.	0.0197	0.0250
Batch number: 19319385801A	Sample number(s): 1201125		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19319964902A	Sample number(s): 1201125		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19318021501A	Sample number(s): 1201125		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/25/2019 09:44

Group Number: 2074510

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193193AA	Sample number(s): 1201125-1201126								
Acetone	150	113.71			76		60-140		
Benzene	20	20.53			103		65-135		
Chlorobenzene	20	21.25			106		65-135		
1,2-Dichlorobenzene	20	21.29			106		65-135		
1,3-Dichlorobenzene	20	21.48			107		70-130		
1,4-Dichlorobenzene	20	21.65			108		65-135		
1,2-Dichloroethane	20	19.66			98		70-130		
Ethylbenzene	20	21.63			108		60-140		
Methylene Chloride	20	18.02			90		60-140		
Toluene	20	21.9			109		70-130		
Vinyl Chloride	20	16.17			81		10-195		
Xylene (Total)	60	64.16			107		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19318WAK625	Sample number(s): 1201125								
Anthracene	50	48.36	50	46.26	97	93	27-133	4	30
Benzo(a)anthracene	50	45.91	50	43.05	92	86	33-143	6	30
Benzo(a)pyrene	50	47.02	50	42.98	94	86	17-163	9	30
Benzo(b)fluoranthene	50	47.46	50	48	95	96	24-159	1	30
Benzo(k)fluoranthene	50	51.19	50	48.5	102	97	11-162	5	30
Butylbenzylphthalate	50	46.31	50	33.97	93	68	10-152	31*	30
Di-n-butylphthalate	50	47.49	50	41.63	95	83	10-118	13	30
Carbazole	50	50.17	50	49.12	100	98	79-112	2	30
4-Chloroaniline	50	32.88	50	33.47	66	67	52-105	2	30
2-Chloronaphthalene	50	42.1	50	32.42	84	65	60-118	26*	24
Chrysene	50	46.2	50	43.34	92	87	17-168	6	30
Dibenz(a,h)anthracene	50	43.39	50	48.48	87	97	10-200	11	30
bis(2-Ethylhexyl)phthalate	50	49.05	50	38.65	98	77	10-158	24	30
Fluoranthene	50	45.93	50	46.04	92	92	26-137	0	30
Indeno(1,2,3-cd)pyrene	50	42.29	50	47.28	85	95	10-171	11	30
2-Methylnaphthalene	50	37.33	50	37.11	75	74	59-101	1	30
4-Methylphenol	50	38.77	50	34.76	78	70	62-98	11	30
Naphthalene	50	38.65	50	38.22	77	76	21-133	1	30
N-Nitrosodimethylamine	50	23.45	50	22.32	47	45	38-74	5	30
Phenanthrene	50	47.34	50	46.74	95	93	54-120	1	30
Phenol	50	18.61	50	15.94	37	32	10-112	15	30
Pyrene	50	49.44	50	44.38	99	89	52-115	11	30
1,2,4-Trichlorobenzene	50	30.57	50	31.79	61	64	44-142	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 193220033A	Sample number(s): 1201125								
PCB-1016	5.02	3.72	5.02	4.49	74	89	50-140	19	36

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/25/2019 09:44

Group Number: 2074510

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.18	5.05	5.11	83	101	10-140	20	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193220032A	Sample number(s): 1201125								
Beta BHC	0.100	0.0936	0.100	0.0954	94	95	17-147	2	44
Alpha Chlordane	0.100	0.0817	0.100	0.0867	82	87	45-140	6	35
Gamma Chlordane	0.100	0.0793	0.100	0.0804	79	80	45-140	1	35
p,p-DDE	0.200	0.137	0.200	0.143	69	71	30-145	4	35
p,p-DDT	0.201	0.175	0.201	0.175	87	87	25-160	0	30
Delta BHC	0.100	0.0851	0.100	0.0966	85	97	19-140	13	52
Endrin Aldehyde	0.200	0.174	0.200	0.176	87	88	60-140	1	30
Heptachlor Epoxide	0.101	0.0963	0.101	0.100	95	99	37-142	4	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193180571403	Sample number(s): 1201125								
Mercury	0.00100	0.00102			102		85-115		
Batch number: 193180571605	Sample number(s): 1201125								
Arsenic	0.0600	0.0573			96		85-115		
Barium	0.0100	0.0100			100		85-115		
Chromium	0.0300	0.0295			98		85-115		
Cobalt	0.0100	0.0100			100		85-115		
Copper	0.0400	0.0426			107		85-115		
Iron	0.400	0.380			95		85-115		
Lead	0.0300	0.0306			102		85-115		
Manganese	0.0200	0.0202			101		85-115		
Nickel	2.02	2.05			101		85-115		
Zinc	0.440	0.436			99		85-115		
Batch number: 193230705004A	Sample number(s): 1201125								
Aluminum	0.200	0.203	0.200	0.204	101	102	85-115	1	20
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19319385801A	Sample number(s): 1201125								
Total Suspended Solids	150	148.1			99		89-105		
Batch number: 19319964902A	Sample number(s): 1201125								
Total Dissolved Solids	200	184			92		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19322002102A	Sample number(s): 1201125								
pH	7.00	7.00			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 11/25/2019 09:44

Group Number: 2074510

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 193180571605	Sample number(s): 1201125 UNSPK: 1201125									
Arsenic	N.D.	0.0600	0.0645			108		70-130		
Barium	0.0322	0.0100	0.0399			77		70-130		
Chromium	N.D.	0.0300	0.0302			101		70-130		
Cobalt	N.D.	0.0100	0.00974			97		70-130		
Copper	N.D.	0.0400	0.0419			105		70-130		
Iron	0.604	0.400	0.965			90		70-130		
Lead	N.D.	0.0300	0.0297			99		70-130		
Manganese	0.718	0.0200	0.701			-86 (2)		70-130		
Nickel	N.D.	2.02	1.95			97		70-130		
Zinc	0.00673	0.440	0.431			97		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 193180571605	Sample number(s): 1201125 BKG: 1201125			
Arsenic	N.D.	N.D.	0 (1)	20
Barium	0.0322	0.0310	4	20
Chromium	N.D.	N.D.	0 (1)	20
Cobalt	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	0.604	0.590	2 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Manganese	0.718	0.701	2	20
Nickel	N.D.	N.D.	0 (1)	20
Zinc	0.00673	0.00704	5 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193193AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/25/2019 09:44

Group Number: 2074510

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193193AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1201125	101	102	99	93
1201126	101	102	99	95
Blank	102	102	98	96
LCS	98	98	101	97
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19318WAK625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1201125	73	71	75	27	40	46
Blank	76	69	81	27	39	70
LCS	68	70	88	34	59	75
LCSD	82	71	77	31	47	79
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193220032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1201125	72	78	72	82
Blank	69	56	66	53
LCS	67	57	65	55
LCSD	65	81	62	77
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 193220033A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1201125	71	77	70	75
Blank	71	55	70	52
LCS	54	66	54	65
LCSD	67	73	67	73
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2074610 Sample # 1201125-26

COC # 577970

Client Information

Client: BASF Corp | Acct. #:

Project Name/#: Rensselaer | PWSID #:

Project Manager: John Bleiler | P.O. #:

Sampler: Jeff Denman | Quote #:

State where samples were collected: New York | For Compliance: Yes ☒ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: Cooler Temp Bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.7 200.8 245.1	PCB EPA 608	TSS SM2540D	Remarks
WWTPEFF111319	11.13.19	1040	X		12	X	X	X	X	X	X	X	X	X	
TB 19303	11.4.19	1040	X		2				X						
Cooler Temp Bottle	11.13.19				1										Cooler Temp bottle

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Jeff Denman	11.13.19	1700			
			CM Wells	11/14/19	11:00

EDD Required? Yes No

If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 3.10 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 266399

Group Number(s): 207510

Client: BASF CORP.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/14/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	3.6	IR	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 05, 2019 12:40

Project: Rensselaer

Account #: 04285
Group Number: 2076594
SDG: RNT15
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF112519 Grab Water	11/25/2019 09:00	1211347
TB19308 Water	11/12/2019 09:00	1211348

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF112519 Grab Water**
COC: 593634

Project Name: **Rensselaer**

Submittal Date/Time: 11/26/2019 10:26
Collection Date/Time: 11/25/2019 09:00
SDG#: RNT15-01

BASF Corporation
ELLE Sample #: RW 1211347
ELLE Group #: 2076594
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.5	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.5	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF112519 Grab Water**
COC: 593634

Project Name: **Rensselaer**

Submittal Date/Time: 11/26/2019 10:26
Collection Date/Time: 11/25/2019 09:00
SDG#: RNT15-01

BASF Corporation
ELLE Sample #: RW 1211347
ELLE Group #: 2076594
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0771	0.521	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0771	0.521	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0771	0.521	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0771	0.521	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0771	0.521	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0771	0.521	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0771	0.521	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0479	0.104	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00625	0.0104	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00865	0.0104	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0208	0.0417	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0104	0.0208	1
13634	Delta BHC	319-86-8	N.D. D1	0.0115	0.0313	1
13634	Endrin Aldehyde	7421-93-4	N.D. D2	0.00948	0.104	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00521	0.0104	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0527	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0021 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.216	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.662	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0086 J	0.0037	0.0200	1
		EPA 200.8 rev 5.4	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0689	0.0197	0.0250	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	522	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.99 J	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF112519 Grab Water**
COC: 593634

Project Name: **Rensselaer**

Submittal Date/Time: 11/26/2019 10:26
Collection Date/Time: 11/25/2019 09:00
SDG#: RNT15-01

BASF Corporation
ELLE Sample #: RW 1211347
ELLE Group #: 2076594
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.2	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.8	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193371AA	12/03/2019 18:22	John Glacken	1
14669	Method 625.1 MINI	EPA 625.1	1	19331WAE625	12/03/2019 17:27	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19331WAE625	11/27/2019 12:10	Christine E Gleim	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	193360006A	12/04/2019 05:18	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193360005A	12/03/2019 18:52	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	193360006A	12/02/2019 17:45	Osvaldo R Sanchez	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193360005A	12/02/2019 17:45	Laura Duquette	1
07035	Arsenic	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07046	Barium	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07051	Chromium	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07052	Cobalt	EPA 200.7 rev 4.4	1	193300571604	12/03/2019 09:27	Lisa J Cooke	1
07053	Copper	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
01754	Iron	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07055	Lead	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07058	Manganese	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07061	Nickel	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
07072	Zinc	EPA 200.7 rev 4.4	1	193300571604	12/02/2019 22:17	Cindy M Gehman	1
06023	Aluminum	EPA 200.8 rev 5.4	1	193300705004A	12/02/2019 12:21	Janeyah Rivers-Hamilton	1
00259	Mercury	EPA 245.1 rev 3	1	193290571401	12/02/2019 08:15	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	193300571604	11/27/2019 03:41	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	193300705004	11/27/2019 03:41	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	193290571401	11/29/2019 04:35	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19331964901A	11/27/2019 13:11	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	19331385801A	11/27/2019 13:29	Angelica Cintron	1
00215	Settleable Solids	SM 2540 F-2011	1	19330021501A	11/26/2019 14:30	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19330008201A	11/26/2019 18:08	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19330008201A	11/26/2019 18:08	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19308 Water**
COC: 593634

Project Name: **Rensselaer**

Submittal Date/Time: 11/26/2019 10:26
Collection Date/Time: 11/12/2019 09:00
SDG#: RNT15-02TB

BASF Corporation
ELLE Sample #: RW 1211348
ELLE Group #: 2076594
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	0.12 J	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193371AA	12/03/2019 17:59	John Glacken	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193371AA	Sample number(s): 1211347-1211348		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19331WAE625	Sample number(s): 1211347		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193360006A	Sample number(s): 1211347		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 193360005A	Sample number(s): 1211347		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 193290571401	Sample number(s): 1211347		
Mercury	N.D.	0.000050	0.00020
Batch number: 193300571604	Sample number(s): 1211347		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 193300705004A	Sample number(s): 1211347		
Aluminum	N.D.	0.0197	0.0250
Batch number: 19331385801A	Sample number(s): 1211347		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 19331964901A	Sample number(s): 1211347		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19330021501A	Sample number(s): 1211347		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193371AA	Sample number(s): 1211347-1211348								
Acetone	150	112.87			75		60-140		
Benzene	20	21.43			107		65-135		
Chlorobenzene	20	20.89			104		65-135		
1,2-Dichlorobenzene	20	20.65			103		65-135		
1,3-Dichlorobenzene	20	20.42			102		70-130		
1,4-Dichlorobenzene	20	21.07			105		65-135		
1,2-Dichloroethane	20	19.93			100		70-130		
Ethylbenzene	20	20.75			104		60-140		
Methylene Chloride	20	20.13			101		60-140		
Toluene	20	20.74			104		70-130		
Vinyl Chloride	20	18.26			91		10-195		
Xylene (Total)	60	62.88			105		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 19331WAE625	Sample number(s): 1211347								
Anthracene	50	46.91	50	47.38	94	95	27-133	1	30
Benzo(a)anthracene	50	47.3	50	47.72	95	95	33-143	1	30
Benzo(a)pyrene	50	47.13	50	46.46	94	93	17-163	1	30
Benzo(b)fluoranthene	50	47.92	50	48.87	96	98	24-159	2	30
Benzo(k)fluoranthene	50	52.88	50	51.9	106	104	11-162	2	30
Butylbenzylphthalate	50	24.65	50	28.39	49	57	10-152	14	30
Di-n-butylphthalate	50	35.99	50	38.48	72	77	10-118	7	30
Carbazole	50	47.03	50	47.81	94	96	79-112	2	30
4-Chloroaniline	50	39.02	50	39.74	78	79	52-105	2	30
2-Chloronaphthalene	50	46.1	50	44.19	92	88	60-118	4	24
Chrysene	50	47.19	50	47.89	94	96	17-168	1	30
Dibenz(a,h)anthracene	50	45.51	50	46.76	91	94	10-200	3	30
bis(2-Ethylhexyl)phthalate	50	43.42	50	43.17	87	86	10-158	1	30
Fluoranthene	50	46.45	50	47.44	93	95	26-137	2	30
Indeno(1,2,3-cd)pyrene	50	44.14	50	45.07	88	90	10-171	2	30
2-Methylnaphthalene	50	40.02	50	38.36	80	77	59-101	4	30
4-Methylphenol	50	37.45	50	38.06	75	76	62-98	2	30
Naphthalene	50	38.3	50	38.09	77	76	21-133	1	30
N-Nitrosodimethylamine	50	25.49	50	28.36	51	57	38-74	11	30
Phenanthrene	50	47.95	50	48.05	96	96	54-120	0	30
Phenol	50	21.17	50	23.17	42	46	10-112	9	30
Pyrene	50	48.19	50	45.8	96	92	52-115	5	30
1,2,4-Trichlorobenzene	50	36.18	50	34.34	72	69	44-142	5	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193360006A	Sample number(s): 1211347								
PCB-1016	5.02	4.05	5.02	3.69	81	73	50-140	9	36

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.38	5.05	4.11	87	82	10-140	6	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193360005A	Sample number(s): 1211347								
Beta BHC	0.100	0.0916	0.100	0.105	92	105	17-147	13	44
Alpha Chlordane	0.100	0.0788	0.100	0.0908	79	91	45-140	14	35
Gamma Chlordane	0.100	0.0763	0.100	0.0873	76	87	45-140	13	35
p,p-DDE	0.200	0.140	0.200	0.166	70	83	30-145	17	35
p,p-DDT	0.201	0.154	0.201	0.188	77	94	25-160	20	30
Delta BHC	0.100	0.0849	0.100	0.0986	85	99	19-140	15	52
Endrin Aldehyde	0.200	0.164	0.200	0.198	82	99	60-140	19	30
Heptachlor Epoxide	0.101	0.0847	0.101	0.100	84	99	37-142	17	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193290571401	Sample number(s): 1211347								
Mercury	0.00100	0.000995			100		85-115		
Batch number: 193300571604	Sample number(s): 1211347								
Arsenic	0.0600	0.0584			97		85-115		
Barium	0.0100	0.0101			101		85-115		
Chromium	0.0300	0.0307			102		85-115		
Cobalt	0.0100	0.0113			113		85-115		
Copper	0.0400	0.0421			105		85-115		
Iron	0.400	0.445			111		85-115		
Lead	0.0300	0.0319			106		85-115		
Manganese	0.0200	0.0211			106		85-115		
Nickel	2.02	2.07			102		85-115		
Zinc	0.440	0.435			99		85-115		
Batch number: 193300705004A	Sample number(s): 1211347								
Aluminum	0.200	0.227			113		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19331385801A	Sample number(s): 1211347								
Total Suspended Solids	150	146.9			98		89-105		
Batch number: 19331964901A	Sample number(s): 1211347								
Total Dissolved Solids	200	202			101		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19330008201A	Sample number(s): 1211347								
pH	7.00	7.01			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: U193371AA	Sample number(s): 1211347-1211348 UNSPK: 1211347									
Acetone	N.D.	150	122.96	150	127.46	82	85	60-140	4	30
Benzene	N.D.	20	25.15	20	23.78	126	119	37-151	6	30
Chlorobenzene	N.D.	20	23.59	20	22.76	118	114	37-160	4	30
1,2-Dichlorobenzene	N.D.	20	23.39	20	22.42	117	112	18-190	4	30
1,3-Dichlorobenzene	N.D.	20	22.85	20	22.8	114	114	59-156	0	30
1,4-Dichlorobenzene	N.D.	20	23.63	20	23.2	118	116	18-190	2	30
1,2-Dichloroethane	N.D.	20	22.44	20	21.49	112	107	49-155	4	30
Ethylbenzene	N.D.	20	24	20	23.13	120	116	37-162	4	30
Methylene Chloride	N.D.	20	22.75	20	22	114	110	10-200	3	28
Toluene	N.D.	20	24.13	20	23.57	121	118	47-150	2	30
Vinyl Chloride	N.D.	20	22.74	20	21.18	114	106	10-200	7	30
Xylene (Total)	N.D.	60	71.98	60	69.64	120	116	60-140	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1211347	109	105	92	86
1211348	110	103	94	87
Blank	107	103	93	88
LCS	105	103	96	90
MS	103	106	95	90
MSD	103	104	95	90
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19331WAE625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1211347	78	65	45	35	49	74
Blank	76	71	86	28	44	78
LCS	83	87	90	36	52	93
LCSD	87	87	88	37	55	93

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/05/2019 12:40

Group Number: 2076594

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Method 625.1 MINI
Batch number: 19331WAE625

Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193360005A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1211347	65	63	69	73
Blank	84	62	88	66
LCS	52	38	58	41
LCSD	62	44	68	47
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 193360006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1211347	64	69	64	71
Blank	85	66	84	66
LCS	40	59	39	55
LCSD	34	53	33	53
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 For Eurofins Lancaster Laboratories Environmental use only Group # 2076594 Sample # 2113471-48

COC # 593634

Client Information

Client: BASF Corp.	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Patrick Gehan	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☐ NPDES ☑ | Other: cooler temp. bottle

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.7, 200.8, 245.1, 200.9	PCB - EPA 608	TSS SM2540D	Remarks
WWTPEFF112519	11/25/19	0900	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TB19308	11/12/19	0900	✓		2				✓						
cooler temp. bottle	11/25/19				1										cooler temp. bottle

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/25/19	1700			
			Eli Wells	11/26/19	10:26

EDD Required? (Yes) No
If yes, format: AECOM EQUIS

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 267840

Group Number(s): 2076594

Client: Basf Corp.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	11/26/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	2.1	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 20, 2019 12:03

Project: Rensselaer

Account #: 04285
Group Number: 2078958
SDG: RNT16
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF121119 Grab Water	12/11/2019 08:00	1221281
TB19308 Water	11/12/2019 08:00	1221282

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF121119 Grab Water**
COC: 577973

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2019 10:44
Collection Date/Time: 12/11/2019 08:00
SDG#: RNT16-01

BASF Corporation
ELLE Sample #: **RW 1221281**
ELLE Group #: **2078958**
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	0.13 J	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles	**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene	120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene	56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene	50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	6	1
14669	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate	85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate	84-74-2	N.D.	1	6	1
14669	Carbazole	86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]	106-47-8	N.D.	0.1	6	1
14669	2-Chloronaphthalene	91-58-7	N.D.	0.7	6	1
14669	Chrysene	218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	1	6	1
14669	Fluoranthene	206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]	91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]	106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
14669	Naphthalene	91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine	62-75-9	N.D.	0.5	6	1
14669	Phenanthrene	85-01-8	N.D.	0.1	6	1
14669	Phenol[1]	108-95-2	N.D.	0.5	1	1
14669	Pyrene	129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.2	1	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF121119 Grab Water**
COC: 577973

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2019 10:44
Collection Date/Time: 12/11/2019 08:00
SDG#: RNT16-01

BASF Corporation
ELLE Sample #: RW 1221281
ELLE Group #: 2078958
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0837	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0837	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0837	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0837	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0837	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0837	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0837	0.566	1
Pesticides	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0520	0.113	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00679	0.0113	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D2	0.00939	0.0113	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0226	0.0452	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0113	0.0226	1
13634	Delta BHC	319-86-8	N.D. D1	0.0124	0.0339	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.0103	0.113	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00566	0.0113	1

The response for a target analyte(s) in the continuing calibration verification standard is outside the QC acceptance limits. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.
The Blank was acquired before the Laboratory Control Spike(s).

Metals	**EPA 200.7 rev 4.4**		**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0742	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0023 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D. K3	0.0120	0.0200	1
01754	Iron	7439-89-6	0.198 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.973	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0022 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0135 J	0.0037	0.0200	1
	EPA 200.8 rev 5.4		**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0493	0.0197	0.0250	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000094 J	0.000050	0.00020	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF121119 Grab Water**
COC: 577973

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2019 10:44
Collection Date/Time: 12/11/2019 08:00
SDG#: RNT16-01

BASF Corporation
ELLE Sample #: RW 1221281
ELLE Group #: 2078958
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 C-2011**		**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	478	20.0	60.0	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.00 J	2.00	6.00	1
	Reporting limits were raised due to limited sample volume. The recovery for the Laboratory Control Sample for the initial trial was outside the QC acceptance limits. The result for the initial trial was 3.73 mg/l. The sample was reanalyzed within hold time at a reduced volume. The second trial is reported.					
	SM 2540 F-2011		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.8	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.6	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193511AA	12/17/2019 12:16	Jason M Long	1
14669	Method 625.1 MINI	EPA 625.1	1	19346WAE625	12/17/2019 00:32	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	19346WAE625	12/13/2019 10:00	David S Schrum	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	193470006A	12/16/2019 12:49	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	193470007A	12/16/2019 15:40	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	193470006A	12/13/2019 16:50	Osvaldo R Sanchez	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	193470007A	12/13/2019 16:50	Laura Duquette	1
07035	Arsenic	EPA 200.7 rev 4.4	1	193460571604	12/16/2019 09:09	Lisa J Cooke	1
07046	Barium	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1
07051	Chromium	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1
07052	Cobalt	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1
07053	Copper	EPA 200.7 rev 4.4	1	193460571604	12/15/2019 19:09	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	193460571604	12/15/2019 19:09	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	193460571604	12/16/2019 06:57	Lisa J Cooke	1
07058	Manganese	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1
07061	Nickel	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1
07072	Zinc	EPA 200.7 rev 4.4	1	193460571604	12/14/2019 13:25	Christina Termini	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF121119 Grab Water**
COC: 577973

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2019 10:44
Collection Date/Time: 12/11/2019 08:00
SDG#: RNT16-01

BASF Corporation
ELLE Sample #: RW 1221281
ELLE Group #: 2078958
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06023	Aluminum	EPA 200.8 rev 5.4	1	193460705006A	12/16/2019 11:42	Janeyah Rivers-Hamilton	1
00259	Mercury	EPA 245.1 rev 3	1	193460571403	12/16/2019 11:37	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	193460571604	12/13/2019 05:45	Annamaria Kuhns	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	193460705006	12/13/2019 05:45	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	193460571403	12/16/2019 04:42	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	19347964901A	12/13/2019 20:17	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	2	19351385804A	12/17/2019 12:22	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	19346021501A	12/12/2019 16:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	19346003101A	12/12/2019 17:50	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	19346003101A	12/12/2019 17:50	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19308 Water**
COC: 577973

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2019 10:44
Collection Date/Time: 11/12/2019 08:00
SDG#: RNT16-02TB

BASF Corporation
ELLE Sample #: RW 1221282
ELLE Group #: 2078958
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	0.12 J	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193511AA	12/17/2019 11:53	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2078958
Reported: 12/20/2019 12:03

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193511AA	Sample number(s): 1221281-1221282		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 19346WAE625	Sample number(s): 1221281		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 193470006A	Sample number(s): 1221281		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2019 12:03

Group Number: 2078958

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 193470007A	Sample number(s): 1221281		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 193460571403	Sample number(s): 1221281		
Mercury	N.D.	0.000050	0.00020
Batch number: 193460571604	Sample number(s): 1221281		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 193460705006A	Sample number(s): 1221281		
Aluminum	N.D.	0.0197	0.0250
Batch number: 19347964901A	Sample number(s): 1221281		
Total Dissolved Solids	N.D.	10.0	30.0
Batch number: 19351385804A	Sample number(s): 1221281		
Total Suspended Solids	N.D.	1.00	3.00
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 19346021501A	Sample number(s): 1221281		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2019 12:03

Group Number: 2078958

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193511AA	Sample number(s): 1221281-1221282								
Acetone	150	103.22			69		60-140		
Benzene	20	19.85			99		65-135		
Chlorobenzene	20	19.74			99		65-135		
1,2-Dichlorobenzene	20	20.51			103		65-135		
1,3-Dichlorobenzene	20	20.29			101		70-130		
1,4-Dichlorobenzene	20	20.48			102		65-135		
1,2-Dichloroethane	20	18.88			94		70-130		
Ethylbenzene	20	19.95			100		60-140		
Methylene Chloride	20	19.16			96		60-140		
Toluene	20	19.91			100		70-130		
Vinyl Chloride	20	18.65			93		10-195		
Xylene (Total)	60	59.92			100		60-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 19346WAE625	Sample number(s): 1221281								
Anthracene	50	40.52	50	45.88	81	92	27-133	12	30
Benzo(a)anthracene	50	43.9	50	50.07	88	100	33-143	13	30
Benzo(a)pyrene	50	42.97	50	49.25	86	99	17-163	14	30
Benzo(b)fluoranthene	50	44.62	50	51.43	89	103	24-159	14	30
Benzo(k)fluoranthene	50	46.8	50	50.48	94	101	11-162	8	30
Butylbenzylphthalate	50	35.95	50	35.33	72	71	10-152	2	30
Di-n-butylphthalate	50	37.3	50	39.6	75	79	10-118	6	30
Carbazole	50	46.5	50	48.63	93	97	79-112	4	30
4-Chloroaniline	50	38	50	37.79	76	76	52-105	1	30
2-Chloronaphthalene	50	36.24	50	36.99	72	74	60-118	2	24
Chrysene	50	44.54	50	49.98	89	100	17-168	12	30
Dibenz(a,h)anthracene	50	52.78	50	57.33	106	115	10-200	8	30
bis(2-Ethylhexyl)phthalate	50	41.29	50	42.64	83	85	10-158	3	30
Fluoranthene	50	43.18	50	48.99	86	98	26-137	13	30
Indeno(1,2,3-cd)pyrene	50	51.11	50	54.41	102	109	10-171	6	30
2-Methylnaphthalene	50	37.75	50	36.72	75	73	59-101	3	30
4-Methylphenol	50	38.48	50	42.49	77	85	62-98	10	30
Naphthalene	50	36.17	50	35.96	72	72	21-133	1	30
N-Nitrosodimethylamine	50	25.11	50	28.12	50	56	38-74	11	30
Phenanthrene	50	42.92	50	48.67	86	97	54-120	13	30
Phenol	50	22.26	50	26.34	45	53	10-112	17	30
Pyrene	50	44.13	50	47.03	88	94	52-115	6	30
1,2,4-Trichlorobenzene	50	34.97	50	31.68	70	63	44-142	10	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 193470006A	Sample number(s): 1221281								
PCB-1016	5.02	3.72			74		50-140		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2019 12:03

Group Number: 2078958

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.20			83		10-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 193470007A	Sample number(s): 1221281								
Beta BHC	0.100	0.106			106		17-147		
Alpha Chlordane	0.100	0.0997			100		45-140		
Gamma Chlordane	0.100	0.0968			97		45-140		
p,p-DDE	0.200	0.194			97		30-145		
p,p-DDT	0.201	0.220			109		25-160		
Delta BHC	0.100	0.101			101		19-140		
Endrin Aldehyde	0.200	0.220			110		60-140		
Heptachlor Epoxide	0.101	0.109			108		37-142		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 193460571403	Sample number(s): 1221281								
Mercury	0.00100	0.00110			110		85-115		
Batch number: 193460571604	Sample number(s): 1221281								
Arsenic	0.0600	0.0568			95		85-115		
Barium	0.0100	0.00969			97		85-115		
Chromium	0.0300	0.0283			94		85-115		
Cobalt	0.0100	0.0103			103		85-115		
Copper	0.0400	0.0388			97		85-115		
Iron	0.400	0.401			100		85-115		
Lead	0.0300	0.0303			101		85-115		
Manganese	0.0200	0.0200			100		85-115		
Nickel	2.02	2.07			102		85-115		
Zinc	0.440	0.433			98		85-115		
Batch number: 193460705006A	Sample number(s): 1221281								
Aluminum	0.200	0.209	0.200	0.192	105	96	85-115	9	20
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 19347964901A	Sample number(s): 1221281								
Total Dissolved Solids	200	206			103		74-127		
Batch number: 19351385804A	Sample number(s): 1221281								
Total Suspended Solids	150	146.9			98		89-105		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 19346003101A	Sample number(s): 1221281								
pH	7.00	6.99			100		95-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2019 12:03

Group Number: 2078958

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193511AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1221281	106	103	98	86
1221282	105	107	96	88
Blank	106	105	98	88
LCS	102	104	99	91
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 19346WAE625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1221281	79	76	49	34	50	78
Blank	84	68	97	34	54	89
LCS	90	81	98	39	61	94
LCSD	88	82	99	45	66	95
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 193470006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1221281	72	57	74	59
Blank	62	44	63	45
LCS	30	57	32	57
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 193470007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1221281	77	63	79	67
Blank	53	44	57	43
LCS	75	73	78	72
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only: Acct. # 4285 Group # 2078958 Sample # 122128I-82 (B) LW 2288 12/12/19

COC # 577973

Client Information

Client: BASF Corp.	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Patrick Gehan	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☑ Surface ☐ | Other: cooler temp. bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.7 200.8 245.1	PCB EPA 608	TSS SM2540D	Remarks
WWTPEFF121119	12/11/19	0800	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TB19308	11/12/19	0800	✓		2				✓						
cooler temp bottle	12/11/19				1										cooler temp. bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	12/11/19	1700			
			Cin Wells	12/12/19	10:44

EDD Required? (Yes) No
If yes, format: ACCOMEQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 3.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 269622

Group Number(s): 2078958

Client: Basf Corp.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	12/12/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192050133	3.0	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: January 09, 2020 09:29

Project: Rensselaer

Account #: 04285
Group Number: 2081261
SDG: RNT17
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF123119 Grab Water	12/31/2019 13:15	1232268
TB19314 Water	12/31/2019 13:15	1232269

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF123119 Grab Water**
COC: 597988

Project Name: **Rensselaer**

Submittal Date/Time: 01/02/2020 09:18
Collection Date/Time: 12/31/2019 13:15
SDG#: RNT17-01

BASF Corporation
ELLE Sample #: **RW 1232268**
ELLE Group #: **2081261**
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.08	6	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	6	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	6	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.09	6	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	6	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	6	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	6	1
14669	Carbazole		86-74-8	N.D.	0.2	6	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	6	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.7	6	1
14669	Chrysene		218-01-9	N.D.	0.2	6	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	6	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	6	1
14669	Fluoranthene		206-44-0	N.D.	0.2	6	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.08	6	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	6	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	6	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.5	6	1
14669	Phenanthrene		85-01-8	N.D.	0.1	6	1
14669	Phenol[1]		108-95-2	N.D.	0.5	1	1
14669	Pyrene		129-00-0	N.D.	0.2	6	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF123119 Grab Water**
COC: 597988

Project Name: **Rensselaer**

Submittal Date/Time: 01/02/2020 09:18
Collection Date/Time: 12/31/2019 13:15
SDG#: RNT17-01

BASF Corporation
ELLE Sample #: RW 1232268
ELLE Group #: 2081261
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0911	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0911	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0911	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0911	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0911	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0911	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0911	0.616	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D1	0.0567	0.123	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00739	0.0123	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.0102	0.0123	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0246	0.0493	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0123	0.0246	1
13634	Delta BHC	319-86-8	N.D. D1	0.0135	0.0369	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.0112	0.123	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00616	0.0123	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0733	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.0442 J	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	1.06	0.0030	0.0100	1
07061	Nickel	7440-02-0	N.D.	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0113 J	0.0037	0.0200	1
		EPA 200.8 rev 5.4	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0213 J	0.0197	0.0250	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	606	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	1.64 J	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF123119 Grab Water**
COC: 597988

Project Name: **Rensselaer**

Submittal Date/Time: 01/02/2020 09:18
Collection Date/Time: 12/31/2019 13:15
SDG#: RNT17-01

BASF Corporation
ELLE Sample #: RW 1232268
ELLE Group #: 2081261
Matrix: Water

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.0	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.3	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193651AB	01/02/2020 21:13	Don V Viray	1
14669	Method 625.1 MINI	EPA 625.1	1	20002WAA625	01/06/2020 15:12	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	20002WAA625	01/02/2020 17:35	Laura Duquette	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	200020009A	01/07/2020 11:04	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	200020010A	01/03/2020 14:44	Dylan Schreiner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	200020009A	01/02/2020 17:35	Osvaldo R Sanchez	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	200020010A	01/02/2020 17:35	Laura Duquette	1
07035	Arsenic	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	200020571603	01/05/2020 21:37	Elaine F Stoltzfus	1
06023	Aluminum	EPA 200.8 rev 5.4	1	200020705004A	01/07/2020 17:32	Huyen Dao-Kendig	1
00259	Mercury	EPA 245.1 rev 3	1	200020571401	01/03/2020 09:40	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	200020571603	01/02/2020 13:20	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	200020705004	01/02/2020 13:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	200020571401	01/02/2020 14:35	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	20003964901B	01/03/2020 10:25	Amy L Cramer	1
13858	Total Suspended Solids	SM 2540 D-2011	1	20003385801A	01/03/2020 08:52	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	20002021501A	01/02/2020 13:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	20002004101A	01/02/2020 17:39	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	20002004101A	01/02/2020 17:39	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB19314 Water**
COC: 597988

Project Name: **Rensselaer**

Submittal Date/Time: 01/02/2020 09:18
Collection Date/Time: 12/31/2019 13:15
SDG#: RNT17-02TB

BASF Corporation
ELLE Sample #: RW 1232269
ELLE Group #: 2081261
Matrix: Water

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U193651AB	01/02/2020 19:40	Don V Viray	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2020 09:29

Group Number: 2081261

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U193651AB	Sample number(s): 1232268-1232269		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 20002WAA625	Sample number(s): 1232268		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.08	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.07	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 200020009A	Sample number(s): 1232268		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2020 09:29

Group Number: 2081261

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 200020010A	Sample number(s): 1232268		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 200020571401	Sample number(s): 1232268		
Mercury	N.D.	0.000050	0.00020
Batch number: 200020571603	Sample number(s): 1232268		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 200020705004A	Sample number(s): 1232268		
Aluminum	N.D.	0.0197	0.0250
Batch number: 20003385801A	Sample number(s): 1232268		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 20003964901B	Sample number(s): 1232268		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 20002021501A	Sample number(s): 1232268		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2020 09:29

Group Number: 2081261

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U193651AB	Sample number(s): 1232268-1232269								
Acetone	150	176.85			118		60-140		
Benzene	20	21.59			108		65-135		
Chlorobenzene	20	20.41			102		65-135		
1,2-Dichlorobenzene	20	20.37			102		65-135		
1,3-Dichlorobenzene	20	20.41			102		70-130		
1,4-Dichlorobenzene	20	20.67			103		65-135		
1,2-Dichloroethane	20	20.35			102		70-130		
Ethylbenzene	20	20.32			102		60-140		
Methylene Chloride	20	20.98			105		60-140		
Toluene	20	20.79			104		70-130		
Vinyl Chloride	20	20.97			105		10-195		
Xylene (Total)	60	61.95			103		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 20002WAA625	Sample number(s): 1232268								
Anthracene	50	46.29	50	47.61	93	95	27-133	3	30
Benzo(a)anthracene	50	47.45	50	48.01	95	96	33-143	1	30
Benzo(a)pyrene	50	46.14	50	46.87	92	94	17-163	2	30
Benzo(b)fluoranthene	50	49.44	50	49.21	99	98	24-159	0	30
Benzo(k)fluoranthene	50	48.76	50	49	98	98	11-162	0	30
Butylbenzylphthalate	50	48.09	50	47.77	96	96	10-152	1	30
Di-n-butylphthalate	50	47.85	50	48.56	96	97	10-118	1	30
Carbazole	50	52.82	50	55.52	106	111	79-112	5	30
4-Chloroaniline	50	40.8	50	39.88	82	80	52-105	2	30
2-Chloronaphthalene	50	37.64	50	41.25	75	82	60-118	9	24
Chrysene	50	49.02	50	47.26	98	95	17-168	4	30
Dibenz(a,h)anthracene	50	41.86	50	42.73	84	85	10-200	2	30
bis(2-Ethylhexyl)phthalate	50	51.38	50	49.46	103	99	10-158	4	30
Fluoranthene	50	52.26	50	53.51	105	107	26-137	2	30
Indeno(1,2,3-cd)pyrene	50	43.46	50	43.17	87	86	10-171	1	30
2-Methylnaphthalene	50	42.25	50	40.81	85	82	59-101	3	30
4-Methylphenol	50	42.27	50	40.45	85	81	62-98	4	30
Naphthalene	50	39.57	50	39.22	79	78	21-133	1	30
N-Nitrosodimethylamine	50	25.83	50	25.77	52	52	38-74	0	30
Phenanthrene	50	48.21	50	49	96	98	54-120	2	30
Phenol	50	25.08	50	24.54	50	49	10-112	2	30
Pyrene	50	52.32	50	50.47	105	101	52-115	4	30
1,2,4-Trichlorobenzene	50	39.78	50	36.7	80	73	44-142	8	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200020009A	Sample number(s): 1232268								
PCB-1016	5.02	4.19	5.02	3.57	84	71	50-140	16	36

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2020 09:29

Group Number: 2081261

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.43	5.05	3.82	88	76	10-140	15	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200020010A	Sample number(s): 1232268								
Beta BHC	0.100	0.0885	0.100	0.0948	88	95	17-147	7	44
Alpha Chlordane	0.100	0.0717	0.100	0.0766	72	77	45-140	7	35
Gamma Chlordane	0.100	0.0669	0.100	0.0708	67	71	45-140	6	35
p,p-DDE	0.200	0.123	0.200	0.132	61	66	30-145	7	35
p,p-DDT	0.201	0.165	0.201	0.186	82	92	25-160	12	30
Delta BHC	0.100	0.0897	0.100	0.0898	90	90	19-140	0	52
Endrin Aldehyde	0.200	0.186	0.200	0.181	93	90	60-140	3	30
Heptachlor Epoxide	0.101	0.0875	0.101	0.0908	86	90	37-142	4	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 200020571401	Sample number(s): 1232268								
Mercury	0.00100	0.00104			104		85-115		
Batch number: 200020571603	Sample number(s): 1232268								
Arsenic	0.0600	0.0623			104		85-115		
Barium	0.0100	0.00883			88		85-115		
Chromium	0.0300	0.0303			101		85-115		
Cobalt	0.0100	0.0106			106		85-115		
Copper	0.0400	0.0405			101		85-115		
Iron	0.400	0.392			98		85-115		
Lead	0.0300	0.0329			110		85-115		
Manganese	0.0200	0.0207			104		85-115		
Nickel	2.02	2.20			109		85-115		
Zinc	0.440	0.466			106		85-115		
Batch number: 200020705004A	Sample number(s): 1232268								
Aluminum	0.200	0.211			105		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 20003385801A	Sample number(s): 1232268								
Total Suspended Solids	150	144.7			96		89-105		
Batch number: 20003964901B	Sample number(s): 1232268								
Total Dissolved Solids	200	208			104		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 20002004101A	Sample number(s): 1232268								
pH	7.00	6.99			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 01/09/2020 09:29

Group Number: 2081261

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 20003964901B	Sample number(s): 1232268 BKG: 1232268			
Total Dissolved Solids	606	636	5	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U193651AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1232268	111	106	93	85
1232269	109	105	94	85
Blank	107	102	94	86
LCS	105	98	95	89
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 20002WAA625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1232268	81	77	67	34	48	66
Blank	77	73	93	35	47	66
LCS	87	80	100	47	61	94
LCSD	87	81	96	43	56	80
Limits:	47-112	47-107	32-140	10-74	10-93	10-140

Analysis Name: PCB (608.3) 250 ml
Batch number: 200020009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1232268	61	71	59	70
Blank	63	47	61	47
LCS	35	48	34	47
LCSD	31	40	29	39
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 200020010A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2081261
Reported: 01/09/2020 09:29

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: OC Pest (608.3) 250mL
Batch number: 200020010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1232268	66	87	63	74
Blank	64	55	63	50
LCS	59	74	58	69
LCSD	63	89	65	78
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2081261 Sample # 1232268-69

COC # 597988

Client Information

Client: BASF Corp.	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Patrick Gehan	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☑ Surface | Other: cooler temp. bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	pH 150.1	Settable Solids 160.2	TDS 160.1	VOC 624	PAH 625	Pesticides 608	Metals 200.7 200.8 245.1	PCB EPA 608	TSS SM2540 D	Remarks
WWTP EFF 123119	12/31/19	1315	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TB 19314	11/18/19	1315	✓		2				✓						
cooler temp. bottle	12/31/19				1										cooler temp. bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/31/19	1730			
			[signature]	1/2/20	0918

EDD Required? (Yes) No
If yes, format: AECOMEQUIS4

Site-Specific QC (MS/MSD/Dup)? Yes (No)
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____
③ Km2 2123 1/2/20

Temperature upon receipt 1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 271221

Group Number(s): 2081261

Client: BASF CORP.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	01/02/2020
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: February 20, 2020 10:28

Project: Rensselaer

Account #: 04285
Group Number: 2087752
SDG: RNT19
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPEFF200211 Grab Water	02/11/2020 08:40	1259224
TB Water	02/11/2020	1259225

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPEFF200211 Grab Water**
COC: 597203

Project Name: **Rensselaer**

Submittal Date/Time: 02/13/2020 11:14
Collection Date/Time: 02/11/2020 08:40
SDG#: RNT19-01

BASF Corporation
ELLE Sample #: **RW 1259224**
ELLE Group #: **2087752**
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.07	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.2	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.09	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.6	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.2	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol[1]		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPEFF200211 Grab Water**
COC: 597203

Project Name: **Rensselaer**

Submittal Date/Time: 02/13/2020 11:14
Collection Date/Time: 02/11/2020 08:40
SDG#: RNT19-01

BASF Corporation
ELLE Sample #: RW 1259224
ELLE Group #: 2087752
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0768	0.519	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0768	0.519	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0768	0.519	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0768	0.519	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0768	0.519	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0768	0.519	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0768	0.519	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0477	0.104	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00622	0.0104	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00861	0.0104	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0207	0.0415	1
13634	p,p-DDT	50-29-3	N.D. D2	0.0104	0.0207	1
13634	Delta BHC	319-86-8	N.D. D1	0.0114	0.0311	1
13634	Endrin Aldehyde	7421-93-4	N.D. D1	0.00944	0.104	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D1	0.00519	0.0104	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	N.D.	0.0160	0.0300	1
07046	Barium	7440-39-3	0.167	0.0010	0.0050	1
07051	Chromium	7440-47-3	N.D.	0.0016	0.0150	1
07052	Cobalt	7440-48-4	0.0023 J	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	0.319	0.0400	0.200	1
07055	Lead	7439-92-1	N.D.	0.0071	0.0150	1
07058	Manganese	7439-96-5	1.06	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0033 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0072 J	0.0037	0.0200	1
		EPA 200.8 rev 5.4	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0699	0.0197	0.0250	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	576	40.0	120	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.63	1.00	3.00	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **WWTPEFF200211 Grab Water**
COC: 597203

Project Name: **Rensselaer**

Submittal Date/Time: 02/13/2020 11:14
Collection Date/Time: 02/11/2020 08:40
SDG#: RNT19-01

BASF Corporation
ELLE Sample #: RW 1259224
ELLE Group #: 2087752
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	N.D.	0.10	0.10	1
	The holding time was not met. The sample was submitted to the laboratory outside of the holding time.					
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	22.8	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.4	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U200451AA	02/14/2020 13:17	Jason M Long	1
14669	Method 625.1 MINI	EPA 625.1	1	20045WAH625	02/18/2020 12:11	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	20045WAH625	02/16/2020 02:00	Mathias Okpo	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	200490002A	02/18/2020 18:16	Elizabeth E Donovan	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	200490003A	02/18/2020 20:26	Anita M Dale	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	200490002A	02/18/2020 09:00	Joshua S Ruth	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	200490003A	02/18/2020 09:00	Joshua S Ruth	1
07035	Arsenic	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 18:47	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07058	Manganese	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 14:51	Elaine F Stoltzfus	1
06023	Aluminum	EPA 200.8 rev 5.4	1	200450705001A	02/15/2020 13:10	Janeyah Rivers-Hamilton	1
00259	Mercury	EPA 245.1 rev 3	1	200480571401	02/18/2020 08:22	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	200450571602	02/14/2020 06:00	Annamaria Kuhns	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	200450705001	02/14/2020 06:00	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	200480571401	02/17/2020 16:00	JoElla L Rice	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	20045964901A	02/14/2020 07:52	Alexa Sanchez	1
13858	Total Suspended Solids	SM 2540 D-2011	1	20045385801A	02/14/2020 08:58	Amy L Cramer	1
00215	Settleable Solids	SM 2540 F-2011	1	20044021501A	02/13/2020 15:00	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	20044004101A	02/13/2020 16:42	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

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Sample Description: **WWTPEFF200211 Grab Water**
COC: 597203

Project Name: **Rensselaer**

Submittal Date/Time: 02/13/2020 11:14
Collection Date/Time: 02/11/2020 08:40
SDG#: RNT19-01

BASF Corporation
ELLE Sample #: RW 1259224
ELLE Group #: 2087752
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12152	pH	SM 4500-H+ B-2011	1	20044004101A	02/13/2020 16:42	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB Water**
COC: 597203

Project Name: **Rensselaer**

Submittal Date/Time: 02/13/2020 11:14
Collection Date/Time: 02/11/2020
SDG#: RNT19-02TB

BASF Corporation
ELLE Sample #: **RW 1259225**
ELLE Group #: **2087752**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone	67-64-1	N.D.	2.00	5.00	1
14687	Benzene	71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene	108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene	95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene	541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene	106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane	107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene	100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride	75-09-2	N.D.	0.30	1.00	1
14687	Toluene	108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride	75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)	1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	U200451AA	02/14/2020 12:53	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 02/20/2020 10:28

Group Number: 2087752

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: U200451AA	Sample number(s): 1259224-1259225		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 20045WAH625	Sample number(s): 1259224		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.2	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.2	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 200490002A	Sample number(s): 1259224		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/20/2020 10:28

Group Number: 2087752

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 200490003A	Sample number(s): 1259224		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 200450571602	Sample number(s): 1259224		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	0.0041 J	0.0037	0.0200
Batch number: 200450705001A	Sample number(s): 1259224		
Aluminum	N.D.	0.0197	0.0250
Batch number: 200480571401	Sample number(s): 1259224		
Mercury	0.000081 J	0.000050	0.00020
Batch number: 20045385801A	Sample number(s): 1259224		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 20045964901A	Sample number(s): 1259224		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 20044021501A	Sample number(s): 1259224		
Settleable Solids	N.D.	0.10	0.10

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation
Reported: 02/20/2020 10:28

Group Number: 2087752

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: U200451AA	Sample number(s): 1259224-1259225								
Acetone	150	129.91			87		60-140		
Benzene	20	19.4			97		65-135		
Chlorobenzene	20	19.73			99		65-135		
1,2-Dichlorobenzene	20	20.23			101		65-135		
1,3-Dichlorobenzene	20	19.8			99		70-130		
1,4-Dichlorobenzene	20	20.25			101		65-135		
1,2-Dichloroethane	20	19.31			97		70-130		
Ethylbenzene	20	20.57			103		60-140		
Methylene Chloride	20	18.97			95		60-140		
Toluene	20	20.42			102		70-130		
Vinyl Chloride	20	22.92			115		10-195		
Xylene (Total)	60	60.78			101		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 20045WAH625	Sample number(s): 1259224								
Anthracene	50	46.31			93		27-133		
Benzo(a)anthracene	50	48.47			97		33-143		
Benzo(a)pyrene	50	44.23			88		17-163		
Benzo(b)fluoranthene	50	47.36			95		24-159		
Benzo(k)fluoranthene	50	45.1			90		11-162		
Butylbenzylphthalate	50	29.39			59		10-152		
Di-n-butylphthalate	50	40.73			81		10-118		
Carbazole	50	50.81			102		72-114		
4-Chloroaniline	50	34.89			70		40-107		
2-Chloronaphthalene	50	43.77			88		60-118		
Chrysene	50	46.51			93		17-168		
Dibenz(a,h)anthracene	50	47.62			95		10-200		
bis(2-Ethylhexyl)phthalate	50	44.44			89		10-158		
Fluoranthene	50	49.68			99		26-137		
Indeno(1,2,3-cd)pyrene	50	47.23			94		10-171		
2-Methylnaphthalene	50	40.04			80		50-100		
4-Methylphenol	50	30.84			62		55-101		
Naphthalene	50	37.57			75		21-133		
N-Nitrosodimethylamine	50	25.48			51		38-74		
Phenanthrene	50	45.89			92		54-120		
Phenol	50	18.75			38		10-112		
Pyrene	50	43.68			87		52-115		
1,2,4-Trichlorobenzene	50	37.08			74		44-142		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200490002A	Sample number(s): 1259224								
PCB-1016	5.02	4.40	5.02	4.45	88	89	50-140	1	36

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/20/2020 10:28

Group Number: 2087752

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.05	4.29	5.05	4.49	85	89	10-140	5	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200490003A	Sample number(s): 1259224								
Beta BHC	0.100	0.0830	0.100	0.0855	83	86	17-147	3	44
Alpha Chlordane	0.100	0.0825	0.100	0.0811	83	81	45-140	2	35
Gamma Chlordane	0.100	0.0800	0.100	0.0810	80	81	45-140	1	35
p,p-DDE	0.200	0.156	0.200	0.158	78	79	30-145	1	35
p,p-DDT	0.201	0.172	0.201	0.168	85	83	25-160	2	30
Delta BHC	0.100	0.0897	0.100	0.0881	90	88	19-140	2	52
Endrin Aldehyde	0.200	0.179	0.200	0.174	89	87	60-140	3	30
Heptachlor Epoxide	0.101	0.0873	0.101	0.0853	86	84	37-142	2	26
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 200450571602	Sample number(s): 1259224								
Arsenic	0.0600	0.0627			104		85-115		
Barium	0.0100	0.00997			100		85-115		
Chromium	0.0300	0.0286			95		85-115		
Cobalt	0.0100	0.0114			114		85-115		
Copper	0.0400	0.0400			100		85-115		
Iron	0.400	0.410			103		85-115		
Lead	0.0300	0.0331			110		85-115		
Manganese	0.0200	0.0206			103		85-115		
Nickel	2.02	2.10			104		85-115		
Zinc	0.440	0.454			103		85-115		
Batch number: 200450705001A	Sample number(s): 1259224								
Aluminum	0.200	0.209			105		85-115		
Batch number: 200480571401	Sample number(s): 1259224								
Mercury	0.00100	0.00103			103		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 20045385801A	Sample number(s): 1259224								
Total Suspended Solids	150	145.8			97		89-105		
Batch number: 20045964901A	Sample number(s): 1259224								
Total Dissolved Solids	200	180			90		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 20044004101A	Sample number(s): 1259224								
pH	7.00	7.01			100		95-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 02/20/2020 10:28

Group Number: 2087752

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: U200451AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1259224	98	101	104	102
1259225	99	101	104	102
Blank	100	100	104	102
LCS	100	101	104	103
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 20045WAH625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1259224	83	76	94	27	37	68
Blank	83	76	98	31	44	88
LCS	91	77	99	36	50	107
Limits:	49-106	47-107	41-134	10-74	10-93	14-134

Analysis Name: PCB (608.3) 250 ml
Batch number: 200490002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1259224	70	45	67	44
Blank	81	55	76	54
LCS	90	58	83	56
LCSD	86	71	82	69
Limits:	18-115	10-127	18-115	10-127

Analysis Name: OC Pest (608.3) 250mL
Batch number: 200490003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1259224	71	50	73	47
Blank	75	60	74	57
LCS	73	68	73	70
LCSD	73	64	72	58
Limits:	29-129	32-149	29-129	32-149

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2087752 Sample # 1259224-25

COC # 597203

Client Information

Client: BASF Corp	Acct. #:
Project Name/#: Rensselaer	PWSID #:
Project Manager: John Bleiler	P.O. #:
Sampler: Tom Quackenbush	Quote #:
State where samples were collected: New York	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☑ Surface | Other: Cooler temp bottle

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	Settable solids/TDS	Metals	8260c VOC	pH/pH Temp	PCBs in water 8082A	TSS	PAH	Pesticides	Remarks
WWTPEFF200211	2/11/20	0840	X		12	X	X	X	X	X	X	X	X	
TB			X		-	X	X	X	X	X	X	X	X	Only test 8260c VOC
Cooler Temp bottle	2/11/20	0840	X		1			(N/A)						Cooler temp bottle

For Lab Use Only
FSC:
SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 5

E-mail address: john.bleiler@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)
Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13
NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Thomas Quackenbush	2/11/20	0820			
			Chi Wells	2/12/20	11:14

EDD Required? (Yes) No
If yes, format: AECOM EQUIS 4

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.2 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 275500

Group Number(s): 2087752

Client: BASF CORP

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	02/13/2020
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	1
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730060WS	1.2	IR	Wet	Y	Loose	N

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Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: March 16, 2020 10:33

Project: Rensselaer

Account #: 04285
Group Number: 2091231
SDG: RNT20
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich
Electronic Copy To	AECOM	Attn: Mike Gardner
Electronic Copy To	AECOM	Attn: Heather Wayne
Electronic Copy To	BASF Corporation	Attn: Kit Williams

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
WWTPLVOCEFF200303 Grab Water	03/03/2020 07:20	1275006
TB Water	03/03/2020	1275007

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **WWTPLVOCEFF200303 Grab Water**
COC: 373941

Project Name: **Rensselaer**

Submittal Date/Time: 03/07/2020 09:42
Collection Date/Time: 03/03/2020 07:20
SDG#: RNT20-01

BASF Corporation
ELLE Sample #: **RW 1275006**
ELLE Group #: **2091231**
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1
GC/MS Semivolatiles		**EPA 625.1**		**ug/l**	**ug/l**	**ug/l**	
14669	Anthracene		120-12-7	N.D.	0.07	5	1
14669	Benzo(a)anthracene		56-55-3	N.D.	0.2	5	1
14669	Benzo(a)pyrene		50-32-8	N.D.	0.2	5	1
14669	Benzo(b)fluoranthene		205-99-2	N.D.	0.2	5	1
14669	Benzo(k)fluoranthene		207-08-9	N.D.	0.1	5	1
14669	Butylbenzylphthalate		85-68-7	N.D.	1	5	1
14669	Di-n-butylphthalate		84-74-2	N.D.	1	5	1
14669	Carbazole		86-74-8	N.D.	0.2	5	1
14669	4-Chloroaniline[1]		106-47-8	N.D.	0.08	5	1
14669	2-Chloronaphthalene		91-58-7	N.D.	0.6	5	1
14669	Chrysene		218-01-9	N.D.	0.2	5	1
14669	Dibenz(a,h)anthracene		53-70-3	N.D.	0.1	5	1
14669	bis(2-Ethylhexyl)phthalate		117-81-7	N.D.	1	5	1
14669	Fluoranthene		206-44-0	N.D.	0.2	5	1
14669	Indeno(1,2,3-cd)pyrene		193-39-5	N.D.	0.2	5	1
14669	2-Methylnaphthalene[1]		91-57-6	N.D.	0.1	5	1
14669	4-Methylphenol[1]		106-44-5	N.D.	0.1	5	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
14669	Naphthalene		91-20-3	N.D.	0.1	2	1
14669	N-Nitrosodimethylamine		62-75-9	N.D.	0.4	5	1
14669	Phenanthrene		85-01-8	N.D.	0.1	5	1
14669	Phenol		108-95-2	N.D.	0.4	1	1
14669	Pyrene		129-00-0	N.D.	0.2	5	1
14669	1,2,4-Trichlorobenzene		120-82-1	N.D.	0.2	1	1
PCBs		**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCEFF200303 Grab Water**
COC: 373941

Project Name: **Rensselaer**

Submittal Date/Time: 03/07/2020 09:42
Collection Date/Time: 03/03/2020 07:20
SDG#: RNT20-01

BASF Corporation
ELLE Sample #: RW 1275006
ELLE Group #: 2091231
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0781	0.527	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0781	0.527	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0781	0.527	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0781	0.527	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0781	0.527	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0781	0.527	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0781	0.527	1
Pesticides		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
13634	Beta BHC	319-85-7	N.D. D2	0.0485	0.105	1
13634	Alpha Chlordane[1]	5103-71-9	N.D. D1	0.00633	0.0105	1
13634	Gamma Chlordane[1]	5103-74-2	N.D. D1	0.00876	0.0105	1
13634	p,p-DDE	72-55-9	N.D. D1	0.0211	0.0422	1
13634	p,p-DDT	50-29-3	N.D. D1	0.0105	0.0211	1
13634	Delta BHC	319-86-8	N.D. D1	0.0116	0.0316	1
13634	Endrin Aldehyde	7421-93-4	N.D. D2	0.00960	0.105	1
13634	Heptachlor Epoxide	1024-57-3	N.D. D2	0.00527	0.0105	1
Metals		**EPA 200.7 rev 4.4**	**mg/l**	**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0333	0.0160	0.0300	1
07046	Barium	7440-39-3	0.0916	0.0010	0.0050	1
07051	Chromium	7440-47-3	0.0061 J	0.0016	0.0150	1
07052	Cobalt	7440-48-4	N.D.	0.0015	0.0050	1
07053	Copper	7440-50-8	N.D.	0.0120	0.0200	1
01754	Iron	7439-89-6	1.59	0.0400	0.200	1
07055	Lead	7439-92-1	0.0080 J	0.0071	0.0150	1
07058	Manganese	7439-96-5	0.321	0.0030	0.0100	1
07061	Nickel	7440-02-0	0.0036 J	0.0021	0.0100	1
07072	Zinc	7440-66-6	0.0288	0.0037	0.0200	1
		EPA 200.8 rev 5.4	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.841	0.0197	0.0250	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000087 J	0.000050	0.00020	1
Wet Chemistry		**SM 2540 C-2011**	**mg/l**	**mg/l**	**mg/l**	
06649	Total Dissolved Solids	n.a.	435	20.0	60.0	1
		SM 2540 D-2011	**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	9.10	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **WWTPLVOCEFF200303 Grab Water**
COC: 373941

Project Name: **Rensselaer**

Submittal Date/Time: 03/07/2020 09:42
Collection Date/Time: 03/03/2020 07:20
SDG#: RNT20-01

BASF Corporation
ELLE Sample #: RW 1275006
ELLE Group #: 2091231
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 F-2011**		**ml/l/hr**	**ml/l/hr**	**ml/l/hr**	
00215	Settleable Solids	n.a.	0.10	0.10	0.10	1
	The holding time was not met. The sample was submitted to the laboratory outside of the holding time.					
	SM 2550 B-2010		**Degrees C**	**Degrees C**	**Degrees C**	
12151	Temperature of pH[1]	n.a.	23.2	0.010	0.010	1
	SM 4500-H+ B-2011		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH[1]	n.a.	7.7	0.010	0.010	1

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	M200701AA	03/10/2020 20:25	Jason M Long	1
14669	Method 625.1 MINI	EPA 625.1	1	20069WAD625	03/10/2020 21:19	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625.1	1	20069WAD625	03/09/2020 17:23	Laura Duquette	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	200690023A	03/12/2020 09:00	Covenant Mutuku	1
13634	OC Pest (608.3) 250mL	EPA 608.3 Dec. 2016	1	200690022A	03/12/2020 06:45	Lisa A Reinert	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	200690023A	03/10/2020 09:44	Christine E Gleim	1
15037	Pesticide 608.3 Water Ext	EPA 608.3 Dec. 2016	1	200690022A	03/10/2020 09:44	Christine E Gleim	1
07035	Arsenic	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07046	Barium	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07051	Chromium	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07052	Cobalt	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07053	Copper	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
01754	Iron	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07055	Lead	EPA 200.7 rev 4.4	1	200680571602	03/09/2020 06:23	Lisa J Cooke	1
07058	Manganese	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07061	Nickel	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
07072	Zinc	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 16:18	Elaine F Stoltzfus	1
06023	Aluminum	EPA 200.8 rev 5.4	1	200680705001A	03/08/2020 16:42	Huyen Dao-Kendig	1
00259	Mercury	EPA 245.1 rev 3	1	200680571401	03/09/2020 11:34	Damary Valentin	1
05716	EPA 600 ICP Digest (tot rec)	EPA 200.7 rev 4.4	1	200680571602	03/08/2020 01:19	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	200680705001	03/08/2020 01:33	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	200680571401	03/08/2020 04:26	James L Mertz	1
06649	Total Dissolved Solids	SM 2540 C-2011	1	20069964901A	03/09/2020 14:45	Angelica Cintron	1
13858	Total Suspended Solids	SM 2540 D-2011	1	20069385802A	03/09/2020 14:25	Alexa Sanchez	1
00215	Settleable Solids	SM 2540 F-2011	1	20070021501A	03/10/2020 14:10	Luz M Groff	1
12151	Temperature of pH	SM 2550 B-2010	1	20069002101A	03/09/2020 18:05	Jeremy L Bolf	1
12152	pH	SM 4500-H+ B-2011	1	20069002101A	03/09/2020 18:05	Jeremy L Bolf	1

*=This limit was used in the evaluation of the final result

Sample Description: **TB Water**
COC: 373941

Project Name: **Rensselaer**

Submittal Date/Time: 03/07/2020 09:42
Collection Date/Time: 03/03/2020
SDG#: RNT20-02TB

BASF Corporation
ELLE Sample #: **RW 1275007**
ELLE Group #: **2091231**
Matrix: Water

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 624.1**		**ug/l**	**ug/l**	**ug/l**	
14687	Acetone		67-64-1	N.D.	2.00	5.00	1
14687	Benzene		71-43-2	N.D.	0.050	1.00	1
14687	Chlorobenzene		108-90-7	N.D.	0.10	1.00	1
14687	1,2-Dichlorobenzene		95-50-1	N.D.	0.070	1.00	1
14687	1,3-Dichlorobenzene		541-73-1	N.D.	0.060	1.00	1
14687	1,4-Dichlorobenzene		106-46-7	N.D.	0.10	1.00	1
14687	1,2-Dichloroethane		107-06-2	N.D.	0.20	1.00	1
14687	Ethylbenzene		100-41-4	N.D.	0.10	1.00	1
14687	Methylene Chloride		75-09-2	N.D.	0.30	1.00	1
14687	Toluene		108-88-3	N.D.	0.050	1.00	1
14687	Vinyl Chloride		75-01-4	N.D.	0.30	1.00	1
14687	Xylene (Total)		1330-20-7	N.D.	0.20	2.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14687	VOCs-5mL Water by 624.1	EPA 624.1	1	M200701AA	03/10/2020 20:02	Jason M Long	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Reported: 03/16/2020 10:33

Group Number: 2091231

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: M200701AA	Sample number(s): 1275006-1275007		
Acetone	N.D.	2.00	5.00
Benzene	N.D.	0.050	1.00
Chlorobenzene	N.D.	0.10	1.00
1,2-Dichlorobenzene	N.D.	0.070	1.00
1,3-Dichlorobenzene	N.D.	0.060	1.00
1,4-Dichlorobenzene	N.D.	0.10	1.00
1,2-Dichloroethane	N.D.	0.20	1.00
Ethylbenzene	N.D.	0.10	1.00
Methylene Chloride	N.D.	0.30	1.00
Toluene	N.D.	0.050	1.00
Vinyl Chloride	N.D.	0.30	1.00
Xylene (Total)	N.D.	0.20	2.00
Batch number: 20069WAD625	Sample number(s): 1275006		
Anthracene	N.D.	0.07	5
Benzo(a)anthracene	N.D.	0.2	5
Benzo(a)pyrene	N.D.	0.2	5
Benzo(b)fluoranthene	N.D.	0.2	5
Benzo(k)fluoranthene	N.D.	0.1	5
Butylbenzylphthalate	N.D.	1	5
Di-n-butylphthalate	N.D.	1	5
Carbazole	N.D.	0.2	5
4-Chloroaniline	N.D.	0.08	5
2-Chloronaphthalene	N.D.	0.6	5
Chrysene	N.D.	0.2	5
Dibenz(a,h)anthracene	N.D.	0.1	5
bis(2-Ethylhexyl)phthalate	N.D.	1	5
Fluoranthene	N.D.	0.2	5
Indeno(1,2,3-cd)pyrene	N.D.	0.2	5
2-Methylnaphthalene	N.D.	0.1	5
4-Methylphenol	N.D.	0.1	5
Naphthalene	N.D.	0.1	2
N-Nitrosodimethylamine	N.D.	0.4	5
Phenanthrene	N.D.	0.1	5
Phenol	N.D.	0.4	1
Pyrene	N.D.	0.2	5
1,2,4-Trichlorobenzene	N.D.	0.2	1
Batch number: 200690023A	Sample number(s): 1275006		
PCB-1016	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 03/16/2020 10:33

Group Number: 2091231

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
Batch number: 200690022A	Sample number(s): 1275006		
Beta BHC	N.D.	0.0460	0.100
Alpha Chlordane	N.D.	0.00600	0.0100
Gamma Chlordane	N.D.	0.00830	0.0100
p,p-DDE	N.D.	0.0200	0.0400
p,p-DDT	N.D.	0.0100	0.0200
Delta BHC	N.D.	0.0110	0.0300
Endrin Aldehyde	N.D.	0.00910	0.100
Heptachlor Epoxide	N.D.	0.00500	0.0100
	mg/l	mg/l	mg/l
Batch number: 200680571401	Sample number(s): 1275006		
Mercury	N.D.	0.000050	0.00020
Batch number: 200680571602	Sample number(s): 1275006		
Arsenic	N.D.	0.0160	0.0300
Barium	N.D.	0.0010	0.0050
Chromium	N.D.	0.0016	0.0150
Cobalt	N.D.	0.0015	0.0050
Copper	N.D.	0.0120	0.0200
Iron	N.D.	0.0400	0.200
Lead	N.D.	0.0071	0.0150
Manganese	N.D.	0.0030	0.0100
Nickel	N.D.	0.0021	0.0100
Zinc	N.D.	0.0037	0.0200
Batch number: 200680705001A	Sample number(s): 1275006		
Aluminum	N.D.	0.0197	0.0250
Batch number: 20069385802A	Sample number(s): 1275006		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 20069964901A	Sample number(s): 1275006		
Total Dissolved Solids	N.D.	10.0	30.0
	ml/l/hr	ml/l/hr	ml/l/hr
Batch number: 20070021501A	Sample number(s): 1275006		
Settleable Solids	N.D.	0.10	0.10

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Quality Control Summary

Client Name: BASF Corporation
Reported: 03/16/2020 10:33

Group Number: 2091231

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: M200701AA	Sample number(s): 1275006-1275007								
Acetone	150	174.58			116		60-140		
Benzene	20	19.27			96		65-135		
Chlorobenzene	20	19.53			98		65-135		
1,2-Dichlorobenzene	20	18.83			94		65-135		
1,3-Dichlorobenzene	20	18.51			93		70-130		
1,4-Dichlorobenzene	20	18.76			94		65-135		
1,2-Dichloroethane	20	18.5			92		70-130		
Ethylbenzene	20	18.5			92		60-140		
Methylene Chloride	20	19.08			95		60-140		
Toluene	20	19.12			96		70-130		
Vinyl Chloride	20	17.99			90		10-195		
Xylene (Total)	60	56.1			94		60-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 20069WAD625	Sample number(s): 1275006								
Anthracene	50	42.2			84		27-133		
Benzo(a)anthracene	50	42.09			84		33-143		
Benzo(a)pyrene	50	41.14			82		17-163		
Benzo(b)fluoranthene	50	40.82			82		24-159		
Benzo(k)fluoranthene	50	44.87			90		11-162		
Butylbenzylphthalate	50	47.76			96		10-152		
Di-n-butylphthalate	50	46.68			93		10-118		
Carbazole	50	48.12			96		72-114		
4-Chloroaniline	50	38.51			77		40-107		
2-Chloronaphthalene	50	36.23			72		60-118		
Chrysene	50	41.15			82		17-168		
Dibenz(a,h)anthracene	50	39.32			79		10-200		
bis(2-Ethylhexyl)phthalate	50	53.02			106		10-158		
Fluoranthene	50	42.39			85		26-137		
Indeno(1,2,3-cd)pyrene	50	39.47			79		10-171		
2-Methylnaphthalene	50	33.21			66		50-100		
4-Methylphenol	50	32.97			66		55-101		
Naphthalene	50	32.84			66		21-133		
N-Nitrosodimethylamine	50	23.79			48		38-74		
Phenanthrene	50	42.11			84		54-120		
Phenol	50	19.14			38		10-112		
Pyrene	50	41.36			83		52-115		
1,2,4-Trichlorobenzene	50	27.1			54		44-142		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200690023A	Sample number(s): 1275006								
PCB-1016	5.01	3.20			64		50-140		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 03/16/2020 10:33

Group Number: 2091231

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.01	3.68			73		10-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 200690022A	Sample number(s): 1275006								
Beta BHC	0.100	0.110			110		17-147		
Alpha Chlordane	0.100	0.0920			92		45-140		
Gamma Chlordane	0.100	0.0865			87		45-140		
p,p-DDE	0.200	0.164			82		30-145		
p,p-DDT	0.201	0.211			105		25-160		
Delta BHC	0.100	0.107			107		19-140		
Endrin Aldehyde	0.200	0.213			107		60-140		
Heptachlor Epoxide	0.101	0.102			101		37-142		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 200680571401	Sample number(s): 1275006								
Mercury	0.00100	0.00107	0.00100	0.00109	107	109	85-115	2	20
Batch number: 200680571602	Sample number(s): 1275006								
Arsenic	0.0600	0.0605			101		85-115		
Barium	0.0100	0.00982			98		85-115		
Chromium	0.0300	0.0302			101		85-115		
Cobalt	0.0100	0.0103			103		85-115		
Copper	0.0400	0.0423			106		85-115		
Iron	0.400	0.402			101		85-115		
Lead	0.0300	0.0301			100		85-115		
Manganese	0.0200	0.0201			100		85-115		
Nickel	2.02	2.06			102		85-115		
Zinc	0.440	0.445			101		85-115		
Batch number: 200680705001A	Sample number(s): 1275006								
Aluminum	0.200	0.199	0.200	0.192	99	96	85-115	4	20
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 20069385802A	Sample number(s): 1275006								
Total Suspended Solids	150	149.6			100		89-105		
Batch number: 20069964901A	Sample number(s): 1275006								
Total Dissolved Solids	200	211			106		74-127		
	Std. Units	**Std. Units**	**Std. Units**	**Std. Units**					
Batch number: 20069002101A	Sample number(s): 1275006								
pH	7.00	7.01			100		95-105		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 03/16/2020 10:33

Group Number: 2091231

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs-5mL Water by 624.1
Batch number: M200701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1275006	111	112	99	89
1275007	111	111	97	90
Blank	107	110	99	91
LCS	101	106	101	93
Limits:	60-140	60-140	60-140	60-140

Analysis Name: Method 625.1 MINI
Batch number: 20069WAD625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
1275006	69	66	92	38	48	70
Blank	85	77	95	39	51	66
LCS	69	63	84	39	52	77
Limits:	49-106	47-107	41-134	10-74	10-93	14-134

Analysis Name: OC Pest (608.3) 250mL
Batch number: 200690022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1275006	59	50	61	51
Blank	69	92	70	88
LCS	69	72	69	67
Limits:	29-129	32-149	29-129	32-149

Analysis Name: PCB (608.3) 250 ml
Batch number: 200690023A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
1275006	55	54	56	59
Blank	62	95	63	99
LCS	41	54	42	59
Limits:	18-115	10-127	18-115	10-127

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Chain of Custody Record 373941

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4285 2091231 127506-07

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: John Bleiler	Site Contact: Tom Quackenbush	Date: 3/3/20	COC No:
Company Name: AECOM	Tel/Email: John.Bleiler@aecom.com	Lab Contact:	Carrier:	1 of 1 COCs
Address: 36 Riverside Ave	Analysis Turnaround Time			Sampler:
City/State/Zip: Rensselaer NY 12144	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
Phone: 978 905 2124	TAT if different from Below 5			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: BASF				Job / SDG No.:
Site: Rensselaer				
PO# 60323713				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Settable Solids/TDS	Metals	8260C VOC	pH/pH temp	PCBs in water	TSS	PAH	Pesticides	Sample Specific Notes:
WWTPLVOCEFF200303	3/3/20	0720	G	water	12			X	X	X	X	X	X	X	X	
TB				water	1					X						
Cooler temp bottle				water	1											Cooler temp bottle

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 0.8 Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Thomas Quackenbush	AECOM	3/3/20 1230		TAL	3/4/2020 10:41
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAL	3/6/2020 16:43			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				LLE	3/7/20 9:42

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Sample Administration Receipt Documentation Log

Doc Log ID: 278120

Group Number(s): 2091231

Client: AECOM

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	03/07/2020
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	46730060WS	0.8	IR	Wet	Y	Loose	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119		
				Lab Sample ID	1104240			1109568			1114886		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM		
				Matrix	WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	0.016		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20
AROCLOR-1242	53469-21-9	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15
ARSENIC	7440-38-2	0.05		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010
BENZENE	71-43-2	1		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
IRON	7439-89-6	0.6		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**
MERCURY	7439-97-6	5e-005		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119		
				Lab Sample ID	1104240			1109568			1114886		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM		
				Matrix	WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	0.016		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20
AROCLOR-1242	53469-21-9	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15
ARSENIC	7440-38-2	0.05		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010
BENZENE	71-43-2	1		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
IRON	7439-89-6	0.6		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**
MERCURY	7439-97-6	5e-005		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119			WWTPEFF080719			WWTPEFF-081419		
				Lab Sample ID	1104240			1109568			1114886			1119771			1125348		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM		
				Matrix	WW			WW			WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.070	ND	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3	ND	U	0.20	ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.060	ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.10	ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.7	ND	U	0.6
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	0.016		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10	ND	U D1	0.0210	ND	U D2	0.0212
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052	ND	U D2	0.0105	ND	U D2	0.0106
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.1
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	ND	U	2.00	ND	U	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060	ND	U D2	0.00630	ND	U D1	0.00636
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153	ND	U	0.153	0.554		0.153
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20	ND	U D1	0.0777	ND	U D1	0.0523
AROCLOR-1242	53469-21-9	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	0.161	J D1	0.0523
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.0777	ND	U D1	0.0523
ARSENIC	7440-38-2	0.05		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010
BENZENE	71-43-2	1		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.09	ND	U	0.09
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0483	ND	U D2	0.0487
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	1
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	0.14	J	0.10	ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053	0.0061	J	0.0053	0.0210		0.0053
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062	ND	U	0.0062	0.0109	J	0.0062
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0116	ND	U D1	0.0117
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020	ND	U D1	0.00956	ND	U D1	0.00964
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.10	ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14	ND	U D2	0.00872	ND	U D2	0.00879
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046	ND	U D2	0.00525	ND	U D1	0.00530
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	0.0227		0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	**0.000092**	**J**	**0.000050**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	0.4	ND	U	0.4
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3	ND	U	0.30	ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031	0.0034	J	0.0031	ND	U	0.0031
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4	ND	U	0.09	ND	U	0.09
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.4	ND	U	0.4
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0	554		20.0	514		20.0
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010	24.1		0.010	23.2		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00	2.84	J	1.00	14.4		4.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.30	ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1	ND	U	0.20	ND	U	0.20
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030	0.0044	J	0.0030	0.0184	J	0.0030

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119			WWTPEFF080719			WWTPEFF-081419			WWTPEFF082319			WWTPEFF-090419			WWTPEFF-091119		
				Lab Sample ID	1104240			1109568			1114886			1119771			1125348			1134737			1143474			1148143		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM			8/23/2019 10:40:00 AM			9/4/2019 8:25:00 AM			9/11/2019 3:15:00 PM		
				Matrix	WW			WW			WW			WW			WW			WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3	ND	U	0.20	ND	U	0.20	0.23	J	0.20	ND	U	0.20	ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.7	ND	U	0.6	ND	U	0.7	ND	U	0.6	ND	U	0.6
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	0.016		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10	ND	U D1	0.0210	ND	U D2	0.0212	ND	U D1	0.0219	ND	U D1	0.0202	ND	U D2	0.0216
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052	ND	U D2	0.0105	ND	U D2	0.0106	ND	U D2	0.0110	ND	U D2	0.0101	ND	U D2	0.0108
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	ND	U	2.00	ND	U	2.00	ND	U	2.00	ND	U	2.00	3.12	J	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060	ND	U D2	0.00630	ND	U D1	0.00636	ND	U D1	0.00658	ND	U D1	0.00607	ND	U D1	0.00649
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153	ND	U	0.153	0.554		0.153	0.332		0.107	0.456		0.107	0.587		0.107
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
AROCLOR-1242	53469-21-9	**0.2**		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	**0.315**	**J D1**	**0.0749**	ND	U D1	0.0801
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	0.161	J D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801
ARSENIC	7440-38-2	0.05		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0130	0.0140	J	0.0130	0.0236	J	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010	0.0155		0.00086	0.184		0.00086	0.242		0.0010
BENZENE	71-43-2	1		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0483	ND	U D2	0.0487	ND	U D2	0.0504	ND	U D2	0.0466	ND	U D2	0.0498
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	0.14	J	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053	0.0061	J	0.0053	0.0210		0.0053	0.0023	J	0.0016	0.0078	J	0.0016	0.0048	J	0.0016
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0013	ND	U	0.0013	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062	ND	U	0.0062	0.0109	J	0.0062	ND	U	0.0062	0.0176	J	0.0062	ND	U	0.0062
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0116	ND	U D1	0.0117	ND	U D1	0.0121	ND	U D1	0.0111	ND	U D1	0.0119
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020	ND	U D1	0.00956	ND	U D1	0.00964	ND	U D1	0.00998	ND	U D1	0.00921	ND	U D2	0.00985
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14	ND	U D2	0.00872	ND	U D2	0.00879	ND	U D1	0.00910	ND	U D1	0.00840	ND	U D1	0.00898
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046	ND	U D2	0.00525	ND	U D1	0.00530	ND	U D1	0.00548	ND	U D1	0.00506	ND	U D1	0.00541
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**	0.177	J	0.0460	0.248		0.0460	0.207		0.0400
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	0.0227		0.0071	ND	U	0.0071	0.0151		0.0071	0.0076	J	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**	0.274		0.0011	0.150		0.0011	0.213		0.0030
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	**0.000092**	**J**	**0.000050**	ND	U	0.000050	**0.00015**	**J**	**0.000050**	**0.000055**	**J**	**0.000050**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031	0.0034	J	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U	0.0021
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010	8.0		0.010	7.3		0.010	7.7		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0	554		20.0	514		20.0	477		20.0	584		40.0	778		40.0
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010	24.1		0.010	23.2		0.010	23.8		0.010	23.3		0.010	23.6		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00	2.84	J	1.00	14.4		4.00	2.99	J	1.00	7.20	J	4.00	4.33		1.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030	0.0044	J	0.0030	0.0184	J	0.0030	0.0039	J	0.0030	0.0201		0.0030	0.0155	J	0.0037

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119			WWTPEFF080719			WWTPEFF-081419			WWTPEFF082319			WWTPEFF-090419			WWTPEFF-091119			WWTPEFF091819			WWTPEFF092619		
				Lab Sample ID	1104240			1109568			1114886			1119771			1125348			1134737			1143474			1148143			1154018			1161145		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM			8/23/2019 10:40:00 AM			9/4/2019 8:25:00 AM			9/11/2019 3:15:00 PM			9/18/2019 8:00:00 AM			9/26/2019 1:00:00 PM		
				Matrix	WW			WW			WW			WW			WW			WW			WW			WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3	ND	U	0.20	ND	U	0.20	0.23	J	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.7	ND	U	0.6	ND	U	0.7	ND	U	0.6	ND	U	0.6	ND	U	0.7	ND	U	0.6
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	0.016		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10	ND	U D1	0.0210	ND	U D2	0.0212	ND	U D1	0.0219	ND	U D1	0.0202	ND	U D2	0.0216	ND	U D2	0.0198	ND	U D2	0.0201
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052	ND	U D2	0.0105	ND	U D2	0.0106	ND	U D1	0.0110	ND	U D2	0.0101	ND	U D2	0.0108	ND	U D2	0.00992	ND	U D2	0.0100
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	ND	U	2.00	ND	U	2.00	ND	U	2.00	ND	U	2.00	3.12	J	2.00	8.30		2.00	ND	U	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060	ND	U D2	0.00630	ND	U D1	0.00636	ND	U D1	0.00658	ND	U D1	0.00607	ND	U D1	0.00649	ND	U D2	0.00595	ND	U D2	0.00602
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153	ND	U	0.153	0.554		0.153	0.332		0.107	0.456		0.107	0.587		0.107	0.640		0.107	1.18		0.107
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.07
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
AROCLOR-1242	53469-21-9	**0.2**		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	**0.315**	**J D1**	**0.0749**	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	0.161	J D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	0.114	J D1	0.0734	ND	U D1	0.0743
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743
ARSENIC	7440-38-2	**0.05**		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0130	0.0140	J	0.0130	0.0236	J	0.0160	0.0329		0.0160	**0.0643**		**0.0160**
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010	0.0155		0.00086	0.184		0.00086	0.242		0.0010	0.160		0.0010	0.137		0.0010
BENZENE	71-43-2	1		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.08
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0483	ND	U D2	0.0487	ND	U D2	0.0504	ND	U D2	0.0466	ND	U D2	0.0498	ND	U D2	0.0456	ND	U D2	0.0462
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	0.14	J	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053	0.0061	J	0.0053	0.0210		0.0053	0.0023	J	0.0016	0.0078	J	0.0016	0.0048	J	0.0016	0.0061	J	0.0016	0.0067	J	0.0016
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0013	ND	U	0.0013	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062	ND	U	0.0062	0.0109	J	0.0062	ND	U	0.0062	0.0176	J	0.0062	ND	U	0.0062	ND	U	0.0062	ND	U	0.0120
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0116	ND	U D1	0.0117	ND	U D1	0.0121	ND	U D1	0.0111	ND	U D1	0.0119	ND	U D2	0.0109	ND	U D1	0.0110
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020	ND	U D1	0.00956	ND	U D1	0.00964	ND	U D1	0.00998	ND	U D1	0.00921	ND	U D2	0.00985	ND	U D2	0.00903	ND	U D1	0.00914
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14	ND	U D2	0.00872	ND	U D2	0.00879	ND	U D1	0.00910	ND	U D1	0.00840	ND	U D1	0.00898	ND	U D2	0.00823	ND	U D2	0.00833
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046	ND	U D2	0.00525	ND	U D1	0.00530	ND	U D1	0.00548	ND	U D1	0.00506	ND	U D1	0.00541	ND	U D2	0.00496	ND	U D2	0.00502
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.07
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**	0.177	J	0.0460	0.248		0.0460	0.207		0.0400	0.456		0.0400	0.445		0.0400
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	0.0227		0.0071	ND	U	0.0071	0.0151		0.0071	0.0076	J	0.0071	0.0083	J	0.0071	0.0103	J	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**	0.274		0.0011	0.150		0.0011	0.213		0.0030	0.196		0.0030	0.265		0.0030
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	**0.000092**	**J**	**0.000050**	ND	U	0.000050	**0.00015**	**J**	**0.000050**	**0.000055**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.4
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031	0.0034	J	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U	0.0021	ND	U	0.0021	ND	U	0.0021
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.08
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010	8.0		0.010	7.3		0.010	7.7		0.010	7.6		0.010	7.5		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.4
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0	554		20.0	514		20.0	477		20.0	584		40.0	778		40.0	646		40.0	642		40.0
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010	24.1		0.010	23.2		0.010	23.8		0.010	23.3		0.010	23.6		0.010	22.5		0.010	23.0		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00	2.84	J	1.00	14.4		4.00	2.99	J	1.00	7.20	J	4.00	4.33		1.00	7.14	J	3.00	9.00		3.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030	0.0044	J	0.0030	0.0184	J	0.0030	0.0039	J	0.0030	0.0201		0.0030	0.0155	J	0.0037	0.0130	J	0.0037	0.0522		0.0037

				Client ID	WWTPLVOCEFF071719			WWTPLEFF-072419			WWTPLEFF -073119			WWTPLEFF-080719			WWTPLEFF-081419			WWTPLEFF082319			WWTPLEFF-090419			WWTPLEFF-091119			WWTPLEFF091819			WWTPLEFF-092619			WWTPLEFF-100219			WWTPLEFF 100919			WWTPLEFF 101619			WWTPLEFF 102319			WWTPLEFF 103019		
				Lab Sample ID	1104240			1105958			1114886			1119771			1125348			1134737			1143474			1148143			1154018			1161145			1165972			1171757			1179917			1182129			1188907		
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM			8/23/2019 10:40:00 AM			9/4/2019 8:25:00 AM			9/11/2019 3:15:00 PM			9/18/2019 8:00:00 AM			9/26/2019 1:00:00 PM			10/2/2019 8:00:00 AM			10/9/2019 9:30:00 AM			10/16/2019 10:00:00 AM			10/23/2019 7:30:00 AM			10/30/2019 7:30:00 AM		
				Matrix	WW			WW			WW			WW			WW			WW			WW			WW			WW			WW			WW			WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	< 0	U	0.5	< 0	U	0.5	< 0	U	0.5	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070	< 0.0	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l	< 0	U	0.3	< 0	U	0.3	< 0	U	0.3	< 0.0	U	0.20	< 0.0	U	0.20	0.23	J	0.20	< 0.0	U	0.20	< 0.0	U	0.20	< 0.0	U	0.20	3.29		0.20	9.17		0.20	9.51		0.20	< 0.0	U	0.20	0.21	J	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060	< 0.0	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	< 0	U	0.4	< 0	U	0.4	< 0	U	0.4	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7	< 0	U	0.7
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
4,4-DDE	72-55-9	**0.016**		ug/l	< 0.0	U	D1 0.0051	< 0.0	U	D1 0.0052	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0210	< 0.00	U	D2 0.0212	< 0.00	U	D1 0.0219	< 0.00	U	D1 0.0202	< 0.00	U	D2 0.0216	< 0.00	U	D2 0.0201	< 0.00	U	D1 0.0225	**0.0280**		**J D1 0.0227**	< 0.00	U	D1 0.0210	< 0.00	U	D1 0.0240	< 0.00	U	D2 0.0245
4,4-DDT	50-29-3	0.048		ug/l	< 0.0	U	D2 0.0054	< 0.0	U	D1 0.0054	< 0.0	U	D1 0.0052	< 0.00	U	D2 0.0105	< 0.00	U	D2 0.0106	< 0.00	U	D2 0.0110	< 0.00	U	D2 0.0101	< 0.00	U	D2 0.0108	< 0.00	U	D2 0.00992	< 0.00	U	D2 0.0100	< 0.00	U	D1 0.0113	< 0.00	U	D1 0.0114	< 0.00	U	D1 0.0105	< 0.00	U	D2 0.0120	< 0.00	U	D1 0.0123
4-METHYLPHENOL	106-44-5	10		ug/l	< 0	U	0.5	< 0	U	0.5	< 0	U	0.5	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	< 0.00	U	2.00	< 0.00	U	2.00	< 0.00	U	2.00	< 0.00	U	2.00	5.12	J	2.00	8.30		2.00	< 0.00	U	2.00	**21.3**		2.00	**33.2**		**2.00**	< 0.00	U	2.00	4.58	J	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	< 0.0	U	D2 0.0031	< 0.0	U	D2 0.0031	< 0.0	U	D1 0.060	< 0.00	U	D2 0.00630	< 0.00	U	D1 0.00636	< 0.00	U	D1 0.00658	< 0.00	U	D1 0.00607	< 0.00	U	D1 0.00649	< 0.00	U	D2 0.00595	< 0.00	U	D2 0.00602	< 0.00	U	D1 0.00676	< 0.00	U	D1 0.00682	< 0.00	U	D2 0.00630	< 0.00	U	D1 0.00721	< 0.00	U	D1 0.00735
ALUMINUM	7429-90-5	2		mg/l	< 0.00	U	0.153	< 0.00	U	0.153	< 0.00	U	0.406	< 0.00	U	0.153	0.554		0.153	0.332		0.107	0.456		0.107	0.587		0.107	0.640		0.107	1.18		0.107	1.05		0.107	1.15		0.107	1.05		0.107	< 0.00	U	K2 0.107	< 0.00	U	0.107	< 0.00	U	0.107
ANTHRACENE	120-12-7	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.08	< 0	U	0.08	< 0	U	0.08	< 0	U	0.07	< 0	U	0.08	< 0	U	0.08	< 0	U	0.07	< 0	U	0.08	< 0	U	0.08	< 0	U	0.08	< 0	U	0.08	< 0	U	0.08	< 0	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0743	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777
AROCLOR-1221	11104-28-2	0.2		ug/l	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0743	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777						
AROCLOR-1232	11141-16-5	0.2		ug/l	< 0.0	U	D1 0.21	< 0.0	U	D1 0.21	< 0.0	U	D1 0.20	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0743	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777						
AROCLOR-1242	53469-21-9	**0.2**		ug/l	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0743	0.127	J	D1 0.0833	**0.292**		**J D1 0.0841**	< 0.00	U	D1 0.0777						
AROCLOR-1248	12672-29-6	0.2		ug/l	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0777	0.161	J	D1 0.0523	< 0.00	U	D1 0.0811	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	0.114	J	D1 0.0734	< 0.00	U	D1 0.0743	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777						
AROCLOR-1254	11097-69-1	0.2		ug/l	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.0	U	D1 0.10	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0523	< 0.00	U	D1 0.0811	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0743	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777						
AROCLOR-1260	11096-82-5	0.2		ug/l	< 0.0	U	D1 0.15	< 0.0	U	D1 0.15	< 0.0	U	D1 0.15	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0777	< 0.00	U	D1 0.0523	< 0.00	U	D1 0.0811	< 0.00	U	D1 0.0749	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0801	< 0.00	U	D1 0.0734	< 0.00	U	D1 0.0833	< 0.00	U	D1 0.0841	< 0.00	U	D1 0.0777						
ARSENIC	7440-38-2	**0.05**		mg/l	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	0.0239		0.0160	0.0329		0.0160	**0.0643**		**0.0160**	0.0408		0.0160	0.0256	J	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160	< 0.00	U	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010	0.0155		0.00086	0.184		0.00086	0.242		0.00010	0.160		0.0010	0.137		0.0010	0.122		0.0010	0.103		0.0010	0.0984		0.0010	0.0879		0.0010	0.108		0.0010
BENZENE	71-43-2	**1**		ug/l	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0.0	U	0.050	< 0.0	U	0.050	< 0.0	U	0.050	< 0.0	U	0.050	< 0.0	U	0.050	< 0.0	U	0.050	< 0.0	U	0.050	**2.60**		**0.050**	**1.51**		**0.050**	< 0.0	U	0.050	0.050		0.050	< 0.0	U	0.050	< 0.0	U	0.050
BENZO(A)ANTHRACENE	56-55-3	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
BENZO(A)PYRENE	50-32-8	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
BENZO(B)FLUORANTHENE	205-99-2	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.09	< 0	U	0.09	< 0	U	0.09	< 0	U	0.08	< 0	U	0.09	< 0	U	0.08	< 0	U	0.08	< 0	U	0.09	< 0	U	0.09	< 0	U	0.09	< 0	U	0.09	< 0	U	0.09	< 0	U	0.09
BENZO(K)FLUORANTHENE	207-08-9	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	< 0	U	1.2	< 0	U	2	< 0	U	2	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1
BETA-BHC	319-85-7	0.07		ug/l	< 0.0	U	D1 0.0035	< 0.0	U	D1 0.0035	< 0.0	U	D1 0.0034	< 0.00	U	D1 0.0483	< 0.00	U	D2 0.0487	< 0.00	U	D2 0.0504	< 0.00	U	D2 0.0466	< 0.00	U	D2 0.0498	< 0.00	U	D2 0.0456	< 0.00	U	D2 0.0462	< 0.00	U	D1 0.0518	< 0.00	U	D1 0.0523	< 0.00	U	D1 0.0483	< 0.00	U	D2 0.0553	< 0.00	U	D1 0.0564
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	< 0	U	3	< 0	U	3	< 0	U	5	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1
CARBAZOLE	86-74-8		ND	ug/l	< 0	U	0.5	< 0	U	0.5	< 0	U	0.5	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	0.14	J	0.10	< 0	U	0.10	< 0	U	0.10	< 0	U	0.10	< 0	U	0.10	< 0	U	0.10	0.16	J	0.10	0.83		0.10	0.96	J	0.10	< 0	U	0.10	0.15	J	0.10	< 0	U	0.10	< 0	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.11		mg/l	0.0059	J	0.0053	< 0	U	0.0053	< 0	U	0.0053	0.0061	J	0.0053	0.0210		0.0053	0.0023	J	0.0018	0.0078	J	0.0018	0.0048	J	0.0018	0.0061	J	0.0018	0.0067	J	0.0018	0.0040	J	0.0018	0.0049	J	0.0018	0.0016	J	0.0018	< 0.0	U	K2 0.0018	< 0.0	U	0.0018	< 0.0	U	0.0018
COBALT	7440-48-4	0.05		mg/l	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0013	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	< 0.0	U	0.0015	0.0023	J	0.0015
COPPER	7440-50-8	0.14		mg/l	< 0.0	U	0.0062	< 0.0	U	0.0149	< 0.0	U	0.0062	< 0.0	U	0.0062	0.0109	J	0.0062	< 0.0	U	0.0062	0.0176	J	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0062	< 0.0	U	0.0120	< 0.0	U	0.0120
DELTA-BHC	319-86-8	0.08		ug/l	< 0.0	U	D1 0.0035	< 0.0	U	D1 0.0035	< 0.0	U	D1 0.0034	< 0.00	U	D1 0.0116	< 0.00	U	D1 0.0117	< 0.00	U	D1 0.0121	< 0.00	U	D1 0.0111	< 0.00	U	D1 0.0119	< 0.00	U	D2 0.0109	< 0.00	U	D1 0.0110	< 0.00	U	D1 0.0124	< 0.00	U	D1 0.0125	< 0.00	U	D1 0.0116	< 0.00	U	D1 0.0132	< 0.00	U	D1 0.0135
DIBENZ(A,H)ANTHRACENE	53-70-3	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	< 0	U	2	< 0	U	2	< 0	U	2	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	< 0.0	U	D1 0.021	< 0.0	U	D1 0.021	< 0.0	U	D1 0.020	< 0.00	U	D1 0.00956	< 0.00	U	D1 0.00964	< 0.00	U	D1 0.00998	< 0.00	U	D1 0.00921	< 0.00	U	D2 0.00985	< 0.00	U	D2 0.00903	< 0.00	U	D1 0.00914	< 0.00	U	D1 0.0102	< 0.00	U	D2 0.0103	< 0.00	U	D1 0.00956	< 0.00	U	D1 0.0109	< 0.00	U	D1 0.0112
ETHYLBENZENE	100-41-4	5		ug/l	< 0	U	0.4	< 0	U	0.4	< 0	U	0.4	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10	< 0.0	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	< 0.0	U	D2 0.0072	< 0.0	U	D1 0.0072	< 0.0	U	D1 0.14	< 0.00	U	D2 0.00872	< 0.00	U	D2 0.00879	< 0.00	U	D1 0.00910	< 0.00	U	D1 0.00840	< 0.00	U	D1 0.00898	< 0.00	U	D2 0.00823	< 0.00	U	D2 0.00833	< 0.00	U	D1 0.00935	< 0.00	U	D1 0.00943	< 0.00	U	D1 0.00872	< 0.00	U	D1 0.00908	< 0.00	U	D1 0.0102
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	< 0.0	U	D1 0.0024	< 0.0	U	D1 0.0024	< 0.0	U	D2 0.046	< 0.00	U	D2 0.00525	< 0.00	U	D1 0.00530	< 0.00	U	D1 0.00548	< 0.00	U	D1 0.00506	< 0.00	U	D1 0.00541	< 0.00	U	D2 0.00496	< 0.00	U	D2 0.00502	< 0.00	U	D1 0.00770	< 0.00	U	D2 0.00568	< 0.00	U	D1 0.00525	< 0.00	U	D1 0.00601	< 0.00	U	D1 0.00613
INDENO(1,2,3-CD)PYRENE	193-39-5	5		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2	< 0	U	0.2
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**	0.177	J	0.0460	0.248		0.0460	0.207		0.0400	0.456		0.0400	0.445		0.0400	0.838		0.0400	**0.854**		**0.0400**	0.404	J	0.0400	< 0.0	U	0.0400	0.166	J	0.0400
LEAD	7439-92-1	0.43		mg/l	< 0.00	U	0.0071	< 0.00	U	0.0071	< 0.00	U	0.0071	< 0.00	U	0.0071	< 0.00	U	0.0071	< 0.00	U	0.0071	0.0155	J	0.0071	< 0.00	U	0.0076	< 0.00	U	0.0071	< 0.00	U	0.0083	< 0.00	U	0.0027	< 0.00	U	0.0103	< 0.00	U	0.0110	< 0.00	U	0.0071	< 0.00	U	0.0071	< 0.00	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**	0.274		0.0011	0.150		0.0011	0.213		0.0030	0.196		0.0030	0.265		0.0030	**0.432**		**0.0030**	**0.429**		**0.0030**	**0.470**		**0.0030**	**0.603**		**0.0030**	**0.927**		**0.0030**
MERCURY	7439-97-6	**5e-005**		mg/l	< 0.00	U	0.000050	< 0.0	U	0.000050	< 0.0	U	0.000050	< 0.0	U	0.000050	**0.000092**	**J**	**0.000050**	< 0.0	U	0.000050	**0.00015**	**J**	**0.000050**	**0.000056**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**	< 0.0	U	0.000050	**0.00012**	**J**	**0.000050**	< 0.0	U	0.000050	< 0.0	U	0.000050	< 0.0	U	0.000050	< 0.0	U	0.000050	< 0.0	U	0.000050
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	< 0	U	2	< 0	U	2	< 0	U	2	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1	< 0	U	1
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	< 0	U	0.3	0.7	J	0.3	< 0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30	< 0.0	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	< 0.0	U	0.0031	< 0.0	U	0.0031	0.0034	J	0.0031	< 0.0	U	0.0031	< 0.0	U	0.0031	< 0.0	U	0.0031	< 0.0	U	0.0021	< 0.0	U	0.0021	< 0.0	U	0.0025	< 0.0	U	0.0021	0.0067	J	0.0021	0.0023	J	0.0021	0.0032	J	0.0021	0.0035	J	0.0021
P-CHLORONALINE	106-47-8	10		ug/l	< 0	U	4	< 0	U	4	< 0	U	4	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3	< 0	U	3
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010	8.0		0.010	7.3		0.010	7.7		0.010	7.6		0.010	7.5		0.010	7.4		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.7		0.010
PHENANTHRENE	85-01-8	10		ug/l	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1	< 0	U	0.1
PHENOL	108-95-2	3		ug/l	< 0	U	0.5	< 0	U	0.5	< 0	U	0.5	< 0	U	0.4	< 0	U	0.4	< 0	U	0.4	< 0	U	0.5	< 0	U	0.4	< 0	U	0.4	< 0	U	0.4	< 0	U	0.5	< 0	U	0.4	< 0	U	0.4	< 0	U	0.4	< 0

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119			WWTPEFF080719			WWTPEFF-081419			WWTPEFF082319			WWTPEFF-090419			WWTPEFF-0911	
				Lab Sample ID	1104240			1109568			1114886			1119771			1125348			1134737			1143474			1148143	
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM			8/23/2019 10:40:00 AM			9/4/2019 8:25:00 AM			9/11/2019 3:15:00	
				Matrix	WW			WW			WW			WW			WW			WW			WW			WW	
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3	ND	U	0.20	ND	U	0.20	0.23	J	0.20	ND	U	0.20	ND	U
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.7	ND	U	0.6	ND	U	0.7	ND	U	0.6	ND	U
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
4,4-DDE	72-55-9	**0.016**		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10	ND	U D1	0.0210	ND	U D2	0.0212	ND	U D1	0.0219	ND	U D1	0.0202	ND	U D2
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052	ND	U D2	0.0105	ND	U D2	0.0106	ND	U D2	0.0110	ND	U D2	0.0101	ND	U D2
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	ND	U	2.00	ND	U	2.00	ND	U	2.00	ND	U	2.00	3.12	J
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060	ND	U D2	0.00630	ND	U D1	0.00636	ND	U D1	0.00658	ND	U D1	0.00607	ND	U D1
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153	ND	U	0.153	0.554		0.153	0.332		0.107	0.456		0.107	0.587	
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
AROCLOR-1242	53469-21-9	**0.2**		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	**0.315**	**J D1**	**0.0749**	ND	U D1
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	0.161	J D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1	0.0811	ND	U D1	0.0749	ND	U D1
ARSENIC	7440-38-2	**0.05**		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0130	0.0140	J	0.0130	0.0236	J
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010	0.0155		0.00086	0.184		0.00086	0.242	
BENZENE	71-43-2	**1**		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0483	ND	U D2	0.0487	ND	U D2	0.0504	ND	U D2	0.0466	ND	U D2
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	0.14	J	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053	0.0061	J	0.0053	0.0210		0.0053	0.0023	J	0.0016	0.0078	J	0.0016	0.0048	J
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0013	ND	U	0.0013	ND	U
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062	ND	U	0.0062	0.0109	J	0.0062	ND	U	0.0062	0.0176	J	0.0062	ND	U
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0116	ND	U D1	0.0117	ND	U D1	0.0121	ND	U D1	0.0111	ND	U D1
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020	ND	U D1	0.00956	ND	U D1	0.00964	ND	U D1	0.00998	ND	U D1	0.00921	ND	U D2
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14	ND	U D2	0.00872	ND	U D2	0.00879	ND	U D1	0.00910	ND	U D1	0.00840	ND	U D1
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046	ND	U D2	0.00525	ND	U D1	0.00530	ND	U D1	0.00548	ND	U D1	0.00506	ND	U D1
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**	0.177	J	0.0460	0.248		0.0460	0.207	
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	0.0227		0.0071	ND	U	0.0071	0.0151		0.0071	0.0076	J
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**	0.274		0.0011	0.150		0.0011	0.213	
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	**0.000092**	**J**	**0.000050**	ND	U	0.000050	**0.00015**	**J**	**0.000050**	**0.000055**	**J**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031	0.0034	J	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U	0.0031	ND	U
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010	8.0		0.010	7.3		0.010	7.7	
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0	554		20.0	514		20.0	477		20.0	584		40.0	778	
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010	24.1		0.010	23.2		0.010	23.8		0.010	23.3		0.010	23.6	
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00	2.84	J	1.00	14.4		4.00	2.99	J	1.00	7.20	J	4.00	4.33	
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030	0.0044	J	0.0030	0.0184	J	0.0030	0.0039	J	0.0030	0.0201		0.0030	0.0155	J

				Client ID	19	WWTPEFF091819			WWTPEFF092619			WWTPEFF-100219			WWTPEFF100919			WWTPEFF101619			WWTPEFF102319			WWTPEFF103019			W
				Lab Sample ID		1154018			1161145			1165972			1171707			1176917			1182129			1188907			
				Sampling Date	PM	9/18/2019 8:00:00 AM			9/26/2019 1:00:00 PM			10/2/2019 8:00:00 AM			10/9/2019 9:30:00 AM			10/16/2019 10:00:00 AM			10/23/2019 7:30:00 AM			10/30/2019 7:30:00 AM			10/3
				Matrix		WW			WW			WW			WW			WW			WW			WW			
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	
1,2-DICHLOROETHANE	107-06-2	10		ug/l	0.20	ND	U	0.20	ND	U	0.20	3.29		0.20	9.17		0.20	9.51		0.20	ND	U	0.20	0.21	J	0.20	
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	0.6	ND	U	0.7	ND	U	0.6	ND	U	0.7	ND	U	0.7	ND	U	0.7	ND	U	0.6	ND	U	0.7	
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
4,4-DDE	72-55-9	**0.016**		ug/l	0.0216	ND	U D2	0.0198	ND	U D2	0.0201	ND	U D1	0.0225	**0.0280**	**J D1**	**0.0227**	ND	U D1	0.0210	ND	U D1	0.0240	ND	U D2	0.0245	
4,4-DDT	50-29-3	0.048		ug/l	0.0108	ND	U D2	0.00992	ND	U D2	0.0100	ND	U D1	0.0113	ND	U D1	0.0114	ND	U D1	0.0105	ND	U D2	0.0120	ND	U D1	0.0123	
4-METHYLPHENOL	106-44-5	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
ACETONE	67-64-1	**10**		ug/l	2.00	8.30		2.00	ND	U	2.00	6.10		2.00	**21.3**		**2.00**	**33.2**		**2.00**	ND	U	2.00	4.58	J	2.00	
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	0.00649	ND	U D2	0.00595	ND	U D2	0.00602	ND	U D1	0.00676	ND	U D1	0.00682	ND	U D2	0.00630	ND	U D1	0.00721	ND	U D1	0.00735	
ALUMINUM	7429-90-5	2		mg/l	0.107	0.640		0.107	1.18		0.107	1.15		0.107	1.05		0.107	ND	U K2	0.107	ND	U	0.107	ND	U	0.107	
ANTHRACENE	120-12-7	10		ug/l	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08	
AROCLOR-1016	12674-11-2	0.2		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
AROCLOR-1221	11104-28-2	0.2		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
AROCLOR-1232	11141-16-5	0.2		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
AROCLOR-1242	53469-21-9	**0.2**		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	0.127	J D1	0.0833	**0.292**	**J D1**	**0.0841**	ND	U D1	0.0777							ND
AROCLOR-1248	12672-29-6	0.2		ug/l	0.0801	0.114	J D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
AROCLOR-1254	11097-69-1	0.2		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
AROCLOR-1260	11096-82-5	0.2		ug/l	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND	U D1	0.0841	ND	U D1	0.0777							ND
ARSENIC	7440-38-2	**0.05**		mg/l	0.0160	0.0329		0.0160	**0.0643**		**0.0160**	0.0406		0.0160	0.0256	J	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	
BARIUM	7440-39-3	1.2		mg/l	0.0010	0.160		0.0010	0.137		0.0010	0.122		0.0010	0.103		0.0010	0.0984		0.0010	0.0879		0.0010	0.108		0.0010	
BENZENE	71-43-2	**1**		ug/l	0.050	ND	U	0.050	ND	U	0.050	0.12	J	0.050	**2.60**		**0.050**	**1.51**		**0.050**	ND	U	0.050	0.051	J	0.050	
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
BENZO[A]PYRENE	50-32-8	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09	
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	
BETA-BHC	319-85-7	0.07		ug/l	0.0498	ND	U D2	0.0456	ND	U D2	0.0462	ND	U D1	0.0518	ND	U D1	0.0523	ND	U D1	0.0483	ND	U D2	0.0553	ND	U D1	0.0564	
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	
CARBAZOLE	86-74-8		ND	ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
CHLOROBENZENE	108-90-7	5		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	0.83	J	0.10	0.96	J	0.10	ND	U	0.10	0.15	J	0.10	
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0016	0.0061	J	0.0016	0.0067	J	0.0016	0.0040	J	0.0016	0.0049	J	0.0016	0.0016	J	0.0016	ND	U K2	0.0016	ND	U	0.0016	
COBALT	7440-48-4	0.05		mg/l	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	0.0016	J	0.0015	0.0023	J	0.0015	
COPPER	7440-50-8	0.14		mg/l	0.0062	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	
DELTA-BHC	319-86-8	0.08		ug/l	0.0119	ND	U D2	0.0109	ND	U D1	0.0110	ND	U D1	0.0124	ND	U D1	0.0125	ND	U D1	0.0116	ND	U D1	0.0132	ND	U D1	0.0135	
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	0.00985	ND	U D2	0.00903	ND	U D1	0.00914	ND	U D1	0.0102	ND	U D2	0.0103	ND	U D1	0.00956	ND	U D1	0.0109	ND	U D1	0.0112	
ETHYLBENZENE	100-41-4	5		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	
FLUORANTHENE	206-44-0	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	0.00898	ND	U D2	0.00823	ND	U D2	0.00833	ND	U D1	0.00935	ND	U D1	0.00943	ND	U D1	0.00872	ND	U D1	0.00998	ND	U D1	0.0102	
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	0.00541	ND	U D2	0.00496	ND	U D2	0.00502	ND	U D1	0.00770	ND	U D2	0.00568	ND	U D1	0.00525	ND	U D1	0.00601	ND	U D1	0.00613	
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08	
IRON	7439-89-6	**0.6**		mg/l	0.0400	0.456		0.0400	0.445		0.0400	0.438		0.0400	**0.854**		**0.0400**	0.404		0.0400	ND	U	0.0400	0.166	J	0.0400	
LEAD	7439-92-1	0.04		mg/l	0.0071	0.0083	J	0.0071	0.0103	J	0.0071	0.0110	J	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	
MANGANESE	7439-96-5	**0.3**		mg/l	0.0030	0.196		0.0030	0.265		0.0030	**0.432**		**0.0030**	**0.429**		**0.0030**	**0.470**		**0.0030**	**0.603**		**0.0030**	**0.927**		**0.0030**	
MERCURY	7439-97-6	**5e-005**		mg/l	**0.000050**	**0.000057**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**	ND	U	0.000050	**0.00012**	**J**	**0.000050**	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	
NAPHTHALENE	91-20-3	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
NICKEL	7440-02-0	0.2		mg/l	0.0021	ND	U	0.0021	ND	U	0.0021	0.0025	J	0.0021	0.0067	J	0.0021	0.0023	J	0.0021	0.0032	J	0.0021	0.0035	J	0.0021	
P-CHLOROANILINE	106-47-8	10		ug/l	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09	
pH	pH	9		SU	0.010	7.6		0.010	7.5		0.010	7.4		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.7		0.010	
PHENANTHRENE	85-01-8	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	
PHENOL	108-95-2	2		ug/l	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	
PYRENE	129-00-0	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	
SETTLEABLE SOLIDS	SS			ml/l/hr	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	40.0	646		40.0	642		40.0	662		20.0	658		40.0	520		20.0	550		40.0	471		20.0	
TEMPERATURE	TEMP			deg c	0.010	22.5		0.010	23.0		0.010	23.1		0.010	23.9		0.010	22.5		0.010	22.7		0.010	22.9		0.010	
TOLUENE	108-88-3	5		ug/l	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	1.00	7.14	J	3.00	9.00		3.00	16.4		4.00	12.0		4.00	4.52	J	2.00	4.50	J	3.00	2.39	J	1.00	
VINYL CHLORIDE	75-01-4	2		ug/l	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	
Xylene (Total)	1330-20-7	5		ug/l	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	
ZINC	7440-66-6	1		mg/l	0.0037	0.0130	J	0.0037	0.0522		0.0037	0.0363		0.0037	0.0083	J	0.0037	0.0049	J	0.0037	0.0091	J	0.0037	0.0192	J	0.0037	

				Client ID	WTPEFF103019		WWTPEFF110619			WWTPEFF111319			WWTPEFF112519		
				Lab Sample ID	1196748		1194931			1201125			1211347		
				Sampling Date	0/2019 7:30:00 AM		11/6/2019 4:15:00 PM			11/13/2019 10:40:00 AM			11/25/2019 9:00:00 AM		
				Matrix	WW		WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l			ND	U	0.070	ND	U	0.070	ND	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l			ND	U	0.20	0.22	J	0.20	ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l			ND	U	0.060	ND	U	0.060	ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l			ND	U	0.10	ND	U	0.10	ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l			ND	U	0.7	ND	U	0.7	ND	U	0.7
2-METHYLNAPHTHALENE	91-57-6	47		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	**0.016**		ug/l			ND	U D1	0.0217	ND	U D1	0.0212	ND	U D1	0.0208
4,4-DDT	50-29-3	0.048		ug/l			ND	U D2	0.0109	ND	U D2	0.0106	ND	U D1	0.0104
4-METHYLPHENOL	106-44-5	10		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
ACETONE	67-64-1	**10**		ug/l			**11.3**		**2.00**	**16.9**		**2.00**	ND	U	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l			ND	U D2	0.00652	ND	U D1	0.00636	ND	U D1	0.00625
ALUMINUM	7429-90-5	2		mg/l			ND	U	0.107	ND	U	0.0985	0.0689		0.0197
ANTHRACENE	120-12-7	10		ug/l			ND	U	0.08	ND	U	0.08	ND	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1221	11104-28-2	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1232	11141-16-5	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1242	53469-21-9	**0.2**		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1248	12672-29-6	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1254	11097-69-1	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
AROCLOR-1260	11096-82-5	0.2		ug/l	U D1	0.0819	ND	U D1	0.0804	ND	U D1	0.0784	ND	U D1	0.0771
ARSENIC	7440-38-2	**0.05**		mg/l			ND	U	0.0160	ND	U	0.0160	ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l			0.0621		0.0010	0.0322		0.0010	0.0527		0.0010
BENZENE	71-43-2	**1**		ug/l			ND	U	0.050	ND	U	0.050	ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l			ND	U	0.09	ND	U	0.09	ND	U	0.09
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l			ND	U	1	ND	U	1	ND	U	1
BETA-BHC	319-85-7	0.07		ug/l			ND	U D2	0.0500	ND	U D2	0.0487	ND	U D2	0.0479
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l			ND	U	1	ND	U	1	ND	U	1
CARBAZOLE	86-74-8		ND	ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l			ND	U	0.10	ND	U	0.10	ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l			ND	U	0.0016	ND	U	0.0016	0.0021	J	0.0016
COBALT	7440-48-4	0.05		mg/l			0.0030	J	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l			ND	U	0.0120	ND	U	0.0120	ND	U	0.0120
DELTA-BHC	319-86-8	0.08		ug/l			ND	U D1	0.0120	ND	U D1	0.0117	ND	U D1	0.0115
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l			ND	U	1	ND	U	1	ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l			ND	U D1	0.00989	ND	U D1	0.00964	ND	U D2	0.00948
ETHYLBENZENE	100-41-4	5		ug/l			ND	U	0.10	ND	U	0.10	ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l			ND	U D2	0.00902	ND	U D1	0.00879	ND	U D2	0.00865
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l			ND	U D1	0.00544	ND	U D1	0.00530	ND	U D2	0.00521
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l			ND	U	0.08	ND	U	0.08	ND	U	0.08
IRON	7439-89-6	**0.6**		mg/l			**3.13**		**0.0400**	**0.604**		**0.0400**	0.216		0.0400
LEAD	7439-92-1	0.04		mg/l			ND	U	0.0071	ND	U	0.0071	ND	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l			**1.11**		**0.0030**	**0.718**		**0.0030**	**0.662**		**0.0030**
MERCURY	7439-97-6	**5e-005**		mg/l			ND	U	0.000050	ND	U	0.000050	ND	U	0.000050
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l			ND	U	0.4	ND	U	0.4	ND	U	0.5
METHYLENE CHLORIDE	75-09-2	5		ug/l			ND	U	0.30	ND	U	0.30	ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l			0.0050	J	0.0021	ND	U	0.0021	ND	U	0.0021
P-CHLOROANILINE	106-47-8	10		ug/l			ND	U	0.09	ND	U	0.09	ND	U	0.09
pH	pH	9		SU			7.4		0.010	8.0		0.010	7.8		0.010
PHENANTHRENE	85-01-8	10		ug/l			ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l			ND	U	0.4	ND	U	0.4	ND	U	0.5
PYRENE	129-00-0	10		ug/l			ND	U	0.2	ND	U	0.2	ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr			ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l			447		20.0	396		20.0	522		20.0
TEMPERATURE	TEMP			deg c			22.6		0.010	23.1		0.010	22.2		0.010
TOLUENE	108-88-3	5		ug/l			ND	U	0.050	ND	U	0.050	ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l			9.25		1.00	1.04	J	1.00	2.99	J	1.00
VINYL CHLORIDE	75-01-4	2		ug/l			ND	U	0.30	ND	U	0.30	ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l			ND	U	0.20	ND	U	0.20	ND	U	0.20
ZINC	7440-66-6	1		mg/l			0.0146	J	0.0037	0.0067	J	0.0037	0.0086	J	0.0037

				Client ID	WWTPLVOCEFF071719			WWTPEFF-072419			WWTPEFF-073119			WWTPEFF080719			WWTPEFF-081419			WWTPEFF08231	
				Lab Sample ID	1104240			1109568			1114886			1119771			1125348			1134737	
				Sampling Date	7/17/2019 8:50:00 AM			7/24/2019 9:20:00 AM			7/31/2019 10:50:00 AM			8/7/2019 1:35:00 PM			8/14/2019 8:20:00 AM			8/23/2019 10:40:00	
				Matrix	WW			WW			WW			WW			WW			WW	
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.070	ND	U	0.070	ND	U
1,2-DICHLOROETHANE	107-06-2	10		ug/l	ND	U	0.3	ND	U	0.3	ND	U	0.3	ND	U	0.20	ND	U	0.20	0.23	J
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.060	ND	U	0.060	ND	U
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.10	ND	U	0.10	ND	U
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.7	ND	U	0.6	ND	U
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
4,4-DDE	72-55-9	**0.016**		ug/l	ND	U D1	0.0051	ND	U D1	0.0052	ND	U D1	0.10	ND	U D1	0.0210	ND	U D2	0.0212	ND	U D1
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0054	ND	U D1	0.0054	ND	U D1	0.0052	ND	U D2	0.0105	ND	U D2	0.0106	ND	U D2
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.1	ND	U	0.1	ND	U
ACETONE	67-64-1	**10**		ug/l	8	J	0.7	10	J	0.7	**13**	**J**	**0.7**	ND	U	2.00	ND	U	2.00	ND	U
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D2	0.0031	ND	U D2	0.0031	ND	U D1	0.060	ND	U D2	0.00630	ND	U D1	0.00636	ND	U D1
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.153	ND	U	0.153	0.406		0.153	ND	U	0.153	0.554		0.153	0.332	
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.21	ND	U D1	0.21	ND	U D1	0.20	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
AROCLOR-1242	53469-21-9	**0.2**		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	0.161	J D1	0.0523	ND	U D1
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.10	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.15	ND	U D1	0.0777	ND	U D1	0.0523	ND	U D1
ARSENIC	7440-38-2	**0.05**		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U
BARIUM	7440-39-3	1.2		mg/l	0.136		0.0010	0.0921		0.0010	0.0511		0.0010	0.0403		0.0010	0.0421		0.0010	0.0155	
BENZENE	71-43-2	**1**		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.09	ND	U	0.09	ND	U
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U
BETA-BHC	319-85-7	0.07		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0483	ND	U D2	0.0487	ND	U D2
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	1	ND	U
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.2	ND	U	0.2	ND	U
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	0.14	J	0.10	ND	U	0.10	ND	U
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0059	J	0.0053	ND	U	0.0053	ND	U	0.0053	0.0061	J	0.0053	0.0210		0.0053	0.0023	J
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0062	0.0149	J	0.0062	ND	U	0.0062	ND	U	0.0062	0.0109	J	0.0062	ND	U
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0035	ND	U D1	0.0035	ND	U D1	0.0034	ND	U D1	0.0116	ND	U D1	0.0117	ND	U D1
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	1	ND	U	1	ND	U
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.021	ND	U D1	0.021	ND	U D1	0.020	ND	U D1	0.00956	ND	U D1	0.00964	ND	U D1
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.10	ND	U	0.10	ND	U
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D2	0.0072	ND	U D1	0.0072	ND	U D1	0.14	ND	U D2	0.00872	ND	U D2	0.00879	ND	U D1
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.0024	ND	U D1	0.0024	ND	U D2	0.046	ND	U D2	0.00525	ND	U D1	0.00530	ND	U D1
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.08	ND	U	0.08	ND	U
IRON	7439-89-6	**0.6**		mg/l	0.345		0.0400	0.286		0.0400	0.289		0.0400	0.327		0.0400	**0.646**		**0.0400**	0.177	J
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071	0.0227		0.0071	ND	U
MANGANESE	7439-96-5	**0.3**		mg/l	0.238		0.0011	**0.493**		**0.0011**	**0.386**		**0.0011**	**0.452**		**0.0011**	**0.495**		**0.0011**	0.274	
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050	**0.000092**	**J**	**0.000050**	ND	U
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	2	ND	U	2	ND	U	2	ND	U	0.4	ND	U	0.4	ND	U
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.5	J	0.3	ND	U	0.3	0.7	J	0.3	ND	U	0.30	ND	U	0.30	ND	U
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
NICKEL	7440-02-0	0.2		mg/l	0.0043	J	0.0031	ND	U	0.0031	ND	U	0.0031	0.0034	J	0.0031	ND	U	0.0031	ND	U
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	4	ND	U	4	ND	U	4	ND	U	0.09	ND	U	0.09	ND	U
pH	pH	9		SU	7.7		0.010	7.8		0.010	7.7		0.010	7.9		0.010	7.8		0.010	8.0	
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U
PHENOL	108-95-2	2		ug/l	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.4	ND	U	0.4	ND	U
PYRENE	129-00-0	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.2	ND	U	0.2	ND	U
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	253		10.0	484		40.0	556		40.0	554		20.0	514		20.0	477	
TEMPERATURE	TEMP			deg c	23.3		0.010	23.6		0.010	23.4		0.010	24.1		0.010	23.2		0.010	23.8	
TOLUENE	108-88-3	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.050	ND	U	0.050	ND	U
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	ND	U	1.00	4.78		1.00	2.39	J	1.00	2.84	J	1.00	14.4		4.00	2.99	J
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.30	ND	U	0.30	ND	U
Xylene (Total)	1330-20-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1	ND	U	0.20	ND	U	0.20	ND	U
ZINC	7440-66-6	1		mg/l	0.0136	J	0.0030	0.0046	J	0.0030	0.0055	J	0.0030	0.0044	J	0.0030	0.0184	J	0.0030	0.0039	J

				Client ID	9	WWTPEFF-090419			WWTPEFF-091119			WWTPEFF091819			WWTPEFF092619			WWTPEFF-100219			W
				Lab Sample ID		1143474			1148143			1154018			1161145			1165972			
				Sampling Date	AM	9/4/2019 8:25:00 AM			9/11/2019 3:15:00 PM			9/18/2019 8:00:00 AM			9/26/2019 1:00:00 PM			10/2/2019 8:00:00 AM			10/
				Matrix		WW			WW			WW			WW			WW			
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070	ND
1,2-DICHLOROETHANE	107-06-2	10		ug/l	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	3.29		0.20	9.17
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060	ND
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	0.7	ND	U	0.6	ND	U	0.6	ND	U	0.7	ND	U	0.6	ND	U	0.7	ND
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
4,4-DDE	72-55-9	**0.016**		ug/l	0.0219	ND	U D1	0.0202	ND	U D2	0.0216	ND	U D2	0.0198	ND	U D2	0.0201	ND	U D1	0.0225	**0.0280**
4,4-DDT	50-29-3	0.048		ug/l	0.0110	ND	U D2	0.0101	ND	U D2	0.0108	ND	U D2	0.00992	ND	U D2	0.0100	ND	U D1	0.0113	ND
4-METHYLPHENOL	106-44-5	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
ACETONE	67-64-1	**10**		ug/l	2.00	ND	U	2.00	3.12	J	2.00	8.30		2.00	ND	U	2.00	6.10		2.00	**21.3**
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	0.00658	ND	U D1	0.00607	ND	U D1	0.00649	ND	U D2	0.00595	ND	U D2	0.00602	ND	U D1	0.00676	ND
ALUMINUM	7429-90-5	2		mg/l	0.107	0.456		0.107	0.587		0.107	0.640		0.107	1.18		0.107	1.15		0.107	1.05
ANTHRACENE	120-12-7	10		ug/l	0.08	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08	ND
AROCLOR-1016	12674-11-2	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
AROCLOR-1221	11104-28-2	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
AROCLOR-1232	11141-16-5	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
AROCLOR-1242	53469-21-9	**0.2**		ug/l	0.0811	**0.315**	**J D1**	**0.0749**	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	0.127	J D1	0.0833	**0.292**
AROCLOR-1248	12672-29-6	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	0.114	J D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
AROCLOR-1254	11097-69-1	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
AROCLOR-1260	11096-82-5	0.2		ug/l	0.0811	ND	U D1	0.0749	ND	U D1	0.0801	ND	U D1	0.0734	ND	U D1	0.0743	ND	U D1	0.0833	ND
ARSENIC	7440-38-2	**0.05**		mg/l	0.0130	0.0140	J	0.0130	0.0236	J	0.0160	0.0329		0.0160	**0.0643**		**0.0160**	0.0406		0.0160	0.0256
BARIUM	7440-39-3	1.2		mg/l	0.00086	0.184		0.00086	0.242		0.0010	0.160		0.0010	0.137		0.0010	0.122		0.0010	0.103
BENZENE	71-43-2	**1**		ug/l	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	0.12	J	0.050	**2.60**
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
BENZO[A]PYRENE	50-32-8	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND
BETA-BHC	319-85-7	0.07		ug/l	0.0504	ND	U D2	0.0466	ND	U D2	0.0498	ND	U D2	0.0456	ND	U D2	0.0462	ND	U D1	0.0518	ND
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND
CARBAZOLE	86-74-8		ND	ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
CHLOROBENZENE	108-90-7	5		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	0.83
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	0.0016	0.0078	J	0.0016	0.0048	J	0.0016	0.0061	J	0.0016	0.0067	J	0.0016	0.0040	J	0.0016	0.0049
COBALT	7440-48-4	0.05		mg/l	0.0013	ND	U	0.0013	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015	ND
COPPER	7440-50-8	0.14		mg/l	0.0062	0.0176	J	0.0062	ND	U	0.0062	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND
DELTA-BHC	319-86-8	0.08		ug/l	0.0121	ND	U D1	0.0111	ND	U D1	0.0119	ND	U D2	0.0109	ND	U D1	0.0110	ND	U D1	0.0124	ND
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	0.00998	ND	U D1	0.00921	ND	U D2	0.00985	ND	U D2	0.00903	ND	U D1	0.00914	ND	U D1	0.0102	ND
ETHYLBENZENE	100-41-4	5		ug/l	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND
FLUORANTHENE	206-44-0	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	0.00910	ND	U D1	0.00840	ND	U D1	0.00898	ND	U D2	0.00823	ND	U D2	0.00833	ND	U D1	0.00935	ND
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	0.00548	ND	U D1	0.00506	ND	U D1	0.00541	ND	U D2	0.00496	ND	U D2	0.00502	ND	U D1	0.00770	ND
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	0.08	ND	U	0.07	ND	U	0.08	ND	U	0.08	ND	U	0.07	ND	U	0.08	ND
IRON	7439-89-6	**0.6**		mg/l	0.0460	0.248		0.0460	0.207		0.0400	0.456		0.0400	0.445		0.0400	0.438		0.0400	**0.854**
LEAD	7439-92-1	0.04		mg/l	0.0071	0.0151		0.0071	0.0076	J	0.0071	0.0083	J	0.0071	0.0103	J	0.0071	0.0110	J	0.0071	ND
MANGANESE	7439-96-5	**0.3**		mg/l	0.0011	0.150		0.0011	0.213		0.0030	0.196		0.0030	0.265		0.0030	**0.432**		**0.0030**	**0.429**
MERCURY	7439-97-6	**5e-005**		mg/l	0.000050	**0.00015**	**J**	**0.000050**	**0.000055**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**	**0.000057**	**J**	**0.000050**	ND	U	0.000050	**0.00012**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND
METHYLENE CHLORIDE	75-09-2	5		ug/l	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND
NAPHTHALENE	91-20-3	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
NICKEL	7440-02-0	0.2		mg/l	0.0031	ND	U	0.0031	ND	U	0.0021	ND	U	0.0021	ND	U	0.0021	0.0025	J	0.0021	0.0067
P-CHLOROANILINE	106-47-8	10		ug/l	0.09	ND	U	0.08	ND	U	0.09	ND	U	0.09	ND	U	0.08	ND	U	0.09	ND
pH	pH	9		SU	0.010	7.3		0.010	7.7		0.010	7.6		0.010	7.5		0.010	7.4		0.010	7.8
PHENANTHRENE	85-01-8	10		ug/l	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1	ND
PHENOL	108-95-2	2		ug/l	0.5	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5	ND
PYRENE	129-00-0	10		ug/l	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2	ND
SETTLEABLE SOLIDS	SS			ml/l/hr	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10	ND
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	20.0	584		40.0	778		40.0	646		40.0	642		40.0	662		20.0	658
TEMPERATURE	TEMP			deg c	0.010	23.3		0.010	23.6		0.010	22.5		0.010	23.0		0.010	23.1		0.010	23.9
TOLUENE	108-88-3	5		ug/l	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050	ND
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	1.00	7.20	J	4.00	4.33		1.00	7.14	J	3.00	9.00		3.00	16.4		4.00	12.0
VINYL CHLORIDE	75-01-4	2		ug/l	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30	ND
Xylene (Total)	1330-20-7	5		ug/l	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20	ND
ZINC	7440-66-6	1		mg/l	0.0030	0.0201		0.0030	0.0155	J	0.0037	0.0130	J	0.0037	0.0522		0.0037	0.0363		0.0037	0.0083

					Client ID	WWTPEFF100919		WWTPEFF101619			WWTPEFF102319			WWTPEFF103019			WWTPEFF103019			WWTPEFF110619		
					Lab Sample ID	1171707		1176917			1182129			1188907			1196748			1194931		
					Sampling Date	9/2019 9:30:00 AM		10/16/2019 10:00:00 AM			10/23/2019 7:30:00 AM			10/30/2019 7:30:00 AM			10/30/2019 7:30:00 AM			11/6/2019 4:15:00 PM		
					Matrix	WW		WW			WW			WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	U	0.070	ND	U	0.070	ND	U	0.070	ND	U	0.070				ND	U	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l		0.20	9.51		0.20	ND	U	0.20	0.21	J	0.20				ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	U	0.060	ND	U	0.060	ND	U	0.060	ND	U	0.060				ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10				ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	U	0.7	ND	U	0.7	ND	U	0.6	ND	U	0.7				ND	U	0.7
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
4,4-DDE	72-55-9	**0.016**		ug/l	**J D1**	**0.0227**	ND	U D1	0.0210	ND	U D1	0.0240	ND	U D2	0.0245				ND	U D1	0.0217
4,4-DDT	50-29-3	0.048		ug/l	U D1	0.0114	ND	U D1	0.0105	ND	U D2	0.0120	ND	U D1	0.0123				ND	U D2	0.0109
4-METHYLPHENOL	106-44-5	10		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
ACETONE	67-64-1	**10**		ug/l		**2.00**	**33.2**		**2.00**	ND	U	2.00	4.58	J	2.00				**11.3**		**2.00**
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	U D1	0.00682	ND	U D2	0.00630	ND	U D1	0.00721	ND	U D1	0.00735				ND	U D2	0.00652
ALUMINUM	7429-90-5	2		mg/l		0.107	ND	U K2	0.107	ND	U	0.107	ND	U	0.107				ND	U	0.107
ANTHRACENE	120-12-7	10		ug/l	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08				ND	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1221	11104-28-2	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1232	11141-16-5	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1242	53469-21-9	**0.2**		ug/l	**J D1**	**0.0841**	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1248	12672-29-6	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1254	11097-69-1	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
AROCLOR-1260	11096-82-5	0.2		ug/l	U D1	0.0841	ND	U D1	0.0777							ND	U D1	0.0819	ND	U D1	0.0804
ARSENIC	7440-38-2	**0.05**		mg/l	J	0.0160	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160				ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l		0.0010	0.0984		0.0010	0.0879		0.0010	0.108		0.0010				0.0621		0.0010
BENZENE	71-43-2	**1**		ug/l		**0.050**	**1.51**		**0.050**	ND	U	0.050	0.051	J	0.050				ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09				ND	U	0.09
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	U	1	ND	U	1	ND	U	1	ND	U	1				ND	U	1
BETA-BHC	319-85-7	0.07		ug/l	U D1	0.0523	ND	U D1	0.0483	ND	U D2	0.0553	ND	U D1	0.0564				ND	U D2	0.0500
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	U	1	ND	U	1	ND	U	1	ND	U	1				ND	U	1
CARBAZOLE	86-74-8		ND	ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	J	0.10	0.96	J	0.10	ND	U	0.10	0.15	J	0.10				ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	J	0.0016	0.0016	J	0.0016	ND	U K2	0.0016	ND	U	0.0016				ND	U	0.0016
COBALT	7440-48-4	0.05		mg/l	U	0.0015	ND	U	0.0015	0.0016	J	0.0015	0.0023	J	0.0015				0.0030	J	0.0015
COPPER	7440-50-8	0.14		mg/l	U	0.0120	ND	U	0.0120	ND	U	0.0120	ND	U	0.0120				ND	U	0.0120
DELTA-BHC	319-86-8	0.08		ug/l	U D1	0.0125	ND	U D1	0.0116	ND	U D1	0.0132	ND	U D1	0.0135				ND	U D1	0.0120
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	U	1	ND	U	1	ND	U	1	ND	U	1				ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	U D2	0.0103	ND	U D1	0.00956	ND	U D1	0.0109	ND	U D1	0.0112				ND	U D1	0.00989
ETHYLBENZENE	100-41-4	5		ug/l	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10				ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	U D1	0.00943	ND	U D1	0.00872	ND	U D1	0.00998	ND	U D1	0.0102				ND	U D2	0.00902
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	U D2	0.00568	ND	U D1	0.00525	ND	U D1	0.00601	ND	U D1	0.00613				ND	U D1	0.00544
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	U	0.08	ND	U	0.08	ND	U	0.08	ND	U	0.08				ND	U	0.08
IRON	7439-89-6	**0.6**		mg/l		**0.0400**	0.404		0.0400	ND	U	0.0400	0.166	J	0.0400				**3.13**		**0.0400**
LEAD	7439-92-1	0.04		mg/l	U	0.0071	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071				ND	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l		**0.0030**	**0.470**		**0.0030**	**0.603**		**0.0030**	**0.927**		**0.0030**				**1.11**		**0.0030**
MERCURY	7439-97-6	**5e-005**		mg/l	**J**	**0.000050**	ND	U	0.000050	ND	U	0.000050	ND	U	0.000050				ND	U	0.000050
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5				ND	U	0.4
METHYLENE CHLORIDE	75-09-2	5		ug/l	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30				ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	J	0.0021	0.0023	J	0.0021	0.0032	J	0.0021	0.0035	J	0.0021				0.0050	J	0.0021
P-CHLOROANILINE	106-47-8	10		ug/l	U	0.09	ND	U	0.09	ND	U	0.09	ND	U	0.09				ND	U	0.09
pH	pH	9		SU		0.010	7.7		0.010	7.9		0.010	7.7		0.010				7.4		0.010
PHENANTHRENE	85-01-8	10		ug/l	U	0.1	ND	U	0.1	ND	U	0.1	ND	U	0.1				ND	U	0.1
PHENOL	108-95-2	2		ug/l	U	0.4	ND	U	0.4	ND	U	0.4	ND	U	0.5				ND	U	0.4
PYRENE	129-00-0	10		ug/l	U	0.2	ND	U	0.2	ND	U	0.2	ND	U	0.2				ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr	U	0.10	ND	U	0.10	ND	U	0.10	ND	U	0.10				ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l		40.0	520		20.0	550		40.0	471		20.0				447		20.0
TEMPERATURE	TEMP			deg c		0.010	22.5		0.010	22.7		0.010	22.9		0.010				22.6		0.010
TOLUENE	108-88-3	5		ug/l	U	0.050	ND	U	0.050	ND	U	0.050	ND	U	0.050				ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l		4.00	4.52	J	2.00	4.50	J	3.00	2.39	J	1.00				9.25		1.00
VINYL CHLORIDE	75-01-4	2		ug/l	U	0.30	ND	U	0.30	ND	U	0.30	ND	U	0.30				ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l	U	0.20	ND	U	0.20	ND	U	0.20	ND	U	0.20				ND	U	0.20
ZINC	7440-66-6	1		mg/l	J	0.0037	0.0049	J	0.0037	0.0091	J	0.0037	0.0192	J	0.0037				0.0146	J	0.0037

				Client ID	WWTPEFF111319			WWTPEFF112519			WWTPEFF121119		
				Lab Sample ID	1201125			1211347			1221281		
				Sampling Date	11/13/2019 10:40:00 AM			11/25/2019 9:00:00 AM			12/11/2019 8:00:00 AM		
				Matrix	WW			WW			WW		
chemical_name	cas_rn	Permit Requirements	Permit Remark	Units	Result	Qual	MDL	Result	Qual	MDL	Result	Qual	MDL
1,2,4-TRICHLOROBENZENE	120-82-1	5		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-BENZPHENANTHRACENE	218-01-9	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
1,2-DICHLOROBENZENE	95-50-1	10		ug/l	ND	U	0.070	ND	U	0.070	0.13	J	0.070
1,2-DICHLOROETHANE	107-06-2	10		ug/l	0.22	J	0.20	ND	U	0.20	ND	U	0.20
1,3-DICHLOROBENZENE	541-73-1	10		ug/l	ND	U	0.060	ND	U	0.060	ND	U	0.060
1,4-DICHLOROBENZENE	106-46-7	10		ug/l	ND	U	0.10	ND	U	0.10	ND	U	0.10
2-CHLORONAPHTHALENE	91-58-7	10		ug/l	ND	U	0.7	ND	U	0.7	ND	U	0.7
2-METHYLNAPHTHALENE	91-57-6	47		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
4,4-DDE	72-55-9	**0.016**		ug/l	ND	U D1	0.0212	ND	U D1	0.0208	ND	U D1	0.0226
4,4-DDT	50-29-3	0.048		ug/l	ND	U D2	0.0106	ND	U D1	0.0104	ND	U D1	0.0113
4-METHYLPHENOL	106-44-5	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
ACETONE	67-64-1	**10**		ug/l	**16.9**		**2.00**	ND	U	2.00	ND	U	2.00
ALPHA-CHLORDANE	5103-71-9	0.33		ug/l	ND	U D1	0.00636	ND	U D1	0.00625	ND	U D1	0.00679
ALUMINUM	7429-90-5	2		mg/l	ND	U	0.0985	0.0689		0.0197	0.0493		0.0197
ANTHRACENE	120-12-7	10		ug/l	ND	U	0.08	ND	U	0.08	ND	U	0.08
AROCLOR-1016	12674-11-2	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1221	11104-28-2	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1232	11141-16-5	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1242	53469-21-9	**0.2**		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1248	12672-29-6	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1254	11097-69-1	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
AROCLOR-1260	11096-82-5	0.2		ug/l	ND	U D1	0.0784	ND	U D1	0.0771	ND	U D1	0.0837
ARSENIC	7440-38-2	**0.05**		mg/l	ND	U	0.0160	ND	U	0.0160	ND	U	0.0160
BARIUM	7440-39-3	1.2		mg/l	0.0322		0.0010	0.0527		0.0010	0.0742		0.0010
BENZENE	71-43-2	**1**		ug/l	ND	U	0.050	ND	U	0.050	ND	U	0.050
BENZO[A]ANTHRACENE	56-55-3	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[A]PYRENE	50-32-8	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
BENZO[B]FLUORANTHENE	205-99-2	10		ug/l	ND	U	0.09	ND	U	0.09	ND	U	0.1
BENZO[K]FLUORANTHENE	207-08-9	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
BENZYL BUTYL PHTHALATE	85-68-7	10		ug/l	ND	U	1	ND	U	1	ND	U	1
BETA-BHC	319-85-7	0.07		ug/l	ND	U D2	0.0487	ND	U D2	0.0479	ND	U D2	0.0520
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	5		ug/l	ND	U	1	ND	U	1	ND	U	1
CARBAZOLE	86-74-8		ND	ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
CHLOROBENZENE	108-90-7	5		ug/l	ND	U	0.10	ND	U	0.10	ND	U	0.10
CHROMIUM, TOTAL	7440-47-3	0.1		mg/l	ND	U	0.0016	0.0021	J	0.0016	0.0023	J	0.0016
COBALT	7440-48-4	0.05		mg/l	ND	U	0.0015	ND	U	0.0015	ND	U	0.0015
COPPER	7440-50-8	0.14		mg/l	ND	U	0.0120	ND	U	0.0120	ND	U K3	0.0120
DELTA-BHC	319-86-8	0.08		ug/l	ND	U D1	0.0117	ND	U D1	0.0115	ND	U D1	0.0124
DIBENZO[A,H]ANTHRACENE	53-70-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
DI-N-BUTYLPHTHALATE	84-74-2	25		ug/l	ND	U	1	ND	U	1	ND	U	1
ENDRIN ALDEHYDE	7421-93-4		ND	ug/l	ND	U D1	0.00964	ND	U D2	0.00948	ND	U D1	0.0103
ETHYLBENZENE	100-41-4	5		ug/l	ND	U	0.10	ND	U	0.10	ND	U	0.10
FLUORANTHENE	206-44-0	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
GAMMA-CHLORDANE	5103-74-2		ND	ug/l	ND	U D1	0.00879	ND	U D2	0.00865	ND	U D2	0.00939
HEPTACHLOR EPOXIDE	1024-57-3	0.33		ug/l	ND	U D1	0.00530	ND	U D2	0.00521	ND	U D1	0.00566
INDENO[1,2,3-CD]PYRENE	193-39-5	5		ug/l	ND	U	0.08	ND	U	0.08	ND	U	0.08
IRON	7439-89-6	**0.6**		mg/l	**0.604**		**0.0400**	0.216		0.0400	0.198	J	0.0400
LEAD	7439-92-1	0.04		mg/l	ND	U	0.0071	ND	U	0.0071	ND	U	0.0071
MANGANESE	7439-96-5	**0.3**		mg/l	**0.718**		**0.0030**	**0.662**		**0.0030**	**0.973**		**0.0030**
MERCURY	7439-97-6	**5e-005**		mg/l	ND	U	0.000050	ND	U	0.000050	**0.000094**	**J**	**0.000050**
METHANAMINE, N-METHYL-N-NITROSO	62-75-9	10		ug/l	ND	U	0.4	ND	U	0.5	ND	U	0.5
METHYLENE CHLORIDE	75-09-2	5		ug/l	ND	U	0.30	ND	U	0.30	ND	U	0.30
NAPHTHALENE	91-20-3	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
NICKEL	7440-02-0	0.2		mg/l	ND	U	0.0021	ND	U	0.0021	0.0022	J	0.0021
P-CHLOROANILINE	106-47-8	10		ug/l	ND	U	0.09	ND	U	0.09	ND	U	0.1
pH	pH	9		SU	8.0		0.010	7.8		0.010	7.6		0.010
PHENANTHRENE	85-01-8	10		ug/l	ND	U	0.1	ND	U	0.1	ND	U	0.1
PHENOL	108-95-2	2		ug/l	ND	U	0.4	ND	U	0.5	ND	U	0.5
PYRENE	129-00-0	10		ug/l	ND	U	0.2	ND	U	0.2	ND	U	0.2
SETTLEABLE SOLIDS	SS			ml/l/hr	ND	U	0.10	ND	U	0.10	ND	U	0.10
SOLIDS, TOTAL DISSOLVED	TDS		Monitor	mg/l	396		20.0	522		20.0	478		20.0
TEMPERATURE	TEMP			deg c	23.1		0.010	22.2		0.010	22.8		0.010
TOLUENE	108-88-3	5		ug/l	ND	U	0.050	ND	U	0.050	ND	U	0.050
TOTAL SUSPENDED SOLIDS	TSS		Monitor	mg/l	1.04	J	1.00	2.99	J	1.00	5.00	J	2.00
VINYL CHLORIDE	75-01-4	2		ug/l	ND	U	0.30	ND	U	0.30	ND	U	0.30
Xylene (Total)	1330-20-7	5		ug/l	ND	U	0.20	ND	U	0.20	ND	U	0.20
ZINC	7440-66-6	1		mg/l	0.0067	J	0.0037	0.0086	J	0.0037	0.0135	J	0.0037

Appendix E Sediment Characterization Documentation

AECOM Imagine it. Delivered.

Submittal Review Record

Route to (name of Reviewer/location/delivery method): E-Copy-Mike Gardner P.E.

Name/Location of Document Originator: Land Remediation, Inc.

Type of Document: Submittal Review

Complete Document Title and Revision Number: Submittal #05A Disposal Facility and Transporter Info

Site and Operable Unit: BASF Hudson River Operable Unit 02 Sediment River Remediation

Date Shown on Title Page: 08-01-18

AECOM Project Number: 60323713 Date transmitted to reviewer: 08-01-18

Review Deadline: 08-07-18 Reviewed By: Mike Gardner

Date Received: 08-01-18	Date of Review: 11-05-18
☐ Approved as Submitted	☐ Call Reviewer to Discuss (Phone: ____)
☒ Approved as Noted	☐ Submit 3 Final Copies to Chief Engineer
☐ Revise and Resubmit	Response Deadline: ____

AECOM Comments:

- Truck drivers shall use only the routes listed in the LRI Technical Execution Plan.
- Only the trucks listed on the Waste Transporter Permit No. 4A-MA138 and MA131 shall be loaded at the site. Trucks not on the list, that cannot be verified, shall not be used for transportation and shall not be loaded until verification is given to the Engineer.

Response By: CM

Date Received: 08-01-18 Date of Response: 11-05-18

cc:	Originator:	Land Remediation, Inc.
	Project Manager:	John A. Bleiler, AECOM
	Engineer of Record:	Mike Gardner, AECOM
	Construction Manager:	Jeff Denman, AECOM
	Client:	Douglas Reid-Green, BASF

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 8/1/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 5A PREVIOUS SUBMITTAL NO. AND DATE: NA
Specification Section No.: 02 81 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	List of Disposal Facility		1	02 81 00		none
2	List of Transporter		1	02 81 00		none
3	Transporter Permit		1	02 81 00		none

Remarks:	**LAND REMEDIATION, INC.**	Signature:
none	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: August 1, 2018

Additional Notes:
Water Transport and Disposal

Disposal Facility / Transporter / Transporter Permits

Spec Section: 02 81 00

Date: 8/01/2018

Water generated from Site Prep Activities will be disposed of at Global Cycle under the submitted profile on 7/31/2018 (attached)

Globalcycle, Inc
700 Richmond Street, Unit 4
Taunton, Massachusetts 02718
Ph: 508-828-1005
Fax: 508-824-2486

J.P. Noonan Transportation, Inc. will provide transportation services for the water

J.P. Noonan Transportation, Inc.
PO Box 400
415 West Street
West Bridgewater, MA 02379
NYSDEC – Part 364 Permit No. MA-131

Permit Attached

Gobal Remediation Services, Inc. will provide transportation services for the water

Global Remediation Services, Inc.
700 Richmond Street
E. Taunton, MA 02718
NYSDEC – Part 364 Permit No. MA-138

Permit Attached

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

INDIVIDUAL RECLAIMED WATER DISCHARGE PERMIT

Name and Address of Applicant:	Globalcycle, Inc 700 Richmond Street, Unit #4 Taunton, Massachusetts 02718
Name and Address of Permittee:	Globalcycle, Inc 700 Richmond Street, Unit #4 Taunton, Massachusetts 02718
Date of Renewal Application:	January 18, 2017
Application/Permit No.	Transmittal # X273454/930-1
Date of Application Amendment:	September 5, 2017
Date of Issuance:	December 26, 2017
Date of Expiration:	December 26, 2022
Effective Date:	December 26, 2017

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 20.00, the Massachusetts Department of Environmental Protection (the Department or MassDEP) hereby issues the following permit to: Globalcycle, Inc. (hereinafter called "the permittee") authorizing the use of reclaimed water from the wastewater treatment facility located at Globalcycle, Inc; 700 Richmond Street, Unit #4; Taunton for the purpose of a Class C reclaimed water as per 314 CMR 20.17, such authorization being expressly conditional on compliance by the permittee with all terms and conditions of the permit hereinafter set forth.

E. McNiff RE - BWR-SERO 12/26/17

[Signature & Title] [Date]

I. SPECIAL CONDITIONS

A. Reclaimed Water Limits

1. The permittee is authorized to reuse industrial wastewater obtained from various sources, and treated to Class C Reclaimed water standards for reuse in Air Quality Control equipment. The reclaimed water, at startup and continuing thereafter, shall not exceed the following values:

Wastewater Characteristics	Reuse Limitations
Flow	96,000 GPD Daily Max.
pH	6.5-8.5 S.U.
BOD	30 mg/L
TSS	30 mg/L
Total nitrogen (TKN+NO2+NO3)	10 mg/L
Fecal Coliform	Median (annual) of 200 colonies/100 mL; no individual sample shall exceed 1000 colonies/100 mL
EPA Method 8260(VOC)and EPA Method 8270(SVOC)	Total of 30 mg/L of EPA 8260 and EPA 8270 combined

a) This flow limitation applies to wastewater that must be treated prior to reuse and does not apply to wastewater that does not require treatment. See Section C. Supplemental Conditions.

b) The pH of the reuse water shall not be less than 6.5 nor equal to or greater than 8.5 at any time.

c)The reuse of this wastewater shall not result in any demonstrable adverse effect on the waters of the Commonwealth or violate any water quality standards that have been promulgated.

B. Monitoring and Reporting

1) The permittee shall monitor and record the quality of the influent and the quality and quantity of the reclaimed water prior to reuse according to the following schedule and other provisions:

INFLUENT:

Parameter	Minimum Frequency of Analysis	Sample Type
pH	Once during each batch	Grab
BOD	Monthly	Grab
TSS	Monthly	Grab
Total Nitrogen	Monthly	Grab
EPA 8260 (VOC) and EPA 8270 (SVOC)	Monthly	Grab
RCRA 8 metals (Total)	Monthly	Grab

Influent samples are to be taken at a location after the influent equalization/collection tanks and before the bag filters.

RECLAIMED WATER:

Parameter	Minimum Frequency of Analysis	Sample Type
pH	With each load leaving the facility	Grab
BOD	Monthly	Grab
TSS	Monthly	Grab
Total Nitrogen	Monthly	Grab
EPA 8260 (VOC) and EPA 8270 (SVOC)	Monthly	Grab

Reclaimed Water samples to be taken at the finish water collection tank

VOC and SVOC samples to be both between GAC treatment units and at finish water collection tank.

2) Any grab sample or composite sample required to be taken less frequently than daily shall be taken during the period of Monday through Friday inclusive. All composite samples shall be taken over the operating day if the hours of operation are less than 24 hours.

3) The permittee shall submit all monitoring reports within 30 days of the last day of the reporting month. Reports shall be on an acceptable form, properly filled and signed and shall be sent to: Wastewater Management Program, Bureau of Water Resources, Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347 and to the Department of Environmental Protection, Bureau of Water Resources, Wastewater Management Program, One Winter Street/5th Floor, Boston, MA 02108, and to the Taunton Board of Health,45 School Street, Taunton MA 02780.

4) Monthly Monitoring Reports shall include a summary of monthly operations in table form. The table shall include the date of operation, the generator of the wastewater, the location of generation of wastewater, the quantity of wastewater accepted from the location, the type and/or general description of wastewater and an acknowledgement that a waste profile has been received prior to acceptance of the wastewater. Another daily summary shall be provided of the quantity of treated wastewater removed from the treatment works and the destination of that wastewater.

5) Submission of monitoring reports in electronic format is available through eDEP and serves as data submission to both the Regional and Boston offices. To register for electronic submission go to:
http://www.mass.gov/dep/service/compliance/edeponlf.htm

B. Supplemental Conditions

1) This permit does not authorize any wastewater to be discharged to the waters of the Commonwealth. Any discharge of treated or untreated wastewater to the waters

of the Commonwealth is a violation of this permit and M.G.L c.21 sections 26-53. The reuse wastewater is a Class C reclaimed water and the treatment facility is considered to be a Closed Loop System.

2) The permittee shall notify the Department of any changes to the Service and Use Agreement and/or the Reuse Management Plan. The permittee shall not implement any of the changes without the Department's approval.

3) This permit does not authorize the use or disposal of reclaimed water in other states. Any out of state transfer of reclaimed water must be recorded in the daily operations log book and must be in compliance with that states's laws and regulations.

4) The permittee shall notify the Department at least thirty (30) days in advance of the proposed transfer of ownership of the facility for which this permit is written. Said notification shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit, responsibility, coverage and liability between them, including without limitation, assumption of the existing permittee's responsibility under the Reuse Management Plan and all Service and Use Agreements.

5) A staffing plan for the facility shall be submitted to the Department once every two years and whenever there are staffing changes. The staffing plan shall include the following components:

a) The operator(s)'s name(s), operator grade(s) and operator license number(s);
b) The number of operational days per week;
c) The number of operational shifts per week;
d) The number of shifts per day;
e) The required personnel per shift;
f) Saturday, Sunday and holiday staff coverage;
g) Emergency operating personnel

6) The permittee is responsible for the operation and maintenance of all sewers, pump stations, and treatment units for the permitted facility, which shall be operated and maintained under the direction of a properly certified wastewater operator.

7) Operation and maintenance of the proposed facility must be in accordance with 314 CMR 12.00, "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges", and, 257 CMR 2.00, "Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities".

a) The facility has been rated (in accordance with 257 CMR 2.00), to be a Grade **2** facility. Therefore, the permittee shall provide for oversight by a Massachusetts Certified Wastewater Treatment plant operator (Chief Operator) Grade **2** or higher. The permittee will also provide for a backup operator who shall possess at least a valid Grade **1** license.

b) The date and time of the operator's inspection along with the operator's name and certification shall be recorded in the log book on location at the treatment facility. All daily inspection logs consistent with the O&M Manual requirements shall be kept at the facility for a period of three (3) years.

c) Records of operation of wastewater treatment facilities or disposal systems required by the Department shall be submitted on forms supplied by the Department or on other forms approved by the Department for such use. Monthly reports shall be certified by the wastewater treatment plant operator in charge and shall be included in the discharge monitoring reports submitted each month.

8) If the operation and maintenance of the facility is to be contracted to a private concern, the permittee shall submit a copy of the contract, consistent with what is required by the approved Operation & Maintenance manual and signed only by the contractor, to the appropriate MassDEP Regional Office for review and approval forty-five (45)days **prior** to the start up of the facility. Along with the contract, a detailed listing of all contract operation obligations of the proposed contractor at other facilities shall also be submitted. For new facilities, the permittee shall not begin operation of the treatment facility until MassDEP approves the contract.

9) The permittee shall notify the appropriate MassDEP Regional Office, in writing, within thirty (30) days of the following events:

a) The date of treatment plant start up.
b) Any interruption of the treatment system operation, other than routine maintenance.
c) Final shutdown of the treatment system.

10) All wastewater, with the exception of the Emergency Response water described in Condition #12 below, accepted at the facility must be pre-characterized before being accepted at the facility. The pre-characterization will determine if the water meets the Reclaimed Water Limits. If the Reclaimed Water Limits are met, this water may be placed, untreated into the outbound storage tanks or remain in the transport vehicle for delivery to the approved reuse facility. The pre-characterization of the wastewater will be by laboratory analysis of the wastewater with the exception noted in Condition #11.

11) The following wastewaters will be exempt from VOC and SVOC analysis based on knowledge of the process from which the wastewater is generated and certification by the generator that it does not contain VOC and SVOC compounds outside of the Reclaimed Water Limits. These waters are:
a) Non contact cooling water and
b) Drinking water that has been used as rinse water from tanks and equipment

Material Safety Data Sheets (or equivalent) of any raw product or additives must accompany the Waste Profile form.

12) Emergency Response wastewater is water that must be removed immediately before the chemical analysis can be completed. The procedure for handling this wastewater shall be as follows:

a) Obtain available information to determine the remote likelihood of the wastewater being considered a Hazardous Waste
b) Visually inspect the wastewater for emulsions and separate phases.
c) Complete a Waste Profile with available information
d) Transport to the facility and place in an empty tank or other vessel, lock out and tag out the valves to and from the tank or vessel to isolate the wastewater until chemical analysis and, if necessary, treatability test results are obtained.

e) If wastewater does not need treatment, transfer to outbound tank or transport to an approved reuse facility, if water needs treatment, process wastewater before transfer to outbound tank, if wastewater cannot be treated at the facility it will be transported to a location where it may be accepted.

13) Wastewater that does not meet the Reclaimed Water Limits for SVOCs and VOCs and is a candidate to be accepted at the facility must undergo a Treatability Analysis as described in the Reuse Management Plan.

14) Wastewater that passes the Treatability Analysis but is not successfully treated to meet the Reclaimed Water Limits may not be shipped for reuse and must be shipped to a facility that may accept the wastewater.

15) Any wastewater that is not shipped for reuse shall include a disclosure statement that the permittee has not demonstrated Equivalent Treatment per 40 CFR 437.

16) The permittee shall notify the MassDEP Regional Office, BWR, in writing, within twenty-four (24) hours when any treated or untreated wastewater has been shipped to any facility that will not reuse the wastewater as authorized by this permit. The notification shall include the following:

A) Reason for shipment
B) Facility name and address
C) Volume shipped

17) The permittee shall contract to have any and all solids and sludges generated by the treatment system for which this permit is issued removed off site by a properly licensed waste hauler for disposal at properly licensed facility. The name and license number of the hauler along with the quantity of wastes removed and the date(s) of removal shall be reported by the permittee in writing to the appropriate MassDEP Regional Office. All solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed in a manner consistent with applicable Federal and State laws and regulations including but not limited to, the State and Federal Clean Water Acts, the Massachusetts Hazardous Waste Management Act, M.G.L.c. 21C, and the Federal Resource

Conservation and Recovery Act, 42 U.S.C. s. 6901, et seq. 310 CMR 19.00 and 30.000, and other applicable regulations

18) Hazardous Waste (as defined by 310 CMR 30.000) cannot be accepted at the facility.

19) Septage, sewerage or any type of human or animal waste can not be accepted at the facility.

20) Wastewater cannot be accepted at the facility if it has either a) failed the treatability testing so that the water intended for reuse cannot be used by the entity contracted to accept the water and/or b). contains multi phase liquids or emulsions.

21) Wastewater that is required to be treated is not to be mixed with either treated wastewater or wastewater that meets the reuse requirements without treatment.

22) Wastewater entering the facility that is not required to be treated shall be reused in accordance with all permits and approvals as wastewater that has been treated.

23) Records shall be kept of each wastewater delivery which clearly associates the delivery with the proper Globalcycle Wastewater Profile Form. The record will indicate the date of delivery, the volume of delivery and the origin of the wastewater.

24) Before full operation of the treatment works occurs, the permittee must provide a demonstration that the "bench top" treatability analysis to be used to simulate the actual treatment process is sufficient to predict the successful treatment of the identified wastewater.

25) All wastewater must be removed from the site within 30 days unless prior notification has occurred to the MassDEP Southeast Regional Office stating the reason and proposing a remedy to this condition.

26) All wastewater must be removed from the container from which it arrived at the site and placed into the appropriate tank within 14 days.

27) Simultaneously with the permit renewal application at year fifteen (2027)following the initiation of plant operations,

the permittee shall submit two reports to the Department for its review and approval:

a. An engineering report, prepared by a registered professional engineer, that outlines in sufficient detail what modifications (if any) to the facility or other changes are required to insure that the facility can remain in compliance with its reclaimed water permit and other applicable requirements through the next 5 year permit term (year 2032) and beyond; and

b. A financial plan that contains the cost estimates for implementing the facility modifications or other changes identified in the engineering report, and describes and demonstrates, how and when the permittee will finance the needed facility modifications or other changes.

28) In the event that reclaimed water limits are not met, or the discharge is determined to impair the waters of the Commonwealth in accordance with 314 CMR 5.16(1) and 314 CMR 4.03 the permittee may be obligated to modify, supplement or replace the permitted treatment process so as to ensure that the discharge does not impair the ability of the groundwater to act as an actual or potential source of potable water.

29) Pursuant to M.G.L. Chapter 21A, section 18(a), and 310 CMR 4.03, holders of this Permit may be subject to annual compliance assurance fees as assessed each year on July 1st and invoiced by MassDEP. Failure of the Permit holder to pay applicable annual compliance assurance fees shall result in the automatic suspension of the permit by operation of law under the statute. If fee non-payment continues for sixty days or more, MassDEP has the statutory option of revoking the Permit, denying any other pending permit applications filed by the Permit holder or taking other enforcement action. Permit holders are required to notify MassDEP in writing if they wish to relinquish or transfer a permit. Failure to do so will result in the continued assessment of fees.

II. GENERAL PERMIT CONDITIONS

The following conditions from 314 CMR 20.18 apply to all individual and general permits:

(1) Beginning on the effective date and lasting through the expiration of the permit, the permittee is authorized to use, sell, distribute, and offer for use, sale, or distribution reclaimed water only in accordance with the permit, 314 CMR 20.00,248 CMR 10.00: *Uniform State Plumbing Code*, and a Reuse Management Plan approved by the Department.

(2) The use, sale, distribution, or offering for use, sale, or distribution of reclaimed water other than as expressly authorized by the permit, 314 CMR 20.00, and a Reuse Management Plan approved by the Department, is prohibited.

(3) The permittee shall at all times operate and maintain the facilities used to produce, and/or distribute reclaimed water in accordance with the permit, 314 CMR 20.00, the approved Operations and Maintenance Plan, the approved Reuse Management Plan, 314 CMR 12.00, 257 CMR 2.00, and 314 CMR 20.00.

(4) In the event that the permittee proposes to reuse reclaimed water for a use at a reuse site, by a person, or for a purpose that is not identified in the approved Reuse Management Plan, and/or not authorized by this permit, the permittee shall notify the Department in writing of the proposed change and request modification of the permit. The permittee shall not commence the proposed use unless and until the permit has been modified and the use has been approved by the Department in writing.

(5) The permittee shall give prior notice to the Department as soon as possible of any planned physical alterations or additions to the treatment works or any activity that could significantly change the nature or increase the quantity of pollutants in the reclaimed water. The permittee shall not make the proposed alteration, or construct the proposed addition, unless and until it is approved in writing by the Department.

(6) The permittee shall notify the Department of any non-compliance with the requirements of 314 CMR 20.00

that may endanger the public health or the environment within 24 hours from the time that the permittee became aware of the noncompliance. Said notice may be oral or by facsimile or email. A written submission shall also be submitted to the Department within five days of the time that the permittee became aware of the non-compliance. The written submission shall contain a description of the non-compliance, including exact dates and times, and, if the non-compliance has not been corrected, the anticipated time it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(7) The permittee shall allow the Department and its authorized representatives to enter upon the permittee's premises where an activity related to the production, use, sale, or distribution of the reclaimed water is located or conducted or where records required by the permit are kept. The Department shall have access to inspect and copy at reasonable times any records that must be kept by the permittee under the conditions of the permit, inspect at reasonable times any facilities, equipment, practices or operations regulated or required under the permit, and sample or monitor the reclaimed water at reasonable times for the purpose of determining compliance with the terms and conditions of the permit.

(8) There shall be no bypassing of untreated or partially treated wastewater to the reclaimed water distribution system or to any reuse site at any time. The reclaimed water produced by the reclaimed water system shall at all times meet the requirements of its classification and use, including, without limitation, the requirements set forth in 314 CMR 20.17. Reclaimed water that does not meet the requirements of its classification and use shall be diverted from the reclaimed water distribution system to an alternate discharge location, to a sewer system with a discharge at another location, or to storage facilities and managed in accordance with all applicable regulations.

(9) The permittee shall notify the Department by telephone, facsimile or email in accordance with 314 CMR 20.18(2)(f) within 24 hours of any time that the permittee discovers that the reclaimed water does not meet the requirements of its classification and use.

Reclaimed water not meeting the requirements of its classification and use shall not be discharged to the reclaimed water distribution system or to any reuse site without the prior approval of the Department.

(10) At each reuse site, the public shall be notified that reclaimed water is being used and that the reclaimed water is not safe for drinking. This notification shall include the posting of signs of sufficient size to be clearly read at all reuse sites. For any reuse site that is under the direct control of the permittee, the permittee shall provide the required notice. For any reuse site not under the direct control of the permittee, this requirement shall be expressly included in a Service and Use Agreement. The Service and Use Agreement shall provide that the permittee shall enforce this requirement and that the Department has authority under 314 CMR 20.00 to enforce this requirement.

(11) The permittee shall develop and implement a cross connection control inspection and testing program that contains all the components of a cross connection program established pursuant to 310 CMR 22.22 and that ensures compliance with 248 CMR 10.00: *Uniform State Plumbing Code* at each reuse site. A registered cross connection prevention device or cross connection control method that meets the requirements of 310 CMR 22.22 and 248 CMR 10.00: *Uniform State Plumbing Code* shall be provided at all potable water system connections, and all connections to pipes conveying water for drinking, domestic and culinary purposes that are located at reuse sites.

(12) The permittee shall not distribute reclaimed water to a person, or offer reclaimed water for use, sale or distribution by another person, without a Service and Use Agreement between said person and the permittee that has been approved by the Department in writing. The permittee shall not distribute reclaimed water to a satellite reclaimed water system for further distribution by that system unless there is a Service and Use Agreement approved by the Department in writing between the owner of the satellite reclaimed water system and each user of the reclaimed water. The permittee shall submit all required Service and Use Agreements to the Department for its review and

approval before they are signed.

(13) Duty to mitigate: The permittee shall take all reasonable steps to minimize or prevent any adverse impact on human health or the environment resulting from non-compliance with the permit or 314 CMR 20.00.

(14) Duty to Halt or Reduce Activity: Upon reduction, loss or failure of a component of the treatment works, the permittee shall control the production, use, sale and distribution of reclaimed water to the extent necessary to maintain compliance with its permit, the approved Reuse Management Plan and 314 CMR 20.00, until the affected component is restored or an alternative component is provided. It shall not be a defense to an enforcement action for a permittee to maintain that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a condition of the permit, the approved Reuse Management Plan, and 314 CMR 20.00.

(15) Power Failure: In the event of the failure of the prime power source, the permittee shall halt or otherwise control the production, use, sale or distribution of the reclaimed water upon the reduction, loss or failure of the primary source of power to the treatment works or any component thereof. A waiver from 310 CMR 20.18 (2)(o) is granted on the basis that the process is batch in nature and the acceptance of wastewater to be treated and the treatment of wastewater can be immediately stopped in the event of a power failure.

(16) Reclaimed water may not be used in a manner that will cause or contribute to a violation of the Massachusetts Surface Water Quality Standards or cause the water quality of any public or private water supply to violate the standards set forth in the Drinking Water Regulations of Massachusetts, 310 CMR 22.00.

(17) The permittee shall furnish to the Department within twenty-one (21) days any information that the Department may request to determine whether cause exists for modifying, revoking, renewing or terminating the permit or to determine whether the permittee has complied with or is complying with all the terms and conditions of the permit.

(18) Nothing in the permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under any Federal or State law or regulation.

(19) Solids, sludges, filter backwash or other pollutants and or waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that is consistent with applicable Federal, State and local laws and regulations.

(20) Monitoring: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring shall be conducted according to the latest edition of Standard Methods for the Examination of Water and Waterworks prepared by the American Public Health Association, American Waterworks Association, and the Water Environment Federation, the latest edition of Methods for Chemical Analysis of Water and Wastes prepared by EPA, the latest edition of Water Standards of the American Society for Testing Materials, or other test procedures specified in the permit or approved by the Department. Analyses of samples shall be conducted at a laboratory certified by the Department.

(21) Record Keeping. The permittee shall retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least three years from the date of the sample, measurement, report or application. The period may be extended by request of the Department at any time. Records of monitoring information shall include the date, exact place and time of sampling or measurement, the individual who performed the sampling or measurement, the date analyses were performed, the individual who performed the analyses, the analytical techniques or methods used, and the results of such analyses.

(22) Monitoring results shall be reported at the intervals specified in the permit. If the permittee

monitors any pollutant more frequently than required by the permit, the results of this monitoring shall be included in the calculation and reporting of the data required by the permit.

(23) Except as otherwise provided, any permittee required to obtain a reclaimed water system permit issued by the Department pursuant to M.G.L.c. 21, § 42 and 314 CMR 20.00, shall be required annually to submit an annual compliance assurance fee in accordance with 310 CMR 4.00. The requirement to submit the annual compliance fee does not apply to any local government unit other than an authority

(24) The permittee shall submit to the Department for its review and approval an Operations and Maintenance Plan and Staffing Plan at least forty-five days prior to the date the reclaimed water system commences operation or the use of the reclaimed water commences, whichever first occurs. The Operation and Maintenance Plan shall document how the permittee intends to operate and maintain and staff the reclaimed water system in accordance with all applicable requirements including the permit, 314 CMR 20.00, 257 CMR 2.00, and 314 CMR 12.00. The Operation and Maintenance Plan shall include a preventative maintenance program to ensure that all equipment is kept in a reliable condition. The Operation and Maintenance Plan shall include a plan to staff the reclaimed water system in accordance with all applicable regulations, including, without limitation, 257 CMR 2.00. The Operation and Maintenance Plan shall also include an emergency contingency plan that establishes standard operating procedures that must be followed when the reclaimed water does not meet the applicable effluent limits.

(25) The permittee shall submit a revised Operation and Maintenance Plan whenever there are modifications to the reclaimed water system, the standard operating procedures for the system, or the staff of the reclaimed water system.

(26) The permittee shall not implement any changes to the reclaimed water system unless and until the Department approves the revised Operations and Maintenance Plan required by the permit.

(27) If the permittee intends to enter into a contract with a third party (the "contract operator") for the operation and maintenance of the reclaimed water system, at least forty-five days prior to the date the system commences operation, the permittee shall submit a draft unsigned contract to the Department for its review and approval. The contract shall provide that the contract operator shall operate and maintain the reclaimed water system in accordance with the approved Operation and Maintenance Plan and Staffing Plan, 314 CMR 20.00, 314 CMR 12.00, and 257 CMR 2.00. The permittee shall not execute the contract and authorize the contract operator to commence operation of the reclaimed water system unless and until the Department has approved the contract.

D. Appeal Rights

During the thirty (30) day period following issuance of this permit, a Notice of Claim for an Adjudicatory Appeal may be sent by any person aggrieved (the "Petitioner") by the issuance to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
One Winter Street/2nd Floor
Boston, MA 02108

310 CMR 1.01(6)(b) requires the Notice of Claim to: include sufficient facts to demonstrate aggrieved person status; state the facts which are grounds for the appeal specifically, clearly and concisely; and, state relief sought. The permit shall become or remain effective at the end of the 30 day appeal period unless the person filing the Notice of Claim requests, and is granted, a stay of its terms and conditions. If a permit is modified under 314 CMR 2.10, only the modified terms and conditions may be subject to an Adjudicatory Appeal. All other aspects of the existing permit shall remain in effect during any such Adjudicatory Appeal.

Per 310 CMR 4.06, the hearing request to the Commonwealth will be dismissed if the filing fee is not paid. Unless the Petitioner is exempt or granted a waiver, a valid check payable to the Commonwealth to Massachusetts in the amount of $100.00 must be mailed to:

Commonwealth of Massachusetts

Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The filing fee is not required if the Petitioner is a city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority effective January 14, 1994, or any municipal housing authority; or, per MGL 161A s. 24, the Massachusetts Bay Transportation Authority. The Department may waive the adjudicatory hearing filing fee for a Petitioner who shows that paying the fee will create and undue financial hardship. A Petitioner seeking a waiver must file, along with the hearing request, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

WASTE WATER PROFILE FORM

Instructions: A complete Material Characterization Form (Sections 1 - 9) must be submitted for each waste stream requested for disposal. Section 1 to Section 6 must be completed for each distinct process generating a waste stream and Section 7 to Section 9 must be completed for each corresponding individual waste

SECTION 1 – GENERATOR INFORMATION

Generator Name: BASF Corp.

Site address: 36 Riverside Ave

MA.DEP Release Tracking No. (if applicable):

City / State / Zip Code: Rensselaer, NY 12144

Phone: 518-465-6534 Fax:

E-mail: kad@land-remediation.com

Technical Contact

Print Name: Keith Decker

Title: Project Director

Phone: 518-766-4105 ext 14

Mailing Address (if different than site address):

SECTION 2 – GENERAL WASTE STREAM INFORMATION

2.1	**Name of waste:** *(provide list if needed)* *Non-Hazardous Water*
2.2	**General Waste Classification** *Please specify if any of the below is applicable to the waste. If so, provide the addendum noted.* ☐ Oily Waste (e.g. > sheen of oil)- NOT ACCEPTABLE/STOP HERE Describe:

SECTION 3 – SHIPPING INFORMATION

3.1	**Container Type:**	☐ Poly Drums, Gal ☐ Steel Drums, Gal ☒ Tank truck gallons ☐ Other:
3.2	**Quantity Per Delivery:**	Tons Gallons 36,000 Pounds Other:
3.3	**Frequency:**	☐ Daily ☐ Weekly ☐ Monthly ☐ Quarterly ☒ One Time ☐ Other:
3.4	**Delivery Vehicle:**	☐ Box Truck ☐ Roll-off ☐ Van Trailer ☒ Tanker Truck ☐ Other:

SECTION 4 – PROCESS DESCRIPTION

4.1 Provide a detailed description of the process that generates the waste. Describe the materials used to generate the waste, as well as, any other chemical or physical constituents that may be present in the waste stream as a result of commingling or contamination. Make a definitive statement as to whether or not any of the constituents, which are noted in Section 8.1, are present. If possible, provide a process flow diagram. *(attach additional pages if needed)*

During remediation LAND Remediation underground pipes. The water in these pipes was pumped to frac tanks

And tested for disposal. Water is non-hazardous, most likely groundwater that has accumulated in pipes.

Name of Waste: (as noted in Section 2.1) _____

SECTION 4 – PROCESS DESCRIPTION (CONTINUED)

4.2 Will the properties of the waste be consistent from delivery to delivery? ☒ Yes ☐ No
If no, how can the properties of the waste differ: *(attach additional pages if needed)*
Does the process generating the wastewater contain nitrogen or ammonia? ☐ Yes ☒ No

4.3 Provide an explanation of how the waste was characterized from the chemical perspective: *(check all that apply)*

☒ Analytical Data. Specify type and attach as back-up documentation:

☐ Generator Knowledge: *(specify)*

- ☐ Information provided in reference materials
- ☐ Information developed through prior testing of the waste
- ☐ Information describing the process generating the waste
- ☐ Information describing the materials used in the process that generates the waste
- ☐ Other, specify: _____

SECTION 5 – REGULATORY WASTE CLASSIFICATION

5.1 Is the waste an EPA Listed Hazardous Waste per 40 CFR 261? ☒ No ☐ Yes – **STOP, waste is unacceptable.**

5.2 Is the waste an EPA Characteristic Hazardous Waste per 40 CFR 261? ☒ No ☐ Yes – **STOP, waste is unacceptable.**
Is the waste an EPA TSCA regulated waste per 40 CFR 761 (contains>3ppb PCB)? ☒ No ☐ Yes – **STOP, waste is unacceptable.**

5.3 Is the waste exempt from being an EPA Hazardous Waste due to any of the following exclusions: (* - attach certification)
☒ Not Applicable ☐ Aqueous Solution (<24% Alcohol *and* >50% Water) * ☐ Non-terne Plated Used Oil Filters *
☐ RCRA Empty* ☐ Small Quantity Generator including conditionally exempt (**STOP-Unacceptable**)
☐ Other, specify:

5.4 Is the waste a "Hazardous Waste" as defined by the State of Origin? ☒ No ☐ Yes, specify State ID#: _____

5.5 Is the waste any of the following in the State of Origin?
☒ None ☐ Special Waste ☐ Residual Waste ☐ Regulated Waste ☐ Other, specify: _____
State Waste Code (if assigned):

5.6 The regulatory classification determinations for Sections 5.1 to 5.5 above were based upon: *(check all that apply)*

☒ Analytical Data. Specify type and attach as back-up documentation: _____

☒ Generator Knowledge: *(specify)*

- ☒ Knowledge of the applicable regulations
- ☐ Information developed through prior testing of the waste
- ☐ Information provided in reference materials
- ☐ Information describing the process generating the waste
- ☒ Information describing the materials used in the process that generates the waste
- ☐ Other, specify: _____

SECTION 6 – ATTACHMENTS

- Globalcycle, Inc. requires supporting documentation to verify the characterization and composition information of all waste(s) profiled for waste water recycling. Please attach all applicable supporting documentation.

Please identify all the back-up information which is provided with this waste profile: ☐ None

☐ Generator knowledge
☐ Memo/Letter: _____
☐ MSDS – Ingredient Specific
☐ MSDS – Waste Specific
☒ Analytical Data, specify: _____
☐ Other, specify: _____

Name of Waste: (as noted in Section 2.1) _____

SECTION 7 – WASTE CHARACTERISTICS

7.0 Physical Characteristics

Please specify the following characteristics of the waste:
Color – Describe: Odor – Describe: Flashpoint:
pH value – Specify:
Paint Filter Test: ☐ Pass ☒ Fail (must contains water for recycle). **If "pass" (no free water)- STOP- Not acceptable**

SECTION 8 - WASTE COMPOSITION

8.1 Constituents: (* -Do not report TCLP results in this section. If TCLP analytical was performed, attach as back-up information.)

Identify the *total** concentration of the below constituents present in the waste as weight percent or ppm (as noted), including *all* the contributions of all compounds. Do not consider packaging. If a constituent is not present, please identify this by noting "N/A" in the space provided. (N/A = not applicable)

-Bromine	ppm	-Arsenic	ppm	-Lead	ppm	-Zinc	ppm
-Chlorine	wt.%	-Barium	ppm	-Manganese	ppm	-pH	
-Fluorine	ppm	-Beryllium	ppm	-Mercury	ppm	Oxide	wt.%
-Iodine	ppm	-Cadmium	ppm	-Nickel	ppm	-Silicates	wt.%
-Nitrogen	ppm	-Chromium	ppm	-Selenium	ppm	-Silicone	wt.%
-Sulfur	wt.%	-Cobalt	ppm	-Silver	ppm	-TSS	ppm
-Antimony	ppm	-Copper	ppm	-Vanadium	ppm	-TDS	ppm

SEE ATTACHED ANALYTICAL REPORT

The above was determined based upon: ☒ Analytical Data ☐ Generator Knowledge

8.2 Composition: (* - The total wt. % range must be ≥100)

Please complete the below table. Do not consider packaging. Attach additional pages if needed. All substances regulated by 29CFR 1910.1000 Subpart Z and 29 CFR 1910.1200 must be listed.

Component	CAS # (if known)	Chemical Formula (if known)	Range (wt. %)
Water			>99.997%
See attached analytical			TRACE

8.3 Other info:

Identify facility where this waste was previously treated:
If previously treated at another facility, was this waste ever "rejected"? *Yes ___ No ___
*If "yes", please explain reason for rejection: _____

SECTION 9- NON-HAZARDOUS CERTIFICATION

I certify, as an Authorized Representative of the Generator, that this document, including all completed forms and all pertinent addenda, accurately represent and describe the waste stream outlined. The information submitted is true, accurate and complete, and no available information has been omitted or falsified. I further certify that the material is non-hazardous based upon Federal, State and Local Regulations.

Authorized Representative – Name, Title & Company (print)	Authorized Representative – Signature	Date
Wayne St.Clair, Inactive Site Manager, BASF	Wayne St. Clair	7/31/18

OR FOR

SECTION 10- CERTIFICATION FOR MASSACHUSETTS GENERATORS

I certify, as an Authorized Representative of the Generator, that this document, including all completed forms and all pertinent addenda, accurately represent and describe the waste stream outlined. The information submitted is true, accurate and complete, and no available information has been omitted or falsified. I further certify that the material is non-hazardous based upon Federal, State and Local Regulations. In addition, I further certify, that the site that generated this waste is in compliance with 314 CMR 18.05

Authorized Representative – Name, Title & Company (print)	Authorized Representative – Signature	Date

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. MA-131

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

J. P. NOONAN TRANSPORTATION, INC.
P.O. BOX 400
415 WEST STREET
WEST BRIDGEWATER, MA 02379

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME: A. J. CLARKE/JIM BAIRD
COUNTY: OUT OF STATE
TELEPHONE NO: (800)922-8026

EFFECTIVE DATE: 04/11/2018
EXPIRATION DATE: **04/10/2019**
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Covanta Niagara LLC	Niagara Falls , NY	Non-Hazardous Industrial/Commercial	
GLENS FALLS (C) WWTP	GLENS FALLS , NY	Grease Trap Waste Septage only (residential) Residential Raw Sewage including Portable Toilet Waste Non-Residential Raw Sewage or Sewage-Contaminated Wastes Sludge from Sewage or Water Supply Treatment Plant	
GLOBALCYCLE, INC.	E. TAUNTON , MA	Non-Hazardous Industrial/Commercial	
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial	
LIQUID ENVIRONMNENTAL SOLUTIONS	ATTLEBORO , MA	Non-Hazardous Industrial/Commercial	

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:

New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 04/02/18

NOTICE

This renewed permit is not valid until the effective date listed on the permit

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. MA-131

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

J. P. NOONAN TRANSPORTATION, INC.
P.O. BOX 400
415 WEST STREET
WEST BRIDGEWATER, MA 02379

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME:	A. J. CLARKE/JIM BAIRD	EFFECTIVE DATE:	04/11/2018
COUNTY:	OUT OF STATE	EXPIRATION DATE:	**04/10/2019**
TELEPHONE NO:	(800)922-8026	US EPA ID NUMBER:	

AUTHORIZED VEHICLES:
The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

6 (Six) Permitted Vehicle(s)

MA SM10103
MA SM215
MA SM216
NH T115386
NH T441960
NY SM94069
End of List

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. MA-138

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

GLOBAL REMEDIATION SERVICES, INC.
700 RICHMOND STREET
E. TAUNTON, MA 02718

CONTACT NAME: PAUL MASTRODOMENICAO
COUNTY: OUT OF STATE
TELEPHONE NO: (508)828-1005

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

EFFECTIVE DATE: 07/25/2018
EXPIRATION DATE. 07/24/2019
US EPA ID NUMBER: MAC300012903

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Covanta Niagara LLC	Niagara Falls , NY	Non-Hazardous Industrial/Commercial	
CWM CHEMICAL SERVICES LLC	MODEL CITY , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Hazardous Industrial/Commercial	
CYN OIL CORPORATION	STOUGHTON , MA	Hazardous Industrial/Commercial	
Global Albany Terminal	Albany , NY	Non-Hazardous Industrial/Commercial Hazardous Industrial/Commercial	
GLOBALCYCLE, INC.	E. TAUNTON , MA	Non-Hazardous Industrial/Commercial	
Hempstead Resource Recovery Facility	Westbury , NY	Non-Hazardous Industrial/Commercial	
NORLITE, LLC	COHOES , NY	Non-Hazardous Industrial/Commercial Hazardous Industrial/Commercial Waste Oil	
Ontario County Sanitary Landfill	Stanley , NY	Petroleum Contaminated Soil	

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:

New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 06/13/18

NOTICE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. MA-138

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

GLOBAL REMEDIATION SERVICES, INC.
700 RICHMOND STREET
E. TAUNTON, MA 02718

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME: PAUL MASTRODOMENICAO
COUNTY: OUT OF STATE
TELEPHONE NO: (508)828-1005

EFFECTIVE DATE: 07/25/2018
EXPIRATION DATE: **07/24/2019**
US EPA ID NUMBER: MAC300012903

AUTHORIZED VEHICLES:
The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:
(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)
7 (Seven) Permitted Vehicle(s)

MA 4151A
MA 77837
MA 90663
MA 99393
MA SM75964
MA SM83949
MA SM94842
End of List

AECOM Imagine it. Delivered.

Submittal Review Record

Route to (name of Reviewer/location/delivery method): E-Copy-Mike Gardner P.E.

Name/Location of Document Originator: Land Remediation, Inc.

Type of Document: Submittal Review

Complete Document Title and Revision Number: Submittal #05C Disposal Facility and Transporter Info

Site and Operable Unit: BASF Hudson River Operable Unit 02 Sediment River Remediation

Date Shown on Title Page: 12-20-2018

AECOM Project Number: 60323713 Date transmitted to reviewer: 12-20-18

Review Deadline: 12-27-18 Reviewed By: Mike Gardner, Abby Chin, Jeff Denman

Date Received: 12-20-18	Date of Review: 01-15-2019
☐ Approved as Submitted	☐ Call Reviewer to Discuss (Phone: ____)
☒ Approved as Noted	☐ Submit 3 Final Copies to Chief Engineer
☐ Revise and Resubmit	Response Deadline: ____

AECOM Comments:

- Truck drivers shall use only the routes listed in the LRI Technical Execution Plan.
- Only the trucks listed on the Waste Transporter Permit No. 4A-485 / Part 364 shall be loaded at the site. Trucks not on the list, that cannot be verified, shall not be used for transportation and shall not be loaded until verification is given to the Engineer.
- Profile number to be included in a separate submittal.

Response By: CM

Date Received: 12-20-18 Date of Response: 01-15-19

cc:

Originator:	Land Remediation, Inc.
Project Manager:	John A. Bleiler, AECOM
Engineer of Record:	Mike Gardner, AECOM
Construction Manager:	Jeff Denman, AECOM
Client:	Douglas Reid-Green, BASF

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 12/20/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 5C PREVIOUS SUBMITTAL NO. AND DATE: NA
Specification Section No.: 02 81 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	List of Transporter		1	02 81 00		none
2	Transporter Permit		1	02 81 00		none

Remarks:	**LAND REMEDIATION, INC.**	Signature:
See below	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: December 20, 2018

Additional Notes:
NON-TSCA LOW VOC Transporter Permits

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME: VINCENT LOGAN
COUNTY: MONTGOMERY
TELEPHONE NO: (518)993-3480

EFFECTIVE DATE: 08/20/2018
EXPIRATION DATE: **06/10/2019**
US EPA ID NUMBER: NYR000164178

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Albany (City) SWMF	Albany , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Ava Landfill	Boonville , NY	Petroleum Contaminated Soil	
Broome County Landfill	Binghamton , NY	Petroleum Contaminated Soil	
Chemung County Sanitary Landfill	Chemung , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Colonie (T) SWMF	Colonie , NY	Petroleum Contaminated Soil	
ESMI of New York	Fort Edward , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Finch Waste Co LLC Consolidated Landfill	Gansevoort , NY	Petroleum Contaminated Soil	
Fulton County Landfill	Johnstown , NY	Asbestos Petroleum Contaminated Soil	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Ontario County Sanitary Landfill	Stanley , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:
New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 8/17/18

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

CONTACT NAME: VINCENT LOGAN
COUNTY: MONTGOMERY
TELEPHONE NO: (518)993-3480

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

EFFECTIVE DATE: 08/20/2018
EXPIRATION DATE: **06/10/2019**
US EPA ID NUMBER: NYR000164178

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Seneca Meadows LF	Waterloo , NY	Non-Hazardous Industrial/Commercial	
		Asbestos	
		Petroleum Contaminated Soil	
		Waste Tires	
		Sludge from Sewage or Water Supply Treatment Plant	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME:	VINCENT LOGAN	EFFECTIVE DATE:	08/20/2018
COUNTY:	MONTGOMERY	EXPIRATION DATE:	**06/10/2019**
TELEPHONE NO:	(518)993-3480	US EPA ID NUMBER:	NYR000164178

AUTHORIZED VEHICLES:

The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

25 (Twenty Five) Permitted Vehicle(s)

NY BB51196
NY BB51197
NY BC91176
NY BE22355
NY BE22389
NY BG43867
NY BG43863
NY BG88283
NY BG88290
NY BG88291
NY BG88332
NY BG88333
NY BG88334
NY BH59030
NY BH59031
NY BH59127
NY BL33918
NY BL49877
NY BL97545
NY BL97614
NY BP47854
NY BP47976
NY BP47977
NY BR34123
NY BR34265
End of List

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-370

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

RON ALLEN TRUCKING, INC.
361 EAST MAIN STREET
CANAJOHARIE, NY 13317

CONTACT NAME: COLLEEN WILDER
COUNTY: MONTGOMERY
TELEPHONE NO: (518)673-3617

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

EFFECTIVE DATE: 08/10/2018
EXPIRATION DATE: **08/02/2019**
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Albany (City) SWMF	Albany , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Ava Landfill	Boonville , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Broome County Landfill	Binghamton , NY	Non-Hazardous Industrial/Commercial	
Chemung County Sanitary Landfill	Chemung , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Clinton County MRF / Casella	Morrisonville , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Colonie (T) SWMF	Colonie , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Development Authority of the North Country Landfill	Rodman , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
ESMI of New York	Fort Edward , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Finch Paper Residual Facility	Gansevoort , NY	Non-Hazardous Industrial/Commercial	
Fulton County Landfill	Johnstown , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS: New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date 08/10/18

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-370

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

RON ALLEN TRUCKING, INC.
361 EAST MAIN STREET
CANAJOHARIE, NY 13317

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME:	COLLEEN WILDER	EFFECTIVE DATE:	08/10/2018
COUNTY:	MONTGOMERY	EXPIRATION DATE:	**08/02/2019**
TELEPHONE NO:	(518)673-3617	US EPA ID NUMBER:	

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Hakes C&D Disposal Inc	Painted Post , NY	Non-Hazardous Industrial/Commercial	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Ontario County Sanitary Landfill	Stanley , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Seneca Meadows LF	Waterloo , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Waste Tires Sludge from Sewage or Water Supply Treatment Plant	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-370

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

RON ALLEN TRUCKING, INC.
361 EAST MAIN STREET
CANAJOHARIE, NY 13317

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME:	COLLEEN WILDER	EFFECTIVE DATE:	08/10/2018
COUNTY:	MONTGOMERY	EXPIRATION DATE:	**08/02/2019**
TELEPHONE NO:	(518)673-3617	US EPA ID NUMBER:	

AUTHORIZED VEHICLES:
The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

21 (Twenty One) Permitted Vehicle(s)

NY AM74415
NY AP38909
NY AR92351
NY AR92510
NY AT59305
NY AT59308
NY AX37467
NY BA36406
NY BC21753
NY BC21754
NY BG43800
NY BG43936
NY BG43937
NY BG43938
NY BK28726
NY BK28753
NY BL50027
NY BL50028
NY BP48091
NY BR34254
NY BR34255
End of List

AECOM Imagine it. Delivered.

Submittal Review Record

Route to (name of Reviewer/location/delivery method): E-Copy-Mike Gardner P.E.

Name/Location of Document Originator: Land Remediation, Inc.

Type of Document: Submittal Review

Complete Document Title and Revision Number: Submittal #05 Disposal Facility and Transporter Info

Site and Operable Unit: BASF Hudson River Operable Unit 02 Sediment River Remediation

Date Shown on Title Page: 07-18-18

AECOM Project Number: 60323713 Date transmitted to reviewer: 07-18-18

Review Deadline: 07-23-18 Reviewed By: Mike Gardner

Date Received: 07-18-18	Date of Review: 08-03-18
☐ Approved as Submitted	☐ Call Reviewer to Discuss (Phone: ____)
☒ Approved as Noted	☐ Submit 3 Final Copies to Chief Engineer
☐ Revise and Resubmit	Response Deadline: ____

AECOM Comments:

- The Profile No. 20589 shall be listed on each manifest prior to leaving the site.
- Truck drivers shall use only the routes listed in the LRI Technical Execution Plan.
- Any dredged Sediments leaving the site shall have the truck beds lined with 10ml or greater poly.
- Only the trucks listed on the Waste Transporter Permit No. 4A-314 / Part 364 shall be loaded at the site. Trucks not on the list, that cannot be verified, shall not be used for transportation and shall not be loaded until verification is given to the Engineer.
- AECOM is noting that the Transportation company listed on the Landfill Profile for this submittal #05, is different that the company being used to transport materials to the Landfill. Longhorn Trucking is currently listed for the transporter on the Profile sheet.
- Should LRI provide use of a different Transportation Company, other than the current Cedar Hill Trucking Company, the Part 364 Permits will need to be submitted along with any other information that is required per the specifications.
- LRI should provide the entire list of approved BASF facilities to be used for the project.

Response By: CM

Date Received: 07-18-18 Date of Response: 08-03-18

cc:	Originator:	Land Remediation, Inc.
	Project Manager:	John A. Bleiler, AECOM
	Engineer of Record:	Mike Gardner, AECOM
	Construction Manager:	Jeff Denman, AECOM
	Client:	Douglas Reid-Green, BASF

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 7/18/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 5
		PREVIOUS SUBMITTAL NO. AND DATE: NA
Specification Section No.: 02 81 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	List of Disposal Facility		1	02 81 00		none
2	List of Transporter		1	02 81 00		none
3	Transporter Permit		1	02 81 00		none

Remarks:	**LAND REMEDIATION, INC.**	Signature:
none	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: July 18, 2018

Additional Notes:
none

Disposal Facility / Transporter / Transporter Permits

Spec Section: 02 81 00

Date: 7/18/2018

C&D Debris generated from Site Prep Activities will be disposed of at Ontario County Landfill – Operated by Casella Waste Services – **Profile No. 20589** (attached)

Ontario County Landfill
1879 Rt. 5&20
Stanley, NY 14561
Ph: 585.526.4420
Fax: 585.526.5459

Cedar Hill Trucking will provide transportation services for the C&D debris

Cedar Hill Trucking
1021 River Road
Selkirk, NY 12158
NYSDEC – Part 364 Permit No. 4A-314

Permit Attached

FOR STATE USE ONLY		
SITE NO. Ontario	APPLICATION NO. #20589	DATE RECEIVED 7/13/2018
DEPARTMENT ACTION ☐ Approved ☐ Disapproved		DATE

SPECIAL WASTE CHARACTERIZATION PROFILE

Disposal Facility Location (Choose All That Apply): *Casella reserves the right to make changes to this section based upon review.*

Hyland Landfill	Chemung Cty LF	Ontario Cty LF	Clinton Cty LF	Waste USA LF	NCES Landfill
6653 Herdman Road	1488 Cnty Rte. 60	1879 Rt. 5 & 20	286 Sand Road	21 Landfill Lane	581 Trudeau Road
Angelica, NY 14709	Lowman, NY 14861	Stanley, NY 14561	Morrisonville, NY 12962	Coventry, VT 05825	Bethlehem, NH 03574
Tel: (585) 466.7271	Tel: (607) 529.3204	Tel: (585) 526.4420	Tel: (518) 563.5514	Tel: (802) 334.5796	Tel: (603) 869.3366
Fax: (585) 466.3206	Fax: (607) 737.2967	Fax: (585) 526.5459	Fax: (518) 563.5598	Fax: (802) 334.2476	Fax: (603) 869.2152
☐	☐	☒	☐	☐	☐

Disposal Option: *Casella reserves the right to make changes to this section based upon review.*

Waste Profile is destined for: ☒Disposal as waste ☐BUD: ____ ☐ Other (describe): ____

Drill Cuttings Only: ☐ Raw Cuttings for Solidification ☐ Bulked Cuttings For Disposal MUST CHECK ONE: ☐ Air/Water ☐ Oil-based

Waste Characterization Data :

1) Company Generating Waste: Basf Corp.	Address of Where the Waste was Generated: Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144		County of Origin: Rensselaer
2) Generator's Contact: *(must match signature on pg 2)* Wayne St. Clair	Mailing Address of Generator: (if different from above) Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144	Telephone No. 518-465-6534	Fax No. & Email: wayne.stclair@basf.com
3) The Landfill's "Bill To" Customer: LAND Remediation, Inc.	Bill To Address: 74 Hudson River Road Waterford, NY 12188	Telephone No. 518-766-4105	Fax No. & Email: 518-233-0141 kad@land-remediation.com

4) Description of Facility (i.e. Residential, Commercial, Type of Manufacturing, WWTP) *and* a description of the Process Generating Waste:

Former Dye and Pigment manufacturing facility. Waste generated from debris encountered during the installation of new bulkhead wall components.

5) Description of waste (list type of waste; contamination of waste, debris-containing, composition, uniform or mixture, etc.)

Waste consists of concrete, asphalt and wood debris. All hard debris will be sized to 18 inches

6) Is Waste Considered Hazardous by Federal or State Hazardous Waste Regulations? (Must Choose One): ☐ Yes ☒ No

7) Expected Annual Amount of Waste To Be Delivered	Approximate Density of Waste
400 tons/year ____ cubic yards/year	3000 pounds/cubic yard

8) Expected Frequency of Delivery:

X one-time

____ daily ____ weekly ____ monthly ____ other (specify, if known)

9) Hauler Name	Address	Transporter Permit No.	Telephone No.
Longhorn Trucking	6605 State Highway 5 Fort Plain, NY 13339	4A-485 Exp. Date: 6/2019	518-993-3480

10) Method of Delivery.

____ roll-off ____ packer truck X tractor trailer ____ other

11) Previous Disposal Location:	Address	Telephone No.	Contact Person
NA			

Waste Characterization Data (Cont'd)

12) Is the waste classified as a "listed" or "characteristic" hazardous waste as defined by USEPA, or State of origin, or State where disposed? (Yes or No; If yes, see box #6, provide explanation.)
No

13) Describe all hazardous or nuisance properties associated with the waste, if applicable.
None

14) Does the waste require any special handling or disposal procedures? (Yes or No; If Yes, provide explanation.)
No

15) Analytical Data Submitted (TCLP/Other).	**Type of Samples (indicate # of each type below)**
NA	____ **grab** ____ **composite** ____ borings *(Site plan must be provided if test pit/boring data is provided)*

Casella requires, at a minimum, the submittal of full TCLP (Metals-RCRA 8, VOC, SVOC, Pesticides/Herbicides), Total PCB's, pH, Reactivity, Ignitibility, and % solids testing results for any special waste submitted for landfill acceptance unless the applicant can provide an acceptable justification in the box below for submittal of less comprehensive data. The generator is responsible for proper waste characterization.

16) Justification for not submitting full list of analysis data:
7/18/2018 - customer verbally confirmed - the waste is uncontaminated, no indication of staining, etc. and no asbestos.

GENERATOR CERTIFICATION

I hereby certify that (1) I am the authorized representative of the generator; (2) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (3) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed; (4) Casella can contact the laboratory directly to discuss our attached waste stream. I understand that, once the waste stream is approved by Casella based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Casella. I further understand that any deviation from the information contained herein will require immediate notification to the disposal facility and cessation of disposal.

Generator or Authorized Representative – Signature (by hand):	**Print name:**	**Print Company Name & Person's Title:**	**Date:**
Wayne St. Clair	Wayne St. Clair	Project Engineer	7/13/18

SUBMIT THIS FORM AND ATTACHMENTS TO:

Special.Waste@Casella.com
Fax#: 802-419-3736
Toll Free Phone#: 855-379-2783

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-314

Pursuant to Article 27 , Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD
SELKIRK, NY 12158-1510

CONTACT NAME: HOWARD C. VAGELE, JR.
COUNTY: ALBANY
TELEPHONE NO: (518)767-9608

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

EFFECTIVE DATE: 10/01/2017
EXPIRATION DATE: **09/30/2018**
US EPA ID NUMBER: NYR000158469

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
110 Sand Company Clean Fill Disposal Site	Melville , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Albany (City) SWMF	Albany , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Waste Tires Sludge from Sewage or Water Supply Treatment Plant	
Ava Landfill	Boonville , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Broome County Landfill	Binghamton , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Hazardous Industrial/Commercial	
CD Man LLC Transfer Station	Albany , NY	Non-Hazardous Industrial/Commercial Asbestos Waste Tires	
Chemung County Transfer Station	Elmira , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
CLEAN EARTH OF CARTERET	CARTERET , NJ	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Clinton County MRF / Casella	Morrisonville , NY	Non-Hazardous Industrial/Commercial	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:

New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 9/14/17

NOTICE
This renewed permit is not valid until the effective date listed on the permit.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-314

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD
SELKIRK, NY 12158-1510

CONTACT NAME: HOWARD C. VAGELE, JR.
COUNTY: ALBANY
TELEPHONE NO: (518)767-9608

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

EFFECTIVE DATE: 10/01/2017
EXPIRATION DATE: **09/30/2018**
US EPA ID NUMBER: NYR000158469

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Clinton County MRF / Casella	Morrisonville , NY	Petroleum Contaminated Soil	
Colonie (T) SWMF	Colonie , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Covanta Environmental Solutions LLC	Niagara , NY	Non-Hazardous Industrial/Commercial	
CWM CHEMICAL SERVICES LLC	MODEL CITY , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Hazardous Industrial/Commercial Waste Oil	
CYCLE CHEM (NJ)	ELIZABETH , NJ	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Hazardous Industrial/Commercial	
CYCLE CHEM (PA)	LEWISBERRY , PA	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Hazardous Industrial/Commercial	
Cycle Chem Inc dba ACV Enviro	New Windsor , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Delaware County SWMF	Walton , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Development Authority of the North Country Landfill	Rodman , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
ENPRO SERVICES OF VERMONT, INC.	WILLISTON , VT	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Hazardous Industrial/Commercial	
Enviro Waste Oil Recovery Corp	Mahopac , NY	Non-Hazardous Industrial/Commercial	
ESMI OF NEW HAMPSHIRE	LOUDON , NH	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
ESMI of New York	Fort Edward , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Finch Municipal Solid Waste Facility	Gansevoort , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Franklin County Regional Landfill	Constable , NY	Non-Hazardous Industrial/Commercial	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-314

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD
SELKIRK, NY 12158-1510

CONTACT NAME: HOWARD C. VAGELE, JR.
COUNTY: ALBANY
TELEPHONE NO: (518)767-9608

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

EFFECTIVE DATE: 10/01/2017
EXPIRATION DATE: **09/30/2018**
US EPA ID NUMBER: NYR000158469

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Franklin County Regional Landfill	Constable , NY	Petroleum Contaminated Soil	
Fulton County Landfill	Johnstown , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Global Albany Terminal	Albany , NY	Non-Hazardous Industrial/Commercial	
Hakes C&D Disposal Inc	Painted Post , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial Asbestos	
Industrial Oil Tank Used Oil Storage Facility	Oriskany , NY	Non-Hazardous Industrial/Commercial	
MBC Contractors Inc (Hudson River Views Ind. Park)	Stony Point , NY	Non-Hazardous Industrial/Commercial	
Mill Seat SLF	Riga , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
Modern Landfill	Youngstown , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Ontario County Sanitary Landfill	Stanley , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
SAFETY-KLEEN SYSTEMS, INC.	LINDEN , NJ	Non-Hazardous Industrial/Commercial	
SCHENECTADY (C) WPCP	SCHENECTADY , NY	Non-Hazardous Industrial/Commercial	
Seneca Meadows LF	Waterloo , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Waste Tires Sludge from Sewage or Water Supply Treatment Plant	
TCI of NY, LLC	Coeymans , NY	Non-Hazardous Industrial/Commercial Waste Oil	elec. units/transit only

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-314

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD
SELKIRK, NY 12158-1510

CONTACT NAME: HOWARD C. VAGELE, JR.
COUNTY: ALBANY
TELEPHONE NO: (518)767-9608

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

EFFECTIVE DATE: 10/01/2017
EXPIRATION DATE: **09/30/2018**
US EPA ID NUMBER: NYR000158469

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
TRADEBE TREATMENT & RECYCLING NORTHEAST, LLC	MERIDEN , CT	Non-Hazardous Industrial/Commercial Hazardous Industrial/Commercial	
TRADEBE TREATMENT & RECYCLING OF BRIDGEPORT, LLC	BRIDGEPORT , CT	Non-Hazardous Industrial/Commercial Hazardous Industrial/Commercial	
VEOLIA ES TECHNICAL SOLUTIONS LLC	STOUGHTON , MA	Non-Hazardous Industrial/Commercial Hazardous Industrial/Commercial	
Westconn Recycling LLC Waste Oil Transfer Station	Selkirk , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Waste Oil	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-314

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

CEDAR HILL TRUCKING, INC.
1021 RIVER ROAD
SELKIRK, NY 12158-1510

PERMIT TYPE:

☐ NEW
■ RENEWAL
☐ MODIFICATION

CONTACT NAME:	HOWARD C. VAGELE, JR.	EFFECTIVE DATE:	10/01/2017
COUNTY:	ALBANY	EXPIRATION DATE:	**09/30/2018**
TELEPHONE NO:	(518)767-9608	US EPA ID NUMBER:	NYR000158469

AUTHORIZED VEHICLES:
The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

34 (Thirty Four) Permitted Vehicle(s)

NY 1031C8
NY 1033C0
NY 1068CO
NY 1084C9
NY 1122C7
NY 1174C9
NY 1205C8
NY 1206C8
NY 16198JB
NY 1770C2
NY 1783C2
NY 1922C2
NY 1923C2
NY 1924C2
NY 1925C2
NY 2072C1
NY 2073C1
NY 2074C1
NY 2075C1
NY 2076C1
NY 3664B7
NY AA10180
NY AE65965
NY AE65993
NY AE66000
NY AE66010
NY AE66022
NY AR85395
NY AV96868
NY BB52518
NY BD15064
NY BE66608
NY BH12825
NY BK32522
End of List

AECOM Imagine it. Delivered.

Submittal Review Record

Route to (name of Reviewer/location/delivery method): E-Copy-Mike Gardner P.E.

Name/Location of Document Originator: Land Remediation, Inc.

Type of Document: Submittal Review

Complete Document Title and Revision Number: Submittal #05B Disposal Facility and Transporter Info

Site and Operable Unit: BASF Hudson River Operable Unit 02 Sediment River Remediation

Date Shown on Title Page: 09-25-18

AECOM Project Number: 60323713 Date transmitted to reviewer: 09-25-18

Review Deadline: 10-02-18 Reviewed By: Mike Gardner

Date Received: 09-25-18	Date of Review: 11-05-18
☐ Approved as Submitted	☐ Call Reviewer to Discuss (Phone: ____)
☒ Approved as Noted	☐ Submit 3 Final Copies to Chief Engineer
☐ Revise and Resubmit	Response Deadline: ____

AECOM Comments:

- The Profile No. 20774 or Profile No. 20773 shall be listed on each manifest prior to leaving the site.
- Truck drivers shall use only the routes listed in the LRI Technical Execution Plan.
- Only the trucks listed on the Waste Transporter Permit No. 4A-485 / Part 364 shall be loaded at the site. Trucks not on the list, that cannot be verified, shall not be used for transportation and shall not be loaded until verification is given to the Engineer.

Response By: CM

Date Received: 09-25-18 Date of Response: 11-05-18

cc:		
	Originator:	Land Remediation, Inc.
	Project Manager:	John A. Bleiler, AECOM
	Engineer of Record:	Mike Gardner, AECOM
	Construction Manager:	Jeff Denman, AECOM
	Client:	Douglas Reid-Green, BASF

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 9/25/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 5B
		PREVIOUS SUBMITTAL NO. AND DATE: NA
Specification Section No.: 02 81 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	List of Disposal Facility		1	02 81 00		none
2	List of Transporter		1	02 81 00		none
3	Transporter Permit		1	02 81 00		none

Remarks:	**LAND REMEDIATION, INC.**	Signature:
none	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: July 18, 2018

Additional Notes:
UPLAND SOIL DISPOSAL
FIBERGLASS UPLAND PIPE DISPOSAL

Disposal Facility / Transporter / Transporter Permits

Spec Section: 02 81 00

Date: 09/25/2018

Impacted soil generated from Site Prep Activities will be disposed of at Ontario County Landfill – Operated by Casella Waste Services – **Profile No. 20774** (attached). In addition, Ontario County Landfill will also accept the stained fiberglass piping – **Profile No. 20773** (attached).

Ontario County Landfill
1879 Rt. 5&20
Stanley, NY 14561
Ph: 585.526.4420
Fax: 585.526.5459

Longhorn Trucking will provide transportation services for the impacted soil and fiberglass pipe.

Longhorn Trucking Company
6605 State Highway 5
Fort Plain, NY 13339
NYSDEC – Part 364 Permit No. 4A-485

Permit Attached

FOR STATE USE ONLY		
SITE NO.	APPLICATION NO. #20774	DATE RECEIVED
DEPARTMENT ACTION ☐ Approved ☐ Disapproved		DATE

SPECIAL WASTE CHARACTERIZATION PROFILE

Disposal Facility Location (Choose All That Apply): ***Casella reserves the right to make changes to this section based upon review.***

Hyland Landfill	Chemung Cty LF	Ontario Cty LF	Clinton Cty LF	Waste USA LF	NCES Landfill
6653 Herdman Road	1488 Cnty Rte. 60	1879 Rt. 5 & 20	286 Sand Road	21 Landfill Lane	581 Trudeau Road
Angelica, NY 14709	Lowman, NY 14861	Stanley, NY 14561	Morrisonville, NY 12962	Coventry, VT 05825	Bethlehem, NH 03574
Tel: (585) 466.7271	Tel: (607) 529.3204	Tel: (585) 526.4420	Tel: (518) 563.5514	Tel: (802) 334.5796	Tel: (603) 869.3366
Fax: (585) 466.3206	Fax: (607) 737.2967	Fax: (585) 526.5459	Fax: (518) 563.5598	Fax: (802) 334.2476	Fax: (603) 869.2152
☐	☐	☒	☐	☐	☐

Disposal Option: ***Casella reserves the right to make changes to this section based upon review.***

Waste Profile is destined for: ☒ Disposal as waste ☐ BUD: ____ ☐ Other (describe): ____

Drill Cuttings Only: ☐ Raw Cuttings for Solidification ☐ Bulked Cuttings For Disposal MUST CHECK ONE: ☐ Air/Water ☐ Oil-based

Waste Characterization Data :

1) Company Generating Waste:	Address of Where the Waste was Generated:		County of Origin:
Basf Corp	Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144		Rensselaer
2) Generator's Contact: *(must match signature on pg 2)*	**Mailing Address of Generator:** (if different from above)	**Telephone No.**	**Fax No. & Email:**
Wayne St. Clair	Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144	518-465-6534	wayne.stclair@basf.com
3) The Landfill's "Bill To" Customer:	**Bill To Address:**	**Telephone No.**	**Fax No. & Email:**
LAND Remediation, Inc.	74 Hudson River Road Waterford, NY 12188	518-766-4105	518-233-0141 kad@land-remediation.com

4) Description of Facility (i.e. Residential, Commercial, Type of Manufacturing, WWTP) *and* a description of the Process Generating Waste:

Former Dye and Pigment manufacturing facility. Soil generated during the excavation of the new bulkhead wall components.

5) Description of waste (list type of waste; contamination of waste, debris-containing, composition, uniform or mixture, etc.)

Waste consists of soil excavated and stockpiled from the installation of the new bulkhead wall components. The concentrations in the totals were above the site cleanup criteria. Additional TCLP testing was performed to determine hazardous characterisitics. The soil does not exhibit any RCRA characteristics above the TCLP thresholds.

6) Is Waste Considered Hazardous by Federal or State Hazardous Waste Regulations? (Must Choose One): ☐ Yes ☒ No

7) Expected Annual Amount of Waste To Be Delivered	Approximate Density of Waste
1500 tons/year 0 cubic yards/year	3400 pounds/cubic yard

8) Expected Frequency of Delivery:

X one-time

____ daily ____ weekly ____ monthly ____ other (specify, if known)

9) Hauler Name	Address	Transporter Permit No.	Telephone No.
Longhorn Trucking	6605 State Highway 5 Fort Plain, NY 13339	4A-485 Exp. Date: 6/2019	518-993-3480

10) Method of Delivery.

____ roll-off ____ packer truck X tractor trailer ____ other

11) Previous Disposal Location:	Address	Telephone No.	Contact Person
NA			

Waste Characterization Data (Cont'd)

12) Is the waste classified as a "listed" or "characteristic" hazardous waste as defined by USEPA, or State of origin, or State where disposed? (Yes or No; If yes, see box #6, provide explanation.)
No

13) Describe all hazardous or nuisance properties associated with the waste, if applicable.
None

14) Does the waste require any special handling or disposal procedures? (Yes or No; If Yes, provide explanation.)
No

15) Analytical Data Submitted (TCLP/Other).	**Type of Samples (indicate # of each type below)**
NA	X grab 1 composite ____ borings *(Site plan must be provided if test pit/boring data is provided)*

Casella requires, at a minimum, the submittal of full TCLP (Metals-RCRA 8, VOC, SVOC, Pesticides/Herbicides), Total PCB's, pH, Reactivity, Ignitibility, and % solids testing results for any special waste submitted for landfill acceptance unless the applicant can provide an acceptable justification in the box below for submittal of less comprehensive data. The generator is responsible for proper waste characterization.

16) Justification for not submitting full list of analysis data:
The site has been fully characterized over many years of investigation and cleanup activities. The following compounds have never been site contaminants: Toxaphene, 2,4 – Dinitrotolulene, 2,4,6 – Trichlorophenol, Pyridine, Hexachlorobutadiene and Hexachloroethane. Although only 1 TCLP sample was used for the pile, there were 3 composite samples that demonstrated total concentrations were low.

GENERATOR CERTIFICATION

I hereby certify that (1) I am the authorized representative of the generator; (2) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (3) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed; (4) Casella can contact the laboratory directly to discuss our attached waste stream. I understand that, once the waste stream is approved by Casella based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Casella. I further understand that any deviation from the information contained herein will require immediate notification to the disposal facility and cessation of disposal.

Generator or Authorized Representative – Signature (by hand):	**Print name:**	**Print Company Name & Person's Title:**	**Date:**
Wayne St. Clair	Wayne St. Clair	Basf Corp., Inactive Site – Manager	9/4/18

SUBMIT THIS FORM AND ATTACHMENTS TO:

Special.Waste@Casella.com
Fax#: 802-419-3736
Toll Free Phone#: 855-379-2783

FOR STATE USE ONLY		
SITE NO. Ontario	APPLICATION NO. #20773	DATE RECEIVED 9/6/2018
DEPARTMENT ACTION ☐ Approved ☐ Disapproved		DATE

SPECIAL WASTE CHARACTERIZATION PROFILE

Disposal Facility Location (Choose All That Apply): Casella reserves the right to make changes to this section based upon review.

Hyland Landfill	Chemung Cty LF	Ontario Cty LF	Clinton Cty LF	Waste USA LF	NCES Landfill
6653 Herdman Road	1488 Cnty Rte. 60	1879 Rt. 5 & 20	286 Sand Road	21 Landfill Lane	581 Trudeau Road
Angelica, NY 14709	Lowman, NY 14861	Stanley, NY 14561	Morrisonville, NY 12962	Coventry, VT 05825	Bethlehem, NH 03574
Tel: (585) 466.7271	Tel: (607) 529.3204	Tel: (585) 526.4420	Tel: (518) 563.5514	Tel: (802) 334.5796	Tel: (603) 869.3366
Fax: (585) 466.3206	Fax: (607) 737.2967	Fax: (585) 526.5459	Fax: (518) 563.5598	Fax: (802) 334.2476	Fax: (603) 869.2152
☐	☐	☒	☐	☐	☐

Disposal Option: Casella reserves the right to make changes to this section based upon review.

Waste Profile is destined for: ☒ **Disposal as waste** ☐ **BUD:** ____ ☐ **Other (describe):** ____

Drill Cuttings Only: ☐ **Raw Cuttings for Solidification** ☐ **Bulked Cuttings For Disposal** **MUST CHECK ONE:** ☐ **Air/Water** ☐ **Oil-based**

Waste Characterization Data :

1) Company Generating Waste: Basf Corp.	**Address of Where the Waste was Generated:** Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144		**County of Origin:** Rensselaer
2) Generator's Contact: *(must match signature on pg 2)* Brian Diepeveen	**Mailing Address of Generator:** (if different from above) Street: 36 Riverside Ave City, State, Zip: Rensselaer, NY 12144	**Telephone No.** 518-465-6534	**Fax No. & Email:** wayne.stclair@basf.com
3) The Landfill's "Bill To" Customer: LAND Remediation, Inc.	**Bill To Address:** 74 Hudson River Road Waterford, NY 12188	**Telephone No.** 518-766-4105	**Fax No. & Email:** 518-233-0141 kad@land-remediation.com

4) Description of Facility (i.e. Residential, Commercial, Type of Manufacturing, WWTP) *and* a description of the Process Generating Waste:

Former Dye and Pigment manufacturing facility. Waste generated from debris encountered during the installation of new bulkhead wall components.

5) Description of waste (list type of waste; contamination of waste, debris-containing, composition, uniform or mixture, etc.)

Waste consists of fiberglass pipe. All analtyical results demonstrate pipe and any pipe residue are non-hazardous

6) Is Waste Considered Hazardous by Federal or State Hazardous Waste Regulations? (Must Choose One): ☐ **Yes** ☒ **No**

7) Expected Annual Amount of Waste To Be Delivered	**Approximate Density of Waste**
50 tons/year 100 cubic yards/year	1000 pounds/cubic yard

8) Expected Frequency of Delivery:

X **one-time**

____ **daily** ____ **weekly** ____ **monthly** ____ **other (specify, if known)**

9) Hauler Name	**Address**	**Transporter Permit No.**	**Telephone No.**
Longhorn Trucking	6605 State Highway 5 Fort Plain, NY 13339	4A-485 Exp. Date: 6/2019	518-993-3480

10) Method of Delivery.

____ **roll-off** ____ **packer truck** X **tractor trailer** ____ **other**

11) Previous Disposal Location:	**Address**	**Telephone No.**	**Contact Person**
NA			

Waste Characterization Data (Cont'd)

12) Is the waste classified as a "listed" or "characteristic" hazardous waste as defined by USEPA, or State of origin, or State where disposed? (Yes or No; If yes, see box #6, provide explanation.)
No

13) Describe all hazardous or nuisance properties associated with the waste, if applicable.
None

14) Does the waste require any special handling or disposal procedures? (Yes or No; If Yes, provide explanation.)
No

15) Analytical Data Submitted (TCLP/Other).	**Type of Samples (indicate # of each type below)**
NA	_____ **grab** 1 **composite** _____ borings *(Site plan must be provided if test pit/boring data is provided)*

Casella requires, at a minimum, the submittal of full TCLP (Metals-RCRA 8, VOC, SVOC, Pesticides/Herbicides), Total PCB's, pH, Reactivity, Ignitibility, and % solids testing results for any special waste submitted for landfill acceptance unless the applicant can provide an acceptable justification in the box below for submittal of less comprehensive data. The generator is responsible for proper waste characterization.

16) Justification for not submitting full list of analysis data:

GENERATOR CERTIFICATION

I hereby certify that (1) I am the authorized representative of the generator; (2) all information submitted on this form and on supplemental materials is complete and accurate to the best of my knowledge and ability to determine; (3) the information provided herein, including any supplemental information, such as laboratory analytical, MSDS, etc., accurately describes the waste stream to be delivered to the facility and that all known or suspected hazards have been disclosed; (4) Casella can contact the laboratory directly to discuss our attached waste stream. I understand that, once the waste stream is approved by Casella based on this information, any deviation in the source, composition, constituents or characteristics of the waste stream from the information described herein, may render the waste stream unacceptable for disposal, at the sole discretion of Casella. I further understand that any deviation from the information contained herein will require immediate notification to the disposal facility and cessation of disposal.

Generator or Authorized Representative – Signature (by hand):	**Print name:** Brian Diepeveen	**Print Company Name & Person's Title:** Basf Corporation /Remediation Director	**Date:** 9/4/118

SUBMIT THIS FORM AND ATTACHMENTS TO:

Special.Waste@Casella.com
Fax#: 802-419-3736
Toll Free Phone#: 855-379-2783

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME: VINCENT LOGAN
COUNTY: MONTGOMERY
TELEPHONE NO: (518)993-3480

EFFECTIVE DATE: 08/20/2018
EXPIRATION DATE: **06/10/2019**
US EPA ID NUMBER: NYR000164178

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Albany (City) SWMF	Albany , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Ava Landfill	Boonville , NY	Petroleum Contaminated Soil	
Broome County Landfill	Binghamton , NY	Petroleum Contaminated Soil	
Chemung County Sanitary Landfill	Chemung , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Colonie (T) SWMF	Colonie , NY	Petroleum Contaminated Soil	
ESMI of New York	Fort Edward , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Finch Waste Co LLC Consolidated Landfill	Gansevoort , NY	Petroleum Contaminated Soil	
Fulton County Landfill	Johnstown , NY	Asbestos Petroleum Contaminated Soil	
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	
Ontario County Sanitary Landfill	Stanley , NY	Non-Hazardous Industrial/Commercial Asbestos Petroleum Contaminated Soil	

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:
New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: _____ Date: 8/17/18

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

CONTACT NAME: VINCENT LOGAN
COUNTY: MONTGOMERY
TELEPHONE NO: (518)993-3480

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

EFFECTIVE DATE: 08/20/2018
EXPIRATION DATE: **06/10/2019**
US EPA ID NUMBER: NYR000164178

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY: (Continued)
The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Seneca Meadows LF	Waterloo , NY	Non-Hazardous Industrial/Commercial	
		Asbestos	
		Petroleum Contaminated Soil	
		Waste Tires	
		Sludge from Sewage or Water Supply Treatment Plant	

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MATERIALS MANAGEMENT

PART 364
WASTE TRANSPORTER PERMIT NO. 4A-485

Pursuant to Article 27 ,Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

LONGHORN TRUCKING COMPANY, INC.
6605 STATE HIGHWAY 5
FORT PLAIN, NY 13339

PERMIT TYPE:

☐ NEW
☐ RENEWAL
■ MODIFICATION

CONTACT NAME:	VINCENT LOGAN	EFFECTIVE DATE:	08/20/2018
COUNTY:	MONTGOMERY	EXPIRATION DATE:	**06/10/2019**
TELEPHONE NO:	(518)993-3480	US EPA ID NUMBER:	NYR000164178

AUTHORIZED VEHICLES:

The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

25 (Twenty Five) Permitted Vehicle(s)

NY BB51196
NY BB51197
NY BC91176
NY BE22355
NY BE22389
NY BG43867
NY BG43863
NY BG88283
NY BG88290
NY BG88291
NY BG88332
NY BG88333
NY BG88334
NY BH59030
NY BH59031
NY BH59127
NY BL33918
NY BL49877
NY BL97545
NY BL97614
NY BP47854
NY BP47976
NY BP47977
NY BR34123
NY BR34265
End of List

E.1 Disposal Facility and Waste Hauler Permits

E.2 Waste Manifests/Bills of Lading

Appendix F – Import Materials Documentation

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 10/15/2019	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 20-B PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Aquatic Fill Materials Analytical Testing		1	02 30 00		see below
2	Aquatic Fill Materials Geotechnical Testing		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for subaqueous Backfill and subaqueous restoration cover material	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: October 15, 2019 

Additional Notes:

Proposed Aquatic fill is proposed for both the Subaqueous Backfill Layer and the Subaqueous Restoration Cover Material based on its material properties.
This material was previously utilized as subaqueous backfill for the GE Hudson River Cleanup project. (>500,000CY)
There is estimated to be 34,000 CY of aquatic fill required for the BASF project.
Attached is the material certification letter from the the certified quarry operator.
Attached is the analytical testing (2 comp, 4 grabs) for the initial 10,000 CY (1 comp, 2 discrete grabs / 5000 CY frequency)
Attached is 5 geotechnical test reports for the initial 11,500 CY (1 sample per 500/cy up to 1500cy, 1 every additional 5000)

RJ VALENTE GRAVEL Inc.
1 MADISON ST.SUITE 300
TROY NY 12180
518-279-1001



TO WHOM IT MAY CONCERN:

As per your request, please accept this correspondence as follows:
For the Port of Rennselaer dredging project Rennselaer NY.

All imported materials to be delivered to the above referenced project, do not, to the best of our knowledge contain any known contamination from prior historical, industrial, commercial development or agricultural use prior to delivery.

The fill material originates from the following virgin sand and gravel pit:
Mackay Pit as designated by the NYS DEC at, George Thompson Rd. Mechanicville NY 12118.

Luther Forest Mine - Mine ID # 50049

STEPHEN A.VALENTE

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

ATT'N: MR. WILL LINDHEIMER

PROJECT: **BASF: RENSSELAER, NY.**

REPORT DATE: 10/03/19
SAMPLE NUMBER: 18991
OUR FILE NO: 1526.000

Tom Joslin

REVIEWED BY: TOM JOSLIN, SET, NICET

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #1**
MATERIAL DESCRIPTION: SAND, medium; some fine Gravel; trace Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	22.2	77.8				#50	88.5	11.5			
3"						**#4**	23.3	**76.7**	**80**	**-**	**90**	#60					
2 1/2"						1/8"						#80					
2"		100.0				#8	27.8	72.2				#100	95.4	4.6			
1 1/2"	13.2	86.8				#10	31.8	68.2				#140					
1"	13.2	**86.8**	**100**	**-**	**100**	#16	41.0	59.0				**#200**	97.2	**2.8**	**10**	**-**	**20**
3/4"	14.8	85.2				#20						SILT					
1/2"	19.0	81.0				#30	72.5	27.5				CLAY					
3/8"	19.9	80.1				#40	81.5	18.5				COLLOID					

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
23.3%	**74.0%**	**2.8%**	**4.2%**	**6.7**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 10/03/19
SAMPLE NUMBER: 18991
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #2**
MATERIAL DESCRIPTION: SAND, medium; trace fine Gravel; trace Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	7.0	93.0		#50	89.5	10.5	
3"				**#4**	11.0	**89.0**	**80 - 90**	#60			
2 1/2"				1/8"				#80			
2"				#8	25.7	74.3		#100	95.2	4.8	
1 1/2"				#10	33.6	66.4		#140			
1"		**100.0**	**100 - 100**	#16	51.5	48.5		**#200**	96.6	**3.4**	**10 - 20**
3/4"				#20				SILT			
1/2"	0.8	99.2		#30	76.7	23.3		CLAY			
3/8"	2.8	97.2		#40	82.9	17.1		COLLOID			

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
11.0%	**85.6%**	**3.4%**	**6.2%**	**6.7**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 10/03/19
SAMPLE NUMBER: 18991
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #3**
MATERIAL DESCRIPTION: SAND, medium; trace fine Gravel; trace Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	5.7	94.3		#50	88.9	11.1	
3"				**#4**	9.3	**90.7**	**80 - 90**	#60			
2 1/2"				1/8"				#80			
2"				#8	23.1	76.9		#100	94.0	6.0	
1 1/2"				#10	30.2	69.8		#140			
1"		**100.0**	**100 - 100**	#16	46.4	53.6		**#200**	95.3	**4.7**	**10 - 20**
3/4"				#20				SILT			
1/2"	2.1	97.9		#30	76.2	23.8		CLAY			
3/8"	3.3	96.7		#40	83.0	17.0		COLLOID			

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
9.3%	**86.0%**	**4.7%**	**6.1%**	**6.7**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 10/03/19
SAMPLE NUMBER: 18991
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #4**
MATERIAL DESCRIPTION: SAND, medium; little fine Gravel; trace Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	6.6	93.4				#50	86.6	13.4			
3"						**#4**	13.8	**86.2**	**80**	**-**	**90**	#60					
2 1/2"						1/8"						#80					
2"						#8	26.3	73.7				#100	92.9	7.1			
1 1/2"						#10	32.3	67.7				#140					
1"		**100.0**	**100**	**-**	**100**	#16	46.0	54.0				**#200**	95.2	**4.8**	**10**	**-**	**20**
3/4"	3.1	96.9				#20						SILT					
1/2"	3.1	96.9				#30	73.0	27.0				CLAY					
3/8"	4.9	95.1				#40	80.3	19.7				COLLOID					

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
13.8%	**81.4%**	**4.8%**	**7.3%**	**6.7**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 09/24/19
SAMPLE NUMBER: 18974
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: VALENTE PIT SAMPLE #5**
MATERIAL DESCRIPTION: SAND, medium/coarse; little fine Gravel; trace Silt/Clay
MATERIAL PROJECT USE: SUBAQUEOUS BACKFILL LAYER
EVALUATION SPECIFICATION: PROJECT SPECIFICATION

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	11.1	88.9				#50	92.0	8.0			
3"		**100.0**	**100**	**-**	**100**	**#4**	14.8	**85.2**	**30**	**-**	**80**	#60					
2 1/2"						1/8"						#80					
2"		**100.0**	**90**	**-**	**100**	#8	29.9	70.1				#100	97.2	2.8			
1 1/2"						#10	36.6	63.4				#140					
1"		**100.0**	**70**	**-**	**90**	#16	51.7	48.3				**#200**	98.1	**1.9**	**0**	**-**	**15**
3/4"	2.7	97.3				#20						SILT					
1/2"	4.9	95.1				#30	79.2	20.8				CLAY					
3/8"	7.4	92.6				#40	85.3	14.7				COLLOID					

ASTM D-2974
ORGANIC CONTENT
8.7%
Spec: 0.5 - 1.0%



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October 11, 2019

Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project Location: Rensselaer
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 19J0333

Enclosed are results of analyses for samples received by the laboratory on October 4, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kaitlyn A. Feliciano
Project Manager

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Land Remediation
74 Hudson River Road
Waterford, NY 12188
ATTN: Will Lindheimer

REPORT DATE: 10/11/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19J0333

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Rensselaer

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
AQ Fill 1	19J0333-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8270D	
AQ Fill 1A	19J0333-02	Soil		SM 2540G	
AQ Fill 1B	19J0333-03	Soil		SM 2540G	
				SW-846 8260C-D	
AQ Fill 2	19J0333-04	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C-D	
				SW-846 8270D	
AQ Fill 2A	19J0333-05	Soil		SM 2540G	
				SW-846 8260C-D	
AQ Fill 2B	19J0333-06	Soil		SM 2540G	
				SW-846 8260C-D	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151 samples were derivatized on 10/09/19

For method 8151 sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 6010D

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Iron
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2], B242593-BS1, B242593-BSD1, B242593-DUP1, B242593-MS1

B-07

Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.

Analyte & Samples(s) Qualified:

Iron
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2], B242593-BLK1

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Antimony
19J0333-04[AQ Fill 2], B242593-MS1

Selenium
19J0333-04[AQ Fill 2], B242593-MS1

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Thallium
19J0333-04[AQ Fill 2], B242593-MS1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Aluminum
19J0333-04[AQ Fill 2], B242593-MS1

Iron
19J0333-04[AQ Fill 2], B242593-MS1

Manganese
19J0333-04[AQ Fill 2], B242593-MS1

SW-846 8081B

Qualifications:

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

alpha-BHC [2C]
B242366-BS1, B242366-BSD1, B242366-MS1, B242366-MSD1

SW-846 8151A

Qualifications:

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Dinoseb [2C]
B242514-BS1, B242514-BSD1

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V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Dinoseb
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2]

Dinoseb [2C]
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2]

SW-846 8260C-D

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Bromodichloromethane
B242469-BSD1

Tetrachloroethylene
B242469-BSD1

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

19J0333-04[AQ Fill 2]

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane
B242469-BS1, B242469-BSD1, S041150-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Bromomethane
19J0333-03[AQ Fill 1B], 19J0333-04[AQ Fill 2], 19J0333-05[AQ Fill 2A], 19J0333-06[AQ Fill 2B], B242469-BLK1, B242469-BS1, B242469-BSD1, S041150-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Acetone
B242469-BS1, B242469-BSD1, S041150-CCV1

SW-846 8270D

Qualifications:

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Benzidine
19J0333-04[AQ Fill 2], B242477-MS1, B242477-MSD1

Pyridine
19J0333-04[AQ Fill 2], B242477-MS1, B242477-MSD1

MS-22

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

Analyte & Samples(s) Qualified:

Aniline
B242477-MSD1

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R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

Benzo(k)fluoranthene
19J0333-04[AQ Fill 2], B242477-MS1, B242477-MSD1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Benzidine
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2], B242477-BLK1, B242477-BS1, B242477-BSD1, B242477-MS1, B242477-MSD1, S041167-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine
19J0333-01[AQ Fill 1], 19J0333-04[AQ Fill 2], B242477-BLK1, B242477-BS1, B242477-BSD1, B242477-MS1, B242477-MSD1, S041167-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Aniline	ND	0.37	0.086	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzidine	ND	0.71	0.19	mg/Kg dry	1	V-05, V-35	SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,4-Dichlorobenzene	ND	0.37	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.32	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Nitroaniline	ND	0.37	0.21	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
N-Nitrosodimethylamine	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 14:47	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	65.9	30-130		10/8/19 14:47
Phenol-d6	70.1	30-130		10/8/19 14:47
Nitrobenzene-d5	68.9	30-130		10/8/19 14:47
2-Fluorobiphenyl	76.6	30-130		10/8/19 14:47
2,4,6-Tribromophenol	101	30-130		10/8/19 14:47
p-Terphenyl-d14	107	30-130		10/8/19 14:47

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	0.011	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Aldrin [1]	ND	0.0054	0.0028	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
alpha-BHC [1]	ND	0.0054	0.0027	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
beta-BHC [1]	ND	0.0054	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
delta-BHC [1]	ND	0.0054	0.0041	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
gamma-BHC (Lindane) [1]	ND	0.0022	0.00054	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Chlordane [1]	ND	0.022	0.0085	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
4,4'-DDD [1]	ND	0.0044	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
4,4'-DDE [1]	ND	0.0044	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
4,4'-DDT [1]	ND	0.0044	0.0036	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Dieldrin [1]	ND	0.0044	0.0032	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endosulfan I [1]	ND	0.0054	0.0028	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endosulfan II [1]	ND	0.0087	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endosulfan sulfate [1]	ND	0.0087	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endrin [1]	ND	0.0087	0.0034	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endrin aldehyde [1]	ND	0.0087	0.0033	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Endrin ketone [1]	ND	0.0087	0.0041	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Heptachlor [1]	ND	0.0054	0.0035	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Heptachlor epoxide [1]	ND	0.0054	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Hexachlorobenzene [1]	ND	0.0065	0.0046	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Methoxychlor [1]	ND	0.054	0.016	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG
Toxaphene [1]	ND	0.11	0.044	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:25	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.6	30-150		10/10/19 12:25
Decachlorobiphenyl [2]	81.9	30-150		10/10/19 12:25
Tetrachloro-m-xylene [1]	88.5	30-150		10/10/19 12:25
Tetrachloro-m-xylene [2]	85.5	30-150		10/10/19 12:25

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1221 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1232 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1242 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1248 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1254 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1260 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1262 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG
Aroclor-1268 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		10/9/19 13:22
Decachlorobiphenyl [2]	102	30-150		10/9/19 13:22
Tetrachloro-m-xylene [1]	89.3	30-150		10/9/19 13:22
Tetrachloro-m-xylene [2]	83.9	30-150		10/9/19 13:22

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	2.4	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
2,4-DB [1]	ND	27	5.4	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
2,4,5-TP (Silvex) [1]	ND	2.7	0.30	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
2,4,5-T [1]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
Dalalpon [1]	ND	68	4.1	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
Dicamba [1]	ND	2.7	0.38	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
Dichloroprop [1]	ND	27	5.1	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
Dinoseb [1]	ND	14	0.57	µg/kg dry	1	V-20	SW-846 8151A	10/8/19	10/9/19 20:08	JMB
MCPA [1]	ND	2700	410	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB
MCPP [1]	ND	2700	360	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:08	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	72.0	30-150		10/9/19 20:08
2,4-Dichlorophenylacetic acid [2]	87.8	30-150		10/9/19 20:08

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	7900	3.7	2.9	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Antimony	ND	1.9	0.92	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Arsenic	5.6	1.9	0.36	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Barium	35	1.9	0.40	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Beryllium	0.40	0.19	0.089	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Boron	1.6	3.7	1.5	mg/Kg dry	1	J	SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Cadmium	0.15	0.19	0.067	mg/Kg dry	1	J	SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Chromium	10	0.37	0.27	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Cobalt	7.3	1.9	0.41	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Copper	18	0.37	0.33	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Iron	19000	19	18	mg/Kg dry	10	B-07, B	SW-846 6010D	10/8/19	10/10/19 13:14	TBC/MJH
Lead	6.5	0.56	0.23	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Manganese	420	0.37	0.24	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Molybdenum	ND	3.7	0.70	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Nickel	16	0.37	0.36	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Selenium	ND	3.7	1.8	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Silver	ND	0.37		mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Thallium	ND	1.9	1.6	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Tin	ND	3.5	1.4	mg/Kg dry	1		SW-846 6010D	10/10/19	10/10/19 23:10	MJH
Vanadium	14	0.74	0.22	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH
Zinc	38	0.74	0.68	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 14:27	MJH

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1 | Sampled: 10/3/2019 11:50

Sample ID: 19J0333-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	10/5/19	10/6/19 8:36	JBM + AVI

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1A | Sampled: 10/3/2019 12:20

Sample ID: 19J0333-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.2		% Wt	1		SM 2540G	10/5/19	10/6/19 8:36	JBM + AVI

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1B | Sampled: 10/3/2019 12:20

Sample ID: 19J0333-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.013	0.081	0.0068	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Acrylonitrile	ND	0.0049	0.00081	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00081	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Benzene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Bromobenzene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Bromochloromethane	ND	0.0033	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Bromodichloromethane	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Bromoform	ND	0.0033	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Bromomethane	ND	0.0081	0.00089	mg/Kg dry	1	V-34	SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
2-Butanone (MEK)	ND	0.033	0.0045	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
tert-Butyl Alcohol (TBA)	ND	0.033	0.0037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
n-Butylbenzene	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
sec-Butylbenzene	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
tert-Butylbenzene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00081	0.00016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Carbon Disulfide	0.0058	0.0049	0.0044	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Carbon Tetrachloride	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Chlorobenzene	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Chlorodibromomethane	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Chloroethane	ND	0.016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Chloroform	ND	0.0033	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Chloromethane	ND	0.0081	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
2-Chlorotoluene	ND	0.0016	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
4-Chlorotoluene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	0.00081	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2-Dibromoethane (EDB)	ND	0.00081	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Dibromomethane	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2-Dichlorobenzene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,3-Dichlorobenzene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,4-Dichlorobenzene	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
trans-1,4-Dichloro-2-butene	ND	0.0033	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.016	0.00089	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1-Dichloroethane	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2-Dichloroethane	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1-Dichloroethylene	ND	0.0033	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
cis-1,2-Dichloroethylene	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
trans-1,2-Dichloroethylene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2-Dichloropropane	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,3-Dichloropropane	ND	0.00081	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
2,2-Dichloropropane	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1-Dichloropropene	ND	0.0033	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
cis-1,3-Dichloropropene	ND	0.00081	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
trans-1,3-Dichloropropene	ND	0.00081	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Diethyl Ether	ND	0.016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1B | Sampled: 10/3/2019 12:20

Sample ID: 19J0333-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00081	0.00016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,4-Dioxane	ND	0.081	0.0043	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Ethylbenzene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Hexachlorobutadiene	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
2-Hexanone (MBK)	ND	0.016	0.0016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Isopropylbenzene (Cumene)	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Methyl Acetate	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Methyl Cyclohexane	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Methylene Chloride	0.00083	0.016	0.00081	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	0.0020	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Naphthalene	ND	0.0081	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
n-Propylbenzene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Styrene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	0.00081	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1,2,2-Tetrachloroethane	ND	0.00081	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Tetrachloroethylene	ND	0.0016	0.00098	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Tetrahydrofuran	ND	0.0081	0.00089	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Toluene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2,3-Trichlorobenzene	ND	0.0016	0.00081	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2,4-Trichlorobenzene	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,3,5-Trichlorobenzene	ND	0.0016	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1,1-Trichloroethane	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1,2-Trichloroethane	ND	0.0016	0.00033	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Trichloroethylene	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0081	0.00057	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2,3-Trichloropropane	ND	0.0033	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0081	0.00065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,2,4-Trimethylbenzene	ND	0.0016	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
1,3,5-Trimethylbenzene	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
Vinyl Chloride	ND	0.0081	0.00073	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
m+p Xylene	ND	0.0033	0.00081	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF
o-Xylene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:21	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		10/7/19 9:21
Toluene-d8	101	70-130		10/7/19 9:21
4-Bromofluorobenzene	101	70-130		10/7/19 9:21

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 1B | Sampled: 10/3/2019 12:20

Sample ID: 19J0333-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.3		% Wt	1		SM 2540G	10/5/19	10/6/19 8:36	JBM + AVI

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Sample Flags: PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.022	0.12	0.0099	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Acrylonitrile	ND	0.0071	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	0.00035	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Benzene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Bromobenzene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Bromochloromethane	ND	0.0047	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Bromodichloromethane	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Bromoform	ND	0.0047	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Bromomethane	ND	0.012	0.0013	mg/Kg dry	1	V-34	SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
2-Butanone (MEK)	ND	0.047	0.0065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
tert-Butyl Alcohol (TBA)	ND	0.047	0.0053	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
n-Butylbenzene	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
sec-Butylbenzene	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
tert-Butylbenzene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Carbon Disulfide	ND	0.0071	0.0064	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Carbon Tetrachloride	ND	0.0024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Chlorobenzene	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Chlorodibromomethane	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Chloroethane	ND	0.024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Chloroform	ND	0.0047	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Chloromethane	ND	0.012	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
2-Chlorotoluene	ND	0.0024	0.00035	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
4-Chlorotoluene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0024	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Dibromomethane	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2-Dichlorobenzene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,3-Dichlorobenzene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,4-Dichlorobenzene	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
trans-1,4-Dichloro-2-butene	ND	0.0047	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.024	0.0013	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1-Dichloroethane	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2-Dichloroethane	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1-Dichloroethylene	ND	0.0047	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
cis-1,2-Dichloroethylene	ND	0.0024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
trans-1,2-Dichloroethylene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2-Dichloropropane	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,3-Dichloropropane	ND	0.0012	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
2,2-Dichloropropane	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1-Dichloropropene	ND	0.0047	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
cis-1,3-Dichloropropene	ND	0.0012	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
trans-1,3-Dichloropropene	ND	0.0012	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Diethyl Ether	ND	0.024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Sample Flags: PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	0.00024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,4-Dioxane	ND	0.12	0.0063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Ethylbenzene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Hexachlorobutadiene	ND	0.0024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
2-Hexanone (MBK)	ND	0.024	0.0024	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Isopropylbenzene (Cumene)	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Methyl Acetate	ND	0.0024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0047	0.00035	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Methyl Cyclohexane	ND	0.0024	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Methylene Chloride	0.026	0.024	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.024	0.0030	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Naphthalene	ND	0.012	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
n-Propylbenzene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Styrene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1,1,2-Tetrachloroethane	ND	0.0024	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Tetrachloroethylene	ND	0.0024	0.0014	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Tetrahydrofuran	ND	0.012	0.0013	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Toluene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2,3-Trichlorobenzene	ND	0.0024	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2,4-Trichlorobenzene	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,3,5-Trichlorobenzene	ND	0.0024	0.00035	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1,1-Trichloroethane	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1,2-Trichloroethane	ND	0.0024	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Trichloroethylene	ND	0.0024	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	0.00083	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2,3-Trichloropropane	ND	0.0047	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,2,4-Trimethylbenzene	ND	0.0024	0.00035	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
1,3,5-Trimethylbenzene	ND	0.0024	0.00059	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
Vinyl Chloride	ND	0.012	0.0011	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
m+p Xylene	ND	0.0047	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF
o-Xylene	ND	0.0024	0.00071	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 16:37	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	96.4	70-130		10/7/19 16:37
Toluene-d8	113	70-130		10/7/19 16:37
4-Bromofluorobenzene	105	70-130		10/7/19 16:37

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Aniline	ND	0.37	0.086	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzidine	ND	0.71	0.19	mg/Kg dry	1	MS-09, V-05, V-35	SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1	R-06	SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,4-Dichlorobenzene	ND	0.37	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.32	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Nitroaniline	ND	0.37	0.21	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
N-Nitrosodimethylamine	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1	MS-09	SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	10/7/19	10/8/19 15:10	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	61.5	30-130		10/8/19 15:10
Phenol-d6	62.7	30-130		10/8/19 15:10
Nitrobenzene-d5	64.7	30-130		10/8/19 15:10
2-Fluorobiphenyl	65.7	30-130		10/8/19 15:10
2,4,6-Tribromophenol	89.2	30-130		10/8/19 15:10
p-Terphenyl-d14	113	30-130		10/8/19 15:10

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.022	0.011	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Aldrin [1]	ND	0.0054	0.0028	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
alpha-BHC [1]	ND	0.0054	0.0027	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
beta-BHC [1]	ND	0.0054	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
delta-BHC [1]	ND	0.0054	0.0041	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
gamma-BHC (Lindane) [1]	ND	0.0022	0.00054	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Chlordane [1]	ND	0.022	0.0084	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
4,4'-DDD [1]	ND	0.0043	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
4,4'-DDE [1]	ND	0.0043	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
4,4'-DDT [1]	ND	0.0043	0.0036	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Dieldrin [1]	ND	0.0043	0.0031	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endosulfan I [1]	ND	0.0054	0.0028	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endosulfan II [1]	ND	0.0086	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endosulfan sulfate [1]	ND	0.0086	0.0030	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endrin [1]	ND	0.0086	0.0033	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endrin aldehyde [1]	ND	0.0086	0.0032	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Endrin ketone [1]	ND	0.0086	0.0041	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Heptachlor [1]	ND	0.0054	0.0034	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Heptachlor epoxide [1]	ND	0.0054	0.0029	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Hexachlorobenzene [1]	ND	0.0065	0.0045	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Methoxychlor [1]	ND	0.054	0.016	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG
Toxaphene [1]	ND	0.11	0.044	mg/Kg dry	1		SW-846 8081B	10/5/19	10/10/19 12:52	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.8	30-150		10/10/19 12:52
Decachlorobiphenyl [2]	80.5	30-150		10/10/19 12:52
Tetrachloro-m-xylene [1]	85.2	30-150		10/10/19 12:52
Tetrachloro-m-xylene [2]	81.1	30-150		10/10/19 12:52

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1221 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1232 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1242 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1248 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1254 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1260 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1262 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG
Aroclor-1268 [1]	ND	0.022	mg/Kg dry	1		SW-846 8082A	10/5/19	10/9/19 13:40	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		10/9/19 13:40
Decachlorobiphenyl [2]	101	30-150		10/9/19 13:40
Tetrachloro-m-xylene [1]	84.9	30-150		10/9/19 13:40
Tetrachloro-m-xylene [2]	79.7	30-150		10/9/19 13:40

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	2.4	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
2,4-DB [1]	ND	27	5.4	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
2,4,5-TP (Silvex) [1]	ND	2.7	0.30	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
2,4,5-T [1]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
Dalalpon [1]	ND	68	4.1	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
Dicamba [1]	ND	2.7	0.38	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
Dichloroprop [1]	ND	27	5.1	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
Dinoseb [1]	ND	14	0.57	µg/kg dry	1	V-20	SW-846 8151A	10/8/19	10/9/19 20:48	JMB
MCPA [1]	ND	2700	410	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB
MCPP [1]	ND	2700	360	µg/kg dry	1		SW-846 8151A	10/8/19	10/9/19 20:48	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	85.3	30-150		10/9/19 20:48
2,4-Dichlorophenylacetic acid [2]	81.5	30-150		10/9/19 20:48

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	8600	3.5	2.7	mg/Kg dry	1	MS-19	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Antimony	ND	1.7	0.86	mg/Kg dry	1	MS-07	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Arsenic	6.6	1.7	0.34	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Barium	33	1.7	0.37	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Beryllium	0.45	0.17	0.083	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Boron	2.6	3.5	1.4	mg/Kg dry	1	J	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Cadmium	0.19	0.17	0.062	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Chromium	13	0.35	0.25	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Cobalt	9.3	1.7	0.38	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Copper	26	0.35	0.31	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Iron	27000	17	17	mg/Kg dry	10	B-07, MS-19, B	SW-846 6010D	10/8/19	10/10/19 12:19	TBC/MJH
Lead	8.8	0.52	0.21	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Manganese	390	0.35	0.22	mg/Kg dry	1	MS-19	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Molybdenum	ND	3.5	0.66	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Nickel	21	0.35	0.34	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Selenium	ND	3.5	1.7	mg/Kg dry	1	MS-07	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Silver	ND	0.35		mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Thallium	ND	1.7	1.5	mg/Kg dry	1	MS-11	SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Tin	2.2	3.6	1.4	mg/Kg dry	1	J	SW-846 6010D	10/10/19	10/11/19 11:32	TBC/MJH
Vanadium	14	0.69	0.20	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH
Zinc	52	0.69	0.64	mg/Kg dry	1		SW-846 6010D	10/8/19	10/9/19 11:34	MJH

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2 | Sampled: 10/3/2019 11:55

Sample ID: 19J0333-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	10/5/19	10/6/19 8:36	JBM + AVI

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2A | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0080	0.078	0.0066	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Acrylonitrile	ND	0.0047	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00078	0.00023	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Benzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Bromobenzene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Bromochloromethane	ND	0.0031	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Bromodichloromethane	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Bromoform	ND	0.0031	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Bromomethane	ND	0.0078	0.00086	mg/Kg dry	1	V-34	SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
2-Butanone (MEK)	ND	0.031	0.0043	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
tert-Butyl Alcohol (TBA)	0.0063	0.031	0.0035	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
n-Butylbenzene	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
sec-Butylbenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
tert-Butylbenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00078	0.00016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Carbon Disulfide	ND	0.0047	0.0042	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Carbon Tetrachloride	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Chlorobenzene	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Chlorodibromomethane	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Chloroethane	ND	0.016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Chloroform	ND	0.0031	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Chloromethane	ND	0.0078	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
2-Chlorotoluene	ND	0.0016	0.00023	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
4-Chlorotoluene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2-Dibromoethane (EDB)	ND	0.00078	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Dibromomethane	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2-Dichlorobenzene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,3-Dichlorobenzene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,4-Dichlorobenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
trans-1,4-Dichloro-2-butene	ND	0.0031	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.016	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1-Dichloroethane	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2-Dichloroethane	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1-Dichloroethylene	ND	0.0031	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
cis-1,2-Dichloroethylene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
trans-1,2-Dichloroethylene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2-Dichloropropane	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,3-Dichloropropane	ND	0.00078	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
2,2-Dichloropropane	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1-Dichloropropene	ND	0.0031	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
cis-1,3-Dichloropropene	ND	0.00078	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
trans-1,3-Dichloropropene	ND	0.00078	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Diethyl Ether	ND	0.016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2A | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00078	0.00016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,4-Dioxane	ND	0.078	0.0041	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Ethylbenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Hexachlorobutadiene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
2-Hexanone (MBK)	ND	0.016	0.0016	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Isopropylbenzene (Cumene)	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Methyl Acetate	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0031	0.00023	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Methyl Cyclohexane	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Methylene Chloride	ND	0.016	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	0.0020	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Naphthalene	ND	0.0078	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
n-Propylbenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Styrene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1,2,2-Tetrachloroethane	ND	0.00078	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Tetrachloroethylene	ND	0.0016	0.00094	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Tetrahydrofuran	ND	0.0078	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Toluene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2,3-Trichlorobenzene	ND	0.0016	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2,4-Trichlorobenzene	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,3,5-Trichlorobenzene	ND	0.0016	0.00023	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1,1-Trichloroethane	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1,2-Trichloroethane	ND	0.0016	0.00031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Trichloroethylene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0078	0.00055	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2,3-Trichloropropane	ND	0.0031	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0078	0.00063	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,2,4-Trimethylbenzene	ND	0.0016	0.00023	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
1,3,5-Trimethylbenzene	ND	0.0016	0.00039	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
Vinyl Chloride	ND	0.0078	0.00070	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
m+p Xylene	ND	0.0031	0.00078	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF
o-Xylene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 9:48	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		10/7/19 9:48
Toluene-d8	102	70-130		10/7/19 9:48
4-Bromofluorobenzene	102	70-130		10/7/19 9:48

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2A | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.0		% Wt	1		SM 2540G	10/5/19	10/6/19 8:36	JBM + AVI

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2B | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.022	0.12	0.010	mg/Kg dry	1	J	SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Acrylonitrile	ND	0.0074	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0012	0.00037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Benzene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Bromobenzene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Bromochloromethane	ND	0.0049	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Bromodichloromethane	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Bromoform	ND	0.0049	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Bromomethane	ND	0.012	0.0014	mg/Kg dry	1	V-34	SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
2-Butanone (MEK)	ND	0.049	0.0068	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
tert-Butyl Alcohol (TBA)	ND	0.049	0.0056	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
n-Butylbenzene	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
sec-Butylbenzene	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
tert-Butylbenzene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0012	0.00025	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Carbon Disulfide	ND	0.0074	0.0067	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Carbon Tetrachloride	ND	0.0025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Chlorobenzene	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Chlorodibromomethane	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Chloroethane	ND	0.025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Chloroform	ND	0.0049	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Chloromethane	ND	0.012	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
2-Chlorotoluene	ND	0.0025	0.00037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
4-Chlorotoluene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0025	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2-Dibromoethane (EDB)	ND	0.0012	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Dibromomethane	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2-Dichlorobenzene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,3-Dichlorobenzene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,4-Dichlorobenzene	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
trans-1,4-Dichloro-2-butene	ND	0.0049	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.025	0.0014	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1-Dichloroethane	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2-Dichloroethane	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1-Dichloroethylene	ND	0.0049	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
cis-1,2-Dichloroethylene	ND	0.0025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
trans-1,2-Dichloroethylene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2-Dichloropropane	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,3-Dichloropropane	ND	0.0012	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
2,2-Dichloropropane	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1-Dichloropropene	ND	0.0049	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
cis-1,3-Dichloropropene	ND	0.0012	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
trans-1,3-Dichloropropene	ND	0.0012	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Diethyl Ether	ND	0.025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2B | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0012	0.00025	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,4-Dioxane	ND	0.12	0.0065	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Ethylbenzene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Hexachlorobutadiene	ND	0.0025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
2-Hexanone (MBK)	ND	0.025	0.0025	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Isopropylbenzene (Cumene)	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Methyl Acetate	ND	0.0025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0049	0.00037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Methyl Cyclohexane	ND	0.0025	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Methylene Chloride	ND	0.025	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.025	0.0031	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Naphthalene	ND	0.012	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
n-Propylbenzene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Styrene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1,1,2-Tetrachloroethane	ND	0.0025	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1,2,2-Tetrachloroethane	ND	0.0012	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Tetrachloroethylene	ND	0.0025	0.0015	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Tetrahydrofuran	ND	0.012	0.0014	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Toluene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2,3-Trichlorobenzene	ND	0.0025	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2,4-Trichlorobenzene	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,3,5-Trichlorobenzene	ND	0.0025	0.00037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1,1-Trichloroethane	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1,2-Trichloroethane	ND	0.0025	0.00049	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Trichloroethylene	ND	0.0025	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Trichlorofluoromethane (Freon 11)	ND	0.012	0.00086	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2,3-Trichloropropane	ND	0.0049	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.012	0.00099	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,2,4-Trimethylbenzene	ND	0.0025	0.00037	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
1,3,5-Trimethylbenzene	ND	0.0025	0.00062	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
Vinyl Chloride	ND	0.012	0.0011	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
m+p Xylene	ND	0.0049	0.0012	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF
o-Xylene	ND	0.0025	0.00074	mg/Kg dry	1		SW-846 8260C-D	10/7/19	10/7/19 10:15	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		10/7/19 10:15
Toluene-d8	100	70-130		10/7/19 10:15
4-Bromofluorobenzene	100	70-130		10/7/19 10:15

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Project Location: Rensselaer | Sample Description: | Work Order: 19J0333

Date Received: 10/4/2019

Field Sample #: AQ Fill 2B | Sampled: 10/3/2019 12:00

Sample ID: 19J0333-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.8		% Wt	1		SM 2540G	10/5/19	10/6/19 8:37	JBM + AVI

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19J0333-01 [AQ Fill 1]	B242381	10/05/19
19J0333-02 [AQ Fill 1A]	B242381	10/05/19
19J0333-03 [AQ Fill 1B]	B242381	10/05/19
19J0333-04 [AQ Fill 2]	B242381	10/05/19
19J0333-05 [AQ Fill 2A]	B242381	10/05/19
19J0333-06 [AQ Fill 2B]	B242381	10/05/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01 [AQ Fill 1]	B242593	1.47	50.0	10/08/19
19J0333-04 [AQ Fill 2]	B242593	1.57	50.0	10/08/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01RE1 [AQ Fill 1]	B242853	1.57	50.0	10/10/19
19J0333-04RE1 [AQ Fill 2]	B242853	1.53	50.0	10/10/19

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01 [AQ Fill 1]	B242366	10.0	10.0	10/05/19
19J0333-04 [AQ Fill 2]	B242366	10.1	10.0	10/05/19

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01 [AQ Fill 1]	B242365	10.0	10.0	10/05/19
19J0333-04 [AQ Fill 2]	B242365	10.1	10.0	10/05/19

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01 [AQ Fill 1]	B242514	20.0	5.00	10/08/19
19J0333-04 [AQ Fill 2]	B242514	20.0	5.00	10/08/19

Prep Method: SW-846 5035-SW-846 8260C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-03 [AQ Fill 1B]	B242469	6.59	10.0	10/07/19
19J0333-04 [AQ Fill 2]	B242469	4.61	10.0	10/07/19
19J0333-05 [AQ Fill 2A]	B242469	6.87	10.0	10/07/19
19J0333-06 [AQ Fill 2B]	B242469	4.41	10.0	10/07/19

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Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19J0333-01 [AQ Fill 1]	B242477	30.4	1.00	10/07/19
19J0333-04 [AQ Fill 2]	B242477	30.4	1.00	10/07/19

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242469 - SW-846 5035										
Blank (B242469-BLK1)				Prepared & Analyzed: 10/07/19						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B242469 - SW-846 5035											
Blank (B242469-BLK1)				Prepared & Analyzed: 10/07/19							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet								
Methyl Cyclohexane	ND	0.0020	mg/Kg wet								
Methylene Chloride	ND	0.020	mg/Kg wet								
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet								
Naphthalene	ND	0.0040	mg/Kg wet								
n-Propylbenzene	ND	0.0020	mg/Kg wet								
Styrene	ND	0.0020	mg/Kg wet								
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet								
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet								
Tetrachloroethylene	ND	0.0020	mg/Kg wet								
Tetrahydrofuran	ND	0.010	mg/Kg wet								
Toluene	ND	0.0020	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet								
Trichloroethylene	ND	0.0020	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet								
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet								
Vinyl Chloride	ND	0.010	mg/Kg wet								
m+p Xylene	ND	0.0040	mg/Kg wet								
o-Xylene	ND	0.0020	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0496*		mg/Kg wet	0.0500		99.3	70-130				
Surrogate: Toluene-d8	*0.0489*		mg/Kg wet	0.0500		97.8	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0506*		mg/Kg wet	0.0500		101	70-130				
LCS (B242469-BS1)				Prepared & Analyzed: 10/07/19							
Acetone	0.217	0.10	mg/Kg wet	0.200		108	70-160			V-35	†
Acrylonitrile	0.0186	0.0060	mg/Kg wet	0.0200		92.9	70-130				
tert-Amyl Methyl Ether (TAME)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130				
Benzene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130				
Bromobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130				
Bromochloromethane	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130				
Bromodichloromethane	0.0254	0.0020	mg/Kg wet	0.0200		127	70-130				
Bromoform	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130				
Bromomethane	0.0168	0.010	mg/Kg wet	0.0200		84.0	40-130			V-20, V-34	†
2-Butanone (MEK)	0.198	0.040	mg/Kg wet	0.200		98.8	70-160				†
tert-Butyl Alcohol (TBA)	0.192	0.040	mg/Kg wet	0.200		95.8	40-130				†
n-Butylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130				
sec-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130				
tert-Butylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130				
Carbon Disulfide	0.0201	0.0060	mg/Kg wet	0.0200		101	70-130				
Carbon Tetrachloride	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130				
Chlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
Chlorodibromomethane	0.0234	0.0010	mg/Kg wet	0.0200		117	70-130				
Chloroethane	0.0209	0.020	mg/Kg wet	0.0200		104	70-130				
Chloroform	0.0203	0.0040	mg/Kg wet	0.0200		102	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B242469 - SW-846 5035											
LCS (B242469-BS1)				Prepared & Analyzed: 10/07/19							
Chloromethane	0.0175	0.010	mg/Kg wet	0.0200		87.7	70-130				
2-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130				
4-Chlorotoluene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130				
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		105	70-130				
Dibromomethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130				
1,2-Dichlorobenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130				
1,3-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
1,4-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
trans-1,4-Dichloro-2-butene	0.0183	0.0040	mg/Kg wet	0.0200		91.6	70-130				
Dichlorodifluoromethane (Freon 12)	0.0187	0.020	mg/Kg wet	0.0200		93.4	40-160			J	†
1,1-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
1,2-Dichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130				
1,1-Dichloroethylene	0.0216	0.0040	mg/Kg wet	0.0200		108	70-130				
cis-1,2-Dichloroethylene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130				
trans-1,2-Dichloroethylene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130				
1,2-Dichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130				
1,3-Dichloropropane	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130				
2,2-Dichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130				
1,1-Dichloropropene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
cis-1,3-Dichloropropene	0.0225	0.0010	mg/Kg wet	0.0200		112	70-130				
trans-1,3-Dichloropropene	0.0226	0.0010	mg/Kg wet	0.0200		113	70-130				
Diethyl Ether	0.0191	0.020	mg/Kg wet	0.0200		95.3	70-130			J	
Diisopropyl Ether (DIPE)	0.0199	0.0010	mg/Kg wet	0.0200		99.7	70-130				
1,4-Dioxane	0.213	0.10	mg/Kg wet	0.200		106	40-160				†
Ethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130				
Hexachlorobutadiene	0.0252	0.0020	mg/Kg wet	0.0200		126	70-160				
2-Hexanone (MBK)	0.197	0.020	mg/Kg wet	0.200		98.5	70-160				†
Isopropylbenzene (Cumene)	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130				
p-Isopropyltoluene (p-Cymene)	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130				
Methyl Acetate	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0215	0.0040	mg/Kg wet	0.0200		107	70-130				
Methyl Cyclohexane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130				
Methylene Chloride	0.0187	0.020	mg/Kg wet	0.0200		93.6	40-160			J	†
4-Methyl-2-pentanone (MIBK)	0.200	0.020	mg/Kg wet	0.200		99.8	70-160				†
Naphthalene	0.0166	0.0040	mg/Kg wet	0.0200		83.1	40-130				†
n-Propylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130				
Styrene	0.0199	0.0020	mg/Kg wet	0.0200		99.4	70-130				
1,1,1,2-Tetrachloroethane	0.0241	0.0020	mg/Kg wet	0.0200		121	70-130				
1,1,2,2-Tetrachloroethane	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130				
Tetrachloroethylene	0.0245	0.0020	mg/Kg wet	0.0200		122	70-130				
Tetrahydrofuran	0.0187	0.010	mg/Kg wet	0.0200		93.4	70-130				
Toluene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
1,2,3-Trichlorobenzene	0.0223	0.0020	mg/Kg wet	0.0200		112	70-130				
1,2,4-Trichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130				
1,3,5-Trichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130				
1,1,1-Trichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
1,1,2-Trichloroethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130				
Trichloroethylene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130				
Trichlorofluoromethane (Freon 11)	0.0208	0.010	mg/Kg wet	0.0200		104	70-130				
1,2,3-Trichloropropane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B242469 - SW-846 5035												
LCS (B242469-BS1)				Prepared & Analyzed: 10/07/19								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0220	0.010	mg/Kg wet	0.0200		110		70-130				
1,2,4-Trimethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106		70-130				
1,3,5-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130				
Vinyl Chloride	0.0190	0.010	mg/Kg wet	0.0200		95.1		40-130				†
m+p Xylene	0.0406	0.0040	mg/Kg wet	0.0400		101		70-130				
o-Xylene	0.0199	0.0020	mg/Kg wet	0.0200		99.7		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0480*		mg/Kg wet	0.0500		96.0		70-130				
Surrogate: Toluene-d8	*0.0498*		mg/Kg wet	0.0500		99.6		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0498*		mg/Kg wet	0.0500		99.6		70-130				
LCS Dup (B242469-BSD1)				Prepared & Analyzed: 10/07/19								
Acetone	0.208	0.10	mg/Kg wet	0.200		104		70-160	4.43	25	V-35	†
Acrylonitrile	0.0190	0.0060	mg/Kg wet	0.0200		95.2		70-130	2.45	25		
tert-Amyl Methyl Ether (TAME)	0.0206	0.0010	mg/Kg wet	0.0200		103		70-130	0.194	25		
Benzene	0.0183	0.0020	mg/Kg wet	0.0200		91.6		70-130	3.22	25		
Bromobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102		70-130	5.42	25		
Bromochloromethane	0.0230	0.0020	mg/Kg wet	0.0200		115		70-130	4.81	25		
Bromodichloromethane	0.0274	0.0020	mg/Kg wet	0.0200		**137**	*	70-130	7.42	25	L-07	
Bromoform	0.0215	0.0020	mg/Kg wet	0.0200		108		70-130	3.56	25		
Bromomethane	0.0190	0.010	mg/Kg wet	0.0200		95.2		40-130	12.5	25	V-20, V-34	†
2-Butanone (MEK)	0.198	0.040	mg/Kg wet	0.200		99.1		70-160	0.323	25		†
tert-Butyl Alcohol (TBA)	0.187	0.040	mg/Kg wet	0.200		93.6		40-130	2.28	25		†
n-Butylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.9		70-130	18.6	25		
sec-Butylbenzene	0.0223	0.0020	mg/Kg wet	0.0200		111		70-130	5.91	25		
tert-Butylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0		70-160	11.4	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0207	0.0010	mg/Kg wet	0.0200		103		70-130	4.86	25		
Carbon Disulfide	0.0208	0.0060	mg/Kg wet	0.0200		104		70-130	3.42	25		
Carbon Tetrachloride	0.0234	0.0020	mg/Kg wet	0.0200		117		70-130	4.11	25		
Chlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105		70-130	4.40	25		
Chlorodibromomethane	0.0250	0.0010	mg/Kg wet	0.0200		125		70-130	6.36	25		
Chloroethane	0.0213	0.020	mg/Kg wet	0.0200		106		70-130	1.90	25		
Chloroform	0.0205	0.0040	mg/Kg wet	0.0200		103		70-130	0.881	25		
Chloromethane	0.0170	0.010	mg/Kg wet	0.0200		84.8		70-130	3.36	25		
2-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	1.44	25		
4-Chlorotoluene	0.0225	0.0020	mg/Kg wet	0.0200		112		70-130	3.99	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	6.28	25		
1,2-Dibromoethane (EDB)	0.0252	0.0010	mg/Kg wet	0.0200		126		70-130	18.5	25		
Dibromomethane	0.0242	0.0020	mg/Kg wet	0.0200		121		70-130	7.56	25		
1,2-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.4		70-130	14.6	25		
1,3-Dichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109		70-130	2.79	25		
1,4-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100		70-130	0.398	25		
trans-1,4-Dichloro-2-butene	0.0184	0.0040	mg/Kg wet	0.0200		91.8		70-130	0.218	25		
Dichlorodifluoromethane (Freon 12)	0.0176	0.020	mg/Kg wet	0.0200		87.9		40-160	6.07	25	J	†
1,1-Dichloroethane	0.0221	0.0020	mg/Kg wet	0.0200		111		70-130	4.06	25		
1,2-Dichloroethane	0.0258	0.0020	mg/Kg wet	0.0200		129		70-130	12.2	25		
1,1-Dichloroethylene	0.0217	0.0040	mg/Kg wet	0.0200		109		70-130	0.554	25		
cis-1,2-Dichloroethylene	0.0220	0.0020	mg/Kg wet	0.0200		110		70-130	2.11	25		
trans-1,2-Dichloroethylene	0.0207	0.0020	mg/Kg wet	0.0200		104		70-130	0.193	25		
1,2-Dichloropropane	0.0216	0.0020	mg/Kg wet	0.0200		108		70-130	5.61	25		
1,3-Dichloropropane	0.0227	0.0010	mg/Kg wet	0.0200		113		70-130	14.1	25		
2,2-Dichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107		70-130	1.13	25		
1,1-Dichloropropene	0.0222	0.0020	mg/Kg wet	0.0200		111		70-130	9.53	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B242469 - SW-846 5035												
LCS Dup (B242469-BSD1)				Prepared & Analyzed: 10/07/19								
cis-1,3-Dichloropropene	0.0237	0.0010	mg/Kg wet	0.0200		118		70-130	5.37	25		
trans-1,3-Dichloropropene	0.0221	0.0010	mg/Kg wet	0.0200		110		70-130	2.42	25		
Diethyl Ether	0.0216	0.020	mg/Kg wet	0.0200		108		70-130	12.3	25		
Diisopropyl Ether (DIPE)	0.0198	0.0010	mg/Kg wet	0.0200		99.1		70-130	0.604	25		
1,4-Dioxane	0.246	0.10	mg/Kg wet	0.200		123		40-160	14.6	50		† ‡
Ethylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		106		70-130	10.5	25		
Hexachlorobutadiene	0.0222	0.0020	mg/Kg wet	0.0200		111		70-160	12.6	25		
2-Hexanone (MBK)	0.211	0.020	mg/Kg wet	0.200		106		70-160	6.87	25		†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107		70-130	8.08	25		
p-Isopropyltoluene (p-Cymene)	0.0213	0.0020	mg/Kg wet	0.0200		106		70-130	0.935	25		
Methyl Acetate	0.0183	0.0020	mg/Kg wet	0.0200		91.6		70-130	7.47	25		
Methyl tert-Butyl Ether (MTBE)	0.0220	0.0040	mg/Kg wet	0.0200		110		70-130	2.49	25		
Methyl Cyclohexane	0.0228	0.0020	mg/Kg wet	0.0200		114		70-130	8.11	25		
Methylene Chloride	0.0192	0.020	mg/Kg wet	0.0200		95.8		40-160	2.32	25	J	†
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101		70-160	1.47	25		†
Naphthalene	0.0151	0.0040	mg/Kg wet	0.0200		75.7		40-130	9.32	25		†
n-Propylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130	2.14	25		
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108		70-130	8.57	25		
1,1,1,2-Tetrachloroethane	0.0241	0.0020	mg/Kg wet	0.0200		120		70-130	0.166	25		
1,1,2,2-Tetrachloroethane	0.0212	0.0010	mg/Kg wet	0.0200		106		70-130	5.73	25		
Tetrachloroethylene	0.0271	0.0020	mg/Kg wet	0.0200		**135**	*	70-130	10.1	25	L-07	
Tetrahydrofuran	0.0199	0.010	mg/Kg wet	0.0200		99.3		70-130	6.12	25		
Toluene	0.0214	0.0020	mg/Kg wet	0.0200		107		70-130	3.62	25		
1,2,3-Trichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104		70-130	7.52	25		
1,2,4-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.7		70-130	4.65	25		
1,3,5-Trichlorobenzene	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130	8.21	25		
1,1,1-Trichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111		70-130	3.76	25		
1,1,2-Trichloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113		70-130	6.95	25		
Trichloroethylene	0.0237	0.0020	mg/Kg wet	0.0200		119		70-130	3.95	25		
Trichlorofluoromethane (Freon 11)	0.0213	0.010	mg/Kg wet	0.0200		106		70-130	2.28	25		
1,2,3-Trichloropropane	0.0233	0.0020	mg/Kg wet	0.0200		117		70-130	8.11	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0230	0.010	mg/Kg wet	0.0200		115		70-130	4.63	25		
1,2,4-Trimethylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.2		70-130	13.6	25		
1,3,5-Trimethylbenzene	0.0217	0.0020	mg/Kg wet	0.0200		108		70-130	6.97	25		
Vinyl Chloride	0.0183	0.010	mg/Kg wet	0.0200		91.5		40-130	3.86	25		†
m+p Xylene	0.0425	0.0040	mg/Kg wet	0.0400		106		70-130	4.62	25		
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		104		70-130	3.84	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0487*		mg/Kg wet	0.0500		97.3		70-130				
Surrogate: Toluene-d8	*0.0493*		mg/Kg wet	0.0500		98.6		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0504*		mg/Kg wet	0.0500		101		70-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546										
Blank (B242477-BLK1)				Prepared: 10/07/19 Analyzed: 10/08/19						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-05, V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546										
Blank (B242477-BLK1)				Prepared: 10/07/19 Analyzed: 10/08/19						
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	*5.22*		mg/Kg wet	6.67		78.3	30-130			
Surrogate: Phenol-d6	*5.43*		mg/Kg wet	6.67		81.4	30-130			
Surrogate: Nitrobenzene-d5	*2.68*		mg/Kg wet	3.33		80.5	30-130			
Surrogate: 2-Fluorobiphenyl	*2.81*		mg/Kg wet	3.33		84.3	30-130			
Surrogate: 2,4,6-Tribromophenol	*7.36*		mg/Kg wet	6.67		110	30-130			
Surrogate: p-Terphenyl-d14	*3.56*		mg/Kg wet	3.33		107	30-130			
LCS (B242477-BS1)				Prepared: 10/07/19 Analyzed: 10/08/19						
Acenaphthene	1.19	0.17	mg/Kg wet	1.67		71.2	40-140			
Acenaphthylene	1.26	0.17	mg/Kg wet	1.67		75.7	40-140			
Acetophenone	1.23	0.34	mg/Kg wet	1.67		74.1	40-140			
Aniline	0.927	0.34	mg/Kg wet	1.67		55.6	10-140			†
Anthracene	1.29	0.17	mg/Kg wet	1.67		77.2	40-140			
Benzidine	2.22	0.66	mg/Kg wet	1.67		133	40-140			V-05, V-35
Benzo(a)anthracene	1.35	0.17	mg/Kg wet	1.67		81.1	40-140			
Benzo(a)pyrene	1.32	0.17	mg/Kg wet	1.67		79.2	40-140			
Benzo(b)fluoranthene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140			
Benzo(g,h,i)perylene	1.45	0.17	mg/Kg wet	1.67		87.3	40-140			
Benzo(k)fluoranthene	1.35	0.17	mg/Kg wet	1.67		81.1	40-140			
Benzoic Acid	0.879	1.0	mg/Kg wet	1.67		52.7	30-130			J
Bis(2-chloroethoxy)methane	1.22	0.34	mg/Kg wet	1.67		73.0	40-140			
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		64.8	40-140			
Bis(2-chloroisopropyl)ether	1.16	0.34	mg/Kg wet	1.67		69.7	40-140			
Bis(2-Ethylhexyl)phthalate	1.29	0.34	mg/Kg wet	1.67		77.4	40-140			
4-Bromophenylphenylether	1.32	0.34	mg/Kg wet	1.67		79.1	40-140			
Butylbenzylphthalate	1.32	0.34	mg/Kg wet	1.67		79.3	40-140			
Carbazole	1.24	0.17	mg/Kg wet	1.67		74.3	40-140			
4-Chloroaniline	0.904	0.66	mg/Kg wet	1.67		54.3	10-140			†
4-Chloro-3-methylphenol	1.35	0.66	mg/Kg wet	1.67		80.9	30-130			
2-Chloronaphthalene	1.09	0.34	mg/Kg wet	1.67		65.3	40-140			

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546										
LCS (B242477-BS1)				Prepared: 10/07/19 Analyzed: 10/08/19						
2-Chlorophenol	1.20	0.34	mg/Kg wet	1.67		71.8	30-130			
4-Chlorophenylphenylether	1.40	0.34	mg/Kg wet	1.67		84.0	40-140			
Chrysene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140			
Dibenz(a,h)anthracene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140			
Dibenzofuran	1.33	0.34	mg/Kg wet	1.67		80.0	40-140			
Di-n-butylphthalate	1.26	0.34	mg/Kg wet	1.67		75.8	40-140			
1,2-Dichlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.7	40-140			
1,3-Dichlorobenzene	1.06	0.34	mg/Kg wet	1.67		63.5	40-140			
1,4-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.6	40-140			
3,3-Dichlorobenzidine	0.944	0.17	mg/Kg wet	1.67		56.7	20-140			†
2,4-Dichlorophenol	1.34	0.34	mg/Kg wet	1.67		80.5	30-130			
Diethylphthalate	1.38	0.34	mg/Kg wet	1.67		82.7	40-140			
2,4-Dimethylphenol	1.27	0.34	mg/Kg wet	1.67		76.1	30-130			
Dimethylphthalate	1.34	0.34	mg/Kg wet	1.67		80.7	40-140			
4,6-Dinitro-2-methylphenol	1.13	0.34	mg/Kg wet	1.67		67.9	30-130			
2,4-Dinitrophenol	0.914	0.66	mg/Kg wet	1.67		54.8	30-130			
2,4-Dinitrotoluene	1.44	0.34	mg/Kg wet	1.67		86.4	40-140			
2,6-Dinitrotoluene	1.42	0.34	mg/Kg wet	1.67		85.1	40-140			
Di-n-octylphthalate	1.27	0.34	mg/Kg wet	1.67		76.3	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.16	0.34	mg/Kg wet	1.67		69.4	40-140			
Fluoranthene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140			
Fluorene	1.35	0.17	mg/Kg wet	1.67		81.0	40-140			
Hexachlorobenzene	1.35	0.34	mg/Kg wet	1.67		80.8	40-140			
Hexachlorobutadiene	1.33	0.34	mg/Kg wet	1.67		79.6	40-140			
Hexachlorocyclopentadiene	0.933	0.34	mg/Kg wet	1.67		56.0	40-140			
Hexachloroethane	1.11	0.34	mg/Kg wet	1.67		66.7	40-140			
Indeno(1,2,3-cd)pyrene	1.55	0.17	mg/Kg wet	1.67		92.9	40-140			
Isophorone	1.31	0.34	mg/Kg wet	1.67		78.7	40-140			
1-Methylnaphthalene	1.18	0.17	mg/Kg wet	1.67		70.9	40-140			
2-Methylnaphthalene	1.42	0.17	mg/Kg wet	1.67		85.1	40-140			
2-Methylphenol	1.17	0.34	mg/Kg wet	1.67		70.1	30-130			
3/4-Methylphenol	1.23	0.34	mg/Kg wet	1.67		74.1	30-130			
Naphthalene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140			
2-Nitroaniline	1.25	0.34	mg/Kg wet	1.67		75.0	40-140			
3-Nitroaniline	1.13	0.34	mg/Kg wet	1.67		67.7	30-140			†
4-Nitroaniline	1.35	0.34	mg/Kg wet	1.67		81.1	40-140			
Nitrobenzene	1.22	0.34	mg/Kg wet	1.67		73.0	40-140			
2-Nitrophenol	1.27	0.34	mg/Kg wet	1.67		76.2	30-130			
4-Nitrophenol	1.67	0.66	mg/Kg wet	1.67		100	30-130			
N-Nitrosodimethylamine	1.01	0.34	mg/Kg wet	1.67		60.7	40-140			
N-Nitrosodiphenylamine/Diphenylamine	1.32	0.34	mg/Kg wet	1.67		79.0	40-140			
N-Nitrosodi-n-propylamine	1.24	0.34	mg/Kg wet	1.67		74.3	40-140			
Pentachloronitrobenzene	1.44	0.34	mg/Kg wet	1.67		86.5	40-140			
Pentachlorophenol	1.23	0.34	mg/Kg wet	1.67		73.8	30-130			
Phenanthrene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140			
Phenol	1.20	0.34	mg/Kg wet	1.67		72.0	30-130			
Pyrene	1.36	0.17	mg/Kg wet	1.67		81.6	40-140			
Pyridine	0.545	0.34	mg/Kg wet	1.67		32.7	30-140			†
1,2,4,5-Tetrachlorobenzene	1.30	0.34	mg/Kg wet	1.67		78.0	40-140			
1,2,4-Trichlorobenzene	1.30	0.34	mg/Kg wet	1.67		77.9	40-140			
2,4,5-Trichlorophenol	1.38	0.34	mg/Kg wet	1.67		82.8	30-130			
2,4,6-Trichlorophenol	1.36	0.34	mg/Kg wet	1.67		81.4	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B242477 - SW-846 3546											
LCS (B242477-BS1)				Prepared: 10/07/19 Analyzed: 10/08/19							
Surrogate: 2-Fluorophenol	*4.98*		mg/Kg wet	6.67		74.6	30-130				
Surrogate: Phenol-d6	*5.18*		mg/Kg wet	6.67		77.7	30-130				
Surrogate: Nitrobenzene-d5	*2.61*		mg/Kg wet	3.33		78.3	30-130				
Surrogate: 2-Fluorobiphenyl	*2.68*		mg/Kg wet	3.33		80.4	30-130				
Surrogate: 2,4,6-Tribromophenol	*7.18*		mg/Kg wet	6.67		108	30-130				
Surrogate: p-Terphenyl-d14	*3.18*		mg/Kg wet	3.33		95.5	30-130				
LCS Dup (B242477-BSD1)				Prepared: 10/07/19 Analyzed: 10/08/19							
Acenaphthene	1.22	0.17	mg/Kg wet	1.67		73.0	40-140	2.52	30		
Acenaphthylene	1.30	0.17	mg/Kg wet	1.67		77.9	40-140	2.81	30		
Acetophenone	1.23	0.34	mg/Kg wet	1.67		74.0	40-140	0.135	30		
Aniline	0.979	0.34	mg/Kg wet	1.67		58.7	10-140	5.46	50		† ‡
Anthracene	1.33	0.17	mg/Kg wet	1.67		79.7	40-140	3.14	30		
Benzidine	2.27	0.66	mg/Kg wet	1.67		136	40-140	2.00	30	V-05, V-35	
Benzo(a)anthracene	1.41	0.17	mg/Kg wet	1.67		84.6	40-140	4.25	30		
Benzo(a)pyrene	1.37	0.17	mg/Kg wet	1.67		81.9	40-140	3.38	30		
Benzo(b)fluoranthene	1.39	0.17	mg/Kg wet	1.67		83.6	40-140	4.35	30		
Benzo(g,h,i)perylene	1.52	0.17	mg/Kg wet	1.67		90.9	40-140	4.09	30		
Benzo(k)fluoranthene	1.38	0.17	mg/Kg wet	1.67		82.8	40-140	2.12	30		
Benzoic Acid	0.959	1.0	mg/Kg wet	1.67		57.6	30-130	8.78	50	J	‡
Bis(2-chloroethoxy)methane	1.22	0.34	mg/Kg wet	1.67		73.5	40-140	0.628	30		
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		64.6	40-140	0.216	30		
Bis(2-chloroisopropyl)ether	1.18	0.34	mg/Kg wet	1.67		70.7	40-140	1.42	30		
Bis(2-Ethylhexyl)phthalate	1.34	0.34	mg/Kg wet	1.67		80.5	40-140	3.85	30		
4-Bromophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.9	40-140	1.03	30		
Butylbenzylphthalate	1.36	0.34	mg/Kg wet	1.67		81.9	40-140	3.23	30		
Carbazole	1.28	0.17	mg/Kg wet	1.67		76.7	40-140	3.12	30		
4-Chloroaniline	0.987	0.66	mg/Kg wet	1.67		59.2	10-140	8.78	30		†
4-Chloro-3-methylphenol	1.40	0.66	mg/Kg wet	1.67		84.0	30-130	3.71	30		
2-Chloronaphthalene	1.13	0.34	mg/Kg wet	1.67		67.9	40-140	3.99	30		
2-Chlorophenol	1.19	0.34	mg/Kg wet	1.67		71.3	30-130	0.671	30		
4-Chlorophenylphenylether	1.46	0.34	mg/Kg wet	1.67		87.8	40-140	4.49	30		
Chrysene	1.40	0.17	mg/Kg wet	1.67		83.8	40-140	5.47	30		
Dibenz(a,h)anthracene	1.50	0.17	mg/Kg wet	1.67		89.8	40-140	3.93	30		
Dibenzofuran	1.38	0.34	mg/Kg wet	1.67		82.9	40-140	3.58	30		
Di-n-butylphthalate	1.34	0.34	mg/Kg wet	1.67		80.5	40-140	5.96	30		
1,2-Dichlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.6	40-140	1.75	30		
1,3-Dichlorobenzene	1.03	0.34	mg/Kg wet	1.67		61.9	40-140	2.46	30		
1,4-Dichlorobenzene	1.07	0.34	mg/Kg wet	1.67		64.2	40-140	2.28	30		
3,3-Dichlorobenzidine	1.06	0.17	mg/Kg wet	1.67		63.4	20-140	11.3	50		† ‡
2,4-Dichlorophenol	1.36	0.34	mg/Kg wet	1.67		81.4	30-130	1.14	30		
Diethylphthalate	1.42	0.34	mg/Kg wet	1.67		85.5	40-140	3.26	30		
2,4-Dimethylphenol	1.28	0.34	mg/Kg wet	1.67		76.6	30-130	0.707	30		
Dimethylphthalate	1.39	0.34	mg/Kg wet	1.67		83.4	40-140	3.31	30		
4,6-Dinitro-2-methylphenol	1.26	0.34	mg/Kg wet	1.67		75.4	30-130	10.5	30		
2,4-Dinitrophenol	1.07	0.66	mg/Kg wet	1.67		64.3	30-130	15.9	30		
2,4-Dinitrotoluene	1.49	0.34	mg/Kg wet	1.67		89.5	40-140	3.62	30		
2,6-Dinitrotoluene	1.49	0.34	mg/Kg wet	1.67		89.2	40-140	4.73	30		
Di-n-octylphthalate	1.31	0.34	mg/Kg wet	1.67		78.7	40-140	3.10	30		
1,2-Diphenylhydrazine/Azobenzene	1.17	0.34	mg/Kg wet	1.67		70.3	40-140	1.29	30		
Fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.3	40-140	4.04	30		
Fluorene	1.41	0.17	mg/Kg wet	1.67		84.3	40-140	4.02	30		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B242477 - SW-846 3546												
LCS Dup (B242477-BSD1)				Prepared: 10/07/19 Analyzed: 10/08/19								
Hexachlorobenzene	1.37	0.34	mg/Kg wet	1.67		82.2		40-140	1.77	30		
Hexachlorobutadiene	1.32	0.34	mg/Kg wet	1.67		79.5		40-140	0.0754	30		
Hexachlorocyclopentadiene	0.937	0.34	mg/Kg wet	1.67		56.2		40-140	0.463	30		
Hexachloroethane	1.09	0.34	mg/Kg wet	1.67		65.4		40-140	2.03	30		
Indeno(1,2,3-cd)pyrene	1.60	0.17	mg/Kg wet	1.67		96.2		40-140	3.53	30		
Isophorone	1.33	0.34	mg/Kg wet	1.67		79.5		40-140	0.986	30		
1-Methylnaphthalene	1.19	0.17	mg/Kg wet	1.67		71.4		40-140	0.675	30		
2-Methylnaphthalene	1.42	0.17	mg/Kg wet	1.67		85.3		40-140	0.164	30		
2-Methylphenol	1.19	0.34	mg/Kg wet	1.67		71.2		30-130	1.50	30		
3/4-Methylphenol	1.26	0.34	mg/Kg wet	1.67		75.4		30-130	1.82	30		
Naphthalene	1.23	0.17	mg/Kg wet	1.67		74.1		40-140	1.17	30		
2-Nitroaniline	1.32	0.34	mg/Kg wet	1.67		79.3		40-140	5.52	30		
3-Nitroaniline	1.24	0.34	mg/Kg wet	1.67		74.2		30-140	9.08	30		†
4-Nitroaniline	1.46	0.34	mg/Kg wet	1.67		87.4		40-140	7.52	30		
Nitrobenzene	1.23	0.34	mg/Kg wet	1.67		73.8		40-140	1.04	30		
2-Nitrophenol	1.26	0.34	mg/Kg wet	1.67		75.5		30-130	0.817	30		
4-Nitrophenol	1.78	0.66	mg/Kg wet	1.67		107		30-130	6.64	50		‡
N-Nitrosodimethylamine	0.997	0.34	mg/Kg wet	1.67		59.8		40-140	1.46	30		
N-Nitrosodiphenylamine/Diphenylamine	1.35	0.34	mg/Kg wet	1.67		81.0		40-140	2.50	30		
N-Nitrosodi-n-propylamine	1.26	0.34	mg/Kg wet	1.67		75.5		40-140	1.60	30		
Pentachloronitrobenzene	1.48	0.34	mg/Kg wet	1.67		88.7		40-140	2.53	30		
Pentachlorophenol	1.21	0.34	mg/Kg wet	1.67		72.5		30-130	1.75	30		
Phenanthrene	1.31	0.17	mg/Kg wet	1.67		78.4		40-140	2.74	30		
Phenol	1.19	0.34	mg/Kg wet	1.67		71.2		30-130	1.09	30		
Pyrene	1.43	0.17	mg/Kg wet	1.67		85.6		40-140	4.81	30		
Pyridine	0.544	0.34	mg/Kg wet	1.67		32.6		30-140	0.245	30		†
1,2,4,5-Tetrachlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.8		40-140	2.36	30		
1,2,4-Trichlorobenzene	1.30	0.34	mg/Kg wet	1.67		77.8		40-140	0.0771	30		
2,4,5-Trichlorophenol	1.42	0.34	mg/Kg wet	1.67		85.1		30-130	2.74	30		
2,4,6-Trichlorophenol	1.43	0.34	mg/Kg wet	1.67		86.0		30-130	5.54	30		
Surrogate: 2-Fluorophenol	*5.05*		mg/Kg wet	6.67		75.7		30-130				
Surrogate: Phenol-d6	*5.25*		mg/Kg wet	6.67		78.8		30-130				
Surrogate: Nitrobenzene-d5	*2.64*		mg/Kg wet	3.33		79.2		30-130				
Surrogate: 2-Fluorobiphenyl	*2.78*		mg/Kg wet	3.33		83.5		30-130				
Surrogate: 2,4,6-Tribromophenol	*7.62*		mg/Kg wet	6.67		114		30-130				
Surrogate: p-Terphenyl-d14	*3.37*		mg/Kg wet	3.33		101		30-130				
Matrix Spike (B242477-MS1)		**Source: 19J0333-04**		Prepared: 10/07/19 Analyzed: 10/08/19								
Acenaphthene	1.07	0.18	mg/Kg dry	1.78	ND	60.3		40-140				
Acenaphthylene	1.14	0.18	mg/Kg dry	1.78	ND	63.6		40-140				
Acetophenone	1.12	0.36	mg/Kg dry	1.78	ND	62.5		40-140				
Aniline	0.719	0.36	mg/Kg dry	1.78	ND	40.3		40-140				
Anthracene	1.23	0.18	mg/Kg dry	1.78	ND	69.0		40-140				
Benzidine	0.0974	0.71	mg/Kg dry	1.78	ND	**5.46**	*	40-140			MS-09, V-05, V-35, J	
Benzo(a)anthracene	1.28	0.18	mg/Kg dry	1.78	ND	71.9		40-140				
Benzo(a)pyrene	1.22	0.18	mg/Kg dry	1.78	ND	68.4		40-140				
Benzo(b)fluoranthene	1.25	0.18	mg/Kg dry	1.78	ND	70.2		40-140				
Benzo(g,h,i)perylene	1.13	0.18	mg/Kg dry	1.78	ND	63.1		40-140				
Benzo(k)fluoranthene	0.934	0.18	mg/Kg dry	1.78	ND	52.3		40-140			R-06	
Benzoic Acid	1.24	1.1	mg/Kg dry	1.78	ND	69.7		40-140				
Bis(2-chloroethoxy)methane	1.08	0.36	mg/Kg dry	1.78	ND	60.3		40-140				
Bis(2-chloroethyl)ether	1.02	0.36	mg/Kg dry	1.78	ND	57.0		40-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546										
Matrix Spike (B242477-MS1)	**Source: 19J0333-04**			Prepared: 10/07/19 Analyzed: 10/08/19						
Bis(2-chloroisopropyl)ether	1.07	0.36	mg/Kg dry	1.78	ND	60.1	40-140			
Bis(2-Ethylhexyl)phthalate	1.26	0.36	mg/Kg dry	1.78	ND	70.8	40-140			
4-Bromophenylphenylether	1.23	0.36	mg/Kg dry	1.78	ND	69.0	40-140			
Butylbenzylphthalate	1.39	0.36	mg/Kg dry	1.78	ND	77.9	40-140			
Carbazole	1.19	0.18	mg/Kg dry	1.78	ND	66.5	40-140			
4-Chloroaniline	0.974	0.71	mg/Kg dry	1.78	ND	54.6	40-140			
4-Chloro-3-methylphenol	1.24	0.71	mg/Kg dry	1.78	ND	69.3	30-130			
2-Chloronaphthalene	0.997	0.36	mg/Kg dry	1.78	ND	55.9	40-140			
2-Chlorophenol	1.08	0.36	mg/Kg dry	1.78	ND	60.4	30-130			
4-Chlorophenylphenylether	1.30	0.36	mg/Kg dry	1.78	ND	72.9	40-140			
Chrysene	1.26	0.18	mg/Kg dry	1.78	ND	70.6	40-140			
Dibenz(a,h)anthracene	1.24	0.18	mg/Kg dry	1.78	ND	69.5	40-140			
Dibenzofuran	1.21	0.36	mg/Kg dry	1.78	ND	68.0	40-140			
Di-n-butylphthalate	1.19	0.36	mg/Kg dry	1.78	ND	66.9	40-140			
1,2-Dichlorobenzene	1.08	0.36	mg/Kg dry	1.78	ND	60.5	40-140			
1,3-Dichlorobenzene	1.02	0.36	mg/Kg dry	1.78	ND	57.0	40-140			
1,4-Dichlorobenzene	1.05	0.36	mg/Kg dry	1.78	ND	58.9	40-140			
3,3-Dichlorobenzidine	1.13	0.18	mg/Kg dry	1.78	ND	63.4	40-140			
2,4-Dichlorophenol	1.17	0.36	mg/Kg dry	1.78	ND	65.6	30-130			
Diethylphthalate	1.28	0.36	mg/Kg dry	1.78	ND	72.0	40-140			
2,4-Dimethylphenol	1.06	0.36	mg/Kg dry	1.78	ND	59.4	30-130			
Dimethylphthalate	1.27	0.36	mg/Kg dry	1.78	ND	71.3	40-140			
4,6-Dinitro-2-methylphenol	0.910	0.36	mg/Kg dry	1.78	ND	51.0	30-130			
2,4-Dinitrophenol	0.844	0.71	mg/Kg dry	1.78	ND	47.3	30-130			
2,4-Dinitrotoluene	1.33	0.36	mg/Kg dry	1.78	ND	74.3	40-140			
2,6-Dinitrotoluene	1.34	0.36	mg/Kg dry	1.78	ND	75.3	40-140			
Di-n-octylphthalate	1.20	0.36	mg/Kg dry	1.78	ND	67.1	40-140			
1,2-Diphenylhydrazine/Azobenzene	1.11	0.36	mg/Kg dry	1.78	ND	62.0	40-140			
Fluoranthene	1.21	0.18	mg/Kg dry	1.78	ND	68.0	40-140			
Fluorene	1.24	0.18	mg/Kg dry	1.78	ND	69.7	40-140			
Hexachlorobenzene	1.27	0.36	mg/Kg dry	1.78	ND	71.2	40-140			
Hexachlorobutadiene	1.25	0.36	mg/Kg dry	1.78	ND	70.2	40-140			
Hexachlorocyclopentadiene	0.594	0.36	mg/Kg dry	1.78	ND	33.3	30-130			
Hexachloroethane	1.02	0.36	mg/Kg dry	1.78	ND	57.5	40-140			
Indeno(1,2,3-cd)pyrene	1.16	0.18	mg/Kg dry	1.78	ND	65.1	40-140			
Isophorone	1.18	0.36	mg/Kg dry	1.78	ND	66.1	40-140			
1-Methylnaphthalene	1.05	0.18	mg/Kg dry	1.78	ND	58.7	40-140			
2-Methylnaphthalene	1.25	0.18	mg/Kg dry	1.78	ND	70.3	40-140			
2-Methylphenol	1.02	0.36	mg/Kg dry	1.78	ND	57.2	30-130			
3/4-Methylphenol	1.08	0.36	mg/Kg dry	1.78	ND	60.7	30-130			
Naphthalene	1.12	0.18	mg/Kg dry	1.78	ND	62.7	40-140			
2-Nitroaniline	1.18	0.36	mg/Kg dry	1.78	ND	66.1	40-140			
3-Nitroaniline	1.15	0.36	mg/Kg dry	1.78	ND	64.7	40-140			
4-Nitroaniline	1.28	0.36	mg/Kg dry	1.78	ND	71.6	40-140			
Nitrobenzene	1.13	0.36	mg/Kg dry	1.78	ND	63.2	40-140			
2-Nitrophenol	1.14	0.36	mg/Kg dry	1.78	ND	63.9	30-130			
4-Nitrophenol	1.59	0.71	mg/Kg dry	1.78	ND	89.3	30-130			
N-Nitrosodimethylamine	0.979	0.36	mg/Kg dry	1.78	ND	54.9	40-140			
N-Nitrosodiphenylamine/Diphenylamine	1.25	0.36	mg/Kg dry	1.78	ND	70.0	40-140			
N-Nitrosodi-n-propylamine	1.10	0.36	mg/Kg dry	1.78	ND	61.8	40-140			
Pentachloronitrobenzene	1.33	0.36	mg/Kg dry	1.78	ND	74.5	40-140			
Pentachlorophenol	1.22	0.36	mg/Kg dry	1.78	ND	68.6	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546											
Matrix Spike (B242477-MS1)		**Source: 19J0333-04**		Prepared: 10/07/19 Analyzed: 10/08/19							
Phenanthrene	1.20	0.18	mg/Kg dry	1.78	ND	67.5		40-140			
Phenol	1.10	0.36	mg/Kg dry	1.78	ND	61.8		30-130			
Pyrene	1.53	0.18	mg/Kg dry	1.78	ND	85.6		40-140			
Pyridine	0.402	0.36	mg/Kg dry	1.78	ND	**22.5**	*	40-140			MS-09
1,2,4,5-Tetrachlorobenzene	1.20	0.36	mg/Kg dry	1.78	ND	67.2		40-140			
1,2,4-Trichlorobenzene	1.21	0.36	mg/Kg dry	1.78	ND	68.0		40-140			
2,4,5-Trichlorophenol	1.28	0.36	mg/Kg dry	1.78	ND	71.8		30-130			
2,4,6-Trichlorophenol	1.23	0.36	mg/Kg dry	1.78	ND	69.2		30-130			
Surrogate: 2-Fluorophenol	*4.62*		mg/Kg dry	7.14		64.8		30-130			
Surrogate: Phenol-d6	*4.64*		mg/Kg dry	7.14		65.1		30-130			
Surrogate: Nitrobenzene-d5	*2.41*		mg/Kg dry	3.57		67.6		30-130			
Surrogate: 2-Fluorobiphenyl	*2.44*		mg/Kg dry	3.57		68.4		30-130			
Surrogate: 2,4,6-Tribromophenol	*6.61*		mg/Kg dry	7.14		92.7		30-130			
Surrogate: p-Terphenyl-d14	*3.61*		mg/Kg dry	3.57		101		30-130			
Matrix Spike Dup (B242477-MSD1)		**Source: 19J0333-04**		Prepared: 10/07/19 Analyzed: 10/08/19							
Acenaphthene	1.16	0.18	mg/Kg dry	1.81	ND	64.0		40-140	7.64	30	
Acenaphthylene	1.24	0.18	mg/Kg dry	1.81	ND	68.2		40-140	8.51	30	
Acetophenone	1.07	0.37	mg/Kg dry	1.81	ND	58.8		40-140	4.48	30	
Aniline	0.716	0.37	mg/Kg dry	1.81	ND	**39.5**	*	40-140	0.453	30	MS-22
Anthracene	1.43	0.18	mg/Kg dry	1.81	ND	78.6		40-140	14.7	30	
Benzidine	0.151	0.72	mg/Kg dry	1.81	ND	**8.32**	*	40-140		30	MS-09, V-05, V-35, J
Benzo(a)anthracene	1.51	0.18	mg/Kg dry	1.81	ND	83.2		40-140	16.1	30	
Benzo(a)pyrene	1.46	0.18	mg/Kg dry	1.81	ND	80.4		40-140	17.7	30	
Benzo(b)fluoranthene	1.47	0.18	mg/Kg dry	1.81	ND	80.9		40-140	15.9	30	
Benzo(g,h,i)perylene	1.38	0.18	mg/Kg dry	1.81	ND	75.8		40-140	20.0	30	
Benzo(k)fluoranthene	1.48	0.18	mg/Kg dry	1.81	ND	81.7		40-140	**45.4**	* 30	R-06
Benzoic Acid	1.30	1.1	mg/Kg dry	1.81	ND	71.8		40-140	4.65	30	
Bis(2-chloroethoxy)methane	1.04	0.37	mg/Kg dry	1.81	ND	57.2		40-140	3.62	30	
Bis(2-chloroethyl)ether	0.925	0.37	mg/Kg dry	1.81	ND	51.0		40-140	9.35	30	
Bis(2-chloroisopropyl)ether	0.999	0.37	mg/Kg dry	1.81	ND	55.1		40-140	7.03	30	
Bis(2-Ethylhexyl)phthalate	1.51	0.37	mg/Kg dry	1.81	ND	83.3		40-140	17.8	30	
4-Bromophenylphenylether	1.44	0.37	mg/Kg dry	1.81	ND	79.5		40-140	15.8	30	
Butylbenzylphthalate	1.61	0.37	mg/Kg dry	1.81	ND	88.9		40-140	14.9	30	
Carbazole	1.40	0.18	mg/Kg dry	1.81	ND	77.0		40-140	16.2	30	
4-Chloroaniline	1.07	0.72	mg/Kg dry	1.81	ND	59.1		40-140	9.64	30	
4-Chloro-3-methylphenol	1.43	0.72	mg/Kg dry	1.81	ND	79.1		30-130	14.8	30	
2-Chloronaphthalene	1.04	0.37	mg/Kg dry	1.81	ND	57.2		40-140	4.02	30	
2-Chlorophenol	1.01	0.37	mg/Kg dry	1.81	ND	55.4		30-130	6.88	30	
4-Chlorophenylphenylether	1.46	0.37	mg/Kg dry	1.81	ND	80.3		40-140	11.3	30	
Chrysene	1.46	0.18	mg/Kg dry	1.81	ND	80.7		40-140	15.1	30	
Dibenz(a,h)anthracene	1.48	0.18	mg/Kg dry	1.81	ND	81.6		40-140	17.7	30	
Dibenzofuran	1.37	0.37	mg/Kg dry	1.81	ND	75.8		40-140	12.5	30	
Di-n-butylphthalate	1.42	0.37	mg/Kg dry	1.81	ND	78.4		40-140	17.4	30	
1,2-Dichlorobenzene	1.01	0.37	mg/Kg dry	1.81	ND	55.9		40-140	6.39	30	
1,3-Dichlorobenzene	0.968	0.37	mg/Kg dry	1.81	ND	53.4		40-140	5.02	30	
1,4-Dichlorobenzene	0.994	0.37	mg/Kg dry	1.81	ND	54.8		40-140	5.56	30	
3,3-Dichlorobenzidine	1.29	0.18	mg/Kg dry	1.81	ND	70.9		40-140	12.8	30	
2,4-Dichlorophenol	1.19	0.37	mg/Kg dry	1.81	ND	65.4		30-130	1.26	30	
Diethylphthalate	1.49	0.37	mg/Kg dry	1.81	ND	82.3		40-140	15.0	30	
2,4-Dimethylphenol	1.12	0.37	mg/Kg dry	1.81	ND	61.6		30-130	5.22	30	
Dimethylphthalate	1.44	0.37	mg/Kg dry	1.81	ND	79.4		40-140	12.3	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B242477 - SW-846 3546											
Matrix Spike Dup (B242477-MSD1)	**Source: 19J0333-04**			Prepared: 10/07/19 Analyzed: 10/08/19							
4,6-Dinitro-2-methylphenol	1.08	0.37	mg/Kg dry	1.81	ND	59.6		30-130	17.0	30	
2,4-Dinitrophenol	0.950	0.72	mg/Kg dry	1.81	ND	52.4		30-130	11.8	30	
2,4-Dinitrotoluene	1.55	0.37	mg/Kg dry	1.81	ND	85.2		40-140	15.3	30	
2,6-Dinitrotoluene	1.52	0.37	mg/Kg dry	1.81	ND	83.8		40-140	12.3	30	
Di-n-octylphthalate	1.47	0.37	mg/Kg dry	1.81	ND	80.9		40-140	20.3	30	
1,2-Diphenylhydrazine/Azobenzene	1.29	0.37	mg/Kg dry	1.81	ND	71.1		40-140	15.3	30	
Fluoranthene	1.46	0.18	mg/Kg dry	1.81	ND	80.7		40-140	18.7	30	
Fluorene	1.40	0.18	mg/Kg dry	1.81	ND	77.3		40-140	12.0	30	
Hexachlorobenzene	1.48	0.37	mg/Kg dry	1.81	ND	81.8		40-140	15.5	30	
Hexachlorobutadiene	1.14	0.37	mg/Kg dry	1.81	ND	62.9		40-140	9.20	30	
Hexachlorocyclopentadiene	0.595	0.37	mg/Kg dry	1.81	ND	32.8		30-130	0.0800	30	
Hexachloroethane	0.997	0.37	mg/Kg dry	1.81	ND	55.0		40-140	2.76	30	
Indeno(1,2,3-cd)pyrene	1.43	0.18	mg/Kg dry	1.81	ND	78.7		40-140	20.5	30	
Isophorone	1.15	0.37	mg/Kg dry	1.81	ND	63.4		40-140	2.55	30	
1-Methylnaphthalene	1.04	0.18	mg/Kg dry	1.81	ND	57.5		40-140	0.411	30	
2-Methylnaphthalene	1.26	0.18	mg/Kg dry	1.81	ND	69.4		40-140	0.365	30	
2-Methylphenol	1.01	0.37	mg/Kg dry	1.81	ND	55.9		30-130	0.680	30	
3/4-Methylphenol	1.12	0.37	mg/Kg dry	1.81	ND	61.7		30-130	3.38	30	
Naphthalene	1.06	0.18	mg/Kg dry	1.81	ND	58.7		40-140	4.94	30	
2-Nitroaniline	1.34	0.37	mg/Kg dry	1.81	ND	74.0		40-140	13.0	30	
3-Nitroaniline	1.30	0.37	mg/Kg dry	1.81	ND	71.7		40-140	11.9	30	
4-Nitroaniline	1.49	0.37	mg/Kg dry	1.81	ND	82.0		40-140	15.2	30	
Nitrobenzene	1.03	0.37	mg/Kg dry	1.81	ND	56.8		40-140	8.98	30	
2-Nitrophenol	1.09	0.37	mg/Kg dry	1.81	ND	60.0		30-130	4.77	30	
4-Nitrophenol	1.83	0.72	mg/Kg dry	1.81	ND	101		30-130	13.8	30	
N-Nitrosodimethylamine	0.935	0.37	mg/Kg dry	1.81	ND	51.6		40-140	4.51	30	
N-Nitrosodiphenylamine/Diphenylamine	1.47	0.37	mg/Kg dry	1.81	ND	80.8		40-140	15.9	30	
N-Nitrosodi-n-propylamine	1.07	0.37	mg/Kg dry	1.81	ND	59.2		40-140	2.61	30	
Pentachloronitrobenzene	1.55	0.37	mg/Kg dry	1.81	ND	85.7		40-140	15.6	30	
Pentachlorophenol	1.37	0.37	mg/Kg dry	1.81	ND	75.7		30-130	11.5	30	
Phenanthrene	1.40	0.18	mg/Kg dry	1.81	ND	77.3		40-140	15.2	30	
Phenol	1.00	0.37	mg/Kg dry	1.81	ND	55.4		30-130	9.38	30	
Pyrene	1.75	0.18	mg/Kg dry	1.81	ND	96.3		40-140	13.5	30	
Pyridine	0.426	0.37	mg/Kg dry	1.81	ND	**23.5**	*	40-140	5.74	30	MS-09
1,2,4,5-Tetrachlorobenzene	1.17	0.37	mg/Kg dry	1.81	ND	64.4		40-140	2.54	30	
1,2,4-Trichlorobenzene	1.10	0.37	mg/Kg dry	1.81	ND	60.8		40-140	9.54	30	
2,4,5-Trichlorophenol	1.45	0.37	mg/Kg dry	1.81	ND	79.9		30-130	12.4	30	
2,4,6-Trichlorophenol	1.42	0.37	mg/Kg dry	1.81	ND	78.1		30-130	13.7	30	
Surrogate: 2-Fluorophenol	*4.15*		mg/Kg dry	7.25		57.1		30-130			
Surrogate: Phenol-d6	*4.41*		mg/Kg dry	7.25		60.7		30-130			
Surrogate: Nitrobenzene-d5	*2.20*		mg/Kg dry	3.63		60.5		30-130			
Surrogate: 2-Fluorobiphenyl	*2.50*		mg/Kg dry	3.63		68.9		30-130			
Surrogate: 2,4,6-Tribromophenol	*7.53*		mg/Kg dry	7.25		104		30-130			
Surrogate: p-Terphenyl-d14	*4.05*		mg/Kg dry	3.63		112		30-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242366 - SW-846 3546										
Blank (B242366-BLK1)				Prepared: 10/05/19 Analyzed: 10/10/19						
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.163*		mg/Kg wet	0.200		81.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.161*		mg/Kg wet	0.200		80.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.172*		mg/Kg wet	0.200		86.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.173*		mg/Kg wet	0.200		86.6	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242366 - SW-846 3546										
LCS (B242366-BS1)				Prepared: 10/05/19 Analyzed: 10/10/19						
alpha-Chlordane	0.082	0.0050	mg/Kg wet	0.100		82.1	40-140			
alpha-Chlordane [2C]	0.081	0.0050	mg/Kg wet	0.100		80.6	40-140			
gamma-Chlordane	0.081	0.0050	mg/Kg wet	0.100		81.2	40-140			
gamma-Chlordane [2C]	0.081	0.0050	mg/Kg wet	0.100		81.4	40-140			
Alachlor	0.078	0.020	mg/Kg wet	0.100		78.3	40-140			
Alachlor [2C]	0.077	0.020	mg/Kg wet	0.100		77.0	40-140			
Aldrin	0.084	0.0050	mg/Kg wet	0.100		83.9	40-140			
Aldrin [2C]	0.084	0.0050	mg/Kg wet	0.100		84.1	40-140			
alpha-BHC	0.083	0.0050	mg/Kg wet	0.100		82.8	40-140			
alpha-BHC [2C]	0.083	0.0050	mg/Kg wet	0.100		82.7	40-140			V-06
beta-BHC	0.083	0.0050	mg/Kg wet	0.100		82.8	40-140			
beta-BHC [2C]	0.073	0.0050	mg/Kg wet	0.100		73.1	40-140			
delta-BHC	0.082	0.0050	mg/Kg wet	0.100		82.1	40-140			
delta-BHC [2C]	0.081	0.0050	mg/Kg wet	0.100		81.3	40-140			
gamma-BHC (Lindane)	0.084	0.0020	mg/Kg wet	0.100		84.4	40-140			
gamma-BHC (Lindane) [2C]	0.085	0.0020	mg/Kg wet	0.100		85.1	40-140			
4,4'-DDD	0.085	0.0040	mg/Kg wet	0.100		84.7	40-140			
4,4'-DDD [2C]	0.083	0.0040	mg/Kg wet	0.100		82.5	40-140			
4,4'-DDE	0.087	0.0040	mg/Kg wet	0.100		86.7	40-140			
4,4'-DDE [2C]	0.084	0.0040	mg/Kg wet	0.100		83.8	40-140			
4,4'-DDT	0.089	0.0040	mg/Kg wet	0.100		89.3	40-140			
4,4'-DDT [2C]	0.086	0.0040	mg/Kg wet	0.100		85.7	40-140			
Dieldrin	0.084	0.0040	mg/Kg wet	0.100		83.8	40-140			
Dieldrin [2C]	0.080	0.0040	mg/Kg wet	0.100		80.2	40-140			
Endosulfan I	0.078	0.0050	mg/Kg wet	0.100		77.5	40-140			
Endosulfan I [2C]	0.079	0.0050	mg/Kg wet	0.100		78.6	40-140			
Endosulfan II	0.080	0.0080	mg/Kg wet	0.100		79.7	40-140			
Endosulfan II [2C]	0.078	0.0080	mg/Kg wet	0.100		77.7	40-140			
Endosulfan Sulfate	0.085	0.0080	mg/Kg wet	0.100		85.2	40-140			
Endosulfan Sulfate [2C]	0.079	0.0080	mg/Kg wet	0.100		78.6	40-140			
Endrin	0.080	0.0080	mg/Kg wet	0.100		79.8	40-140			
Endrin [2C]	0.079	0.0080	mg/Kg wet	0.100		78.8	40-140			
Endrin Aldehyde	0.077	0.0080	mg/Kg wet	0.100		77.4	40-140			
Endrin Aldehyde [2C]	0.076	0.0080	mg/Kg wet	0.100		76.1	40-140			
Endrin Ketone	0.080	0.0080	mg/Kg wet	0.100		80.5	40-140			
Endrin Ketone [2C]	0.079	0.0080	mg/Kg wet	0.100		78.6	40-140			
Heptachlor	0.081	0.0050	mg/Kg wet	0.100		80.9	40-140			
Heptachlor [2C]	0.082	0.0050	mg/Kg wet	0.100		82.0	40-140			
Heptachlor Epoxide	0.081	0.0050	mg/Kg wet	0.100		80.8	40-140			
Heptachlor Epoxide [2C]	0.078	0.0050	mg/Kg wet	0.100		77.8	40-140			
Hexachlorobenzene	0.080	0.0060	mg/Kg wet	0.100		80.4	40-140			
Hexachlorobenzene [2C]	0.080	0.0060	mg/Kg wet	0.100		79.9	40-140			
Methoxychlor	0.094	0.050	mg/Kg wet	0.100		94.1	40-140			
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		107	40-140			
Surrogate: Decachlorobiphenyl	*0.147*		mg/Kg wet	0.200		73.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.145*		mg/Kg wet	0.200		72.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.155*		mg/Kg wet	0.200		77.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.159*		mg/Kg wet	0.200		79.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242366 - SW-846 3546										
LCS Dup (B242366-BSD1)				Prepared: 10/05/19 Analyzed: 10/10/19						
alpha-Chlordane	0.092	0.0050	mg/Kg wet	0.100		91.6	40-140	10.9	30	
alpha-Chlordane [2C]	0.090	0.0050	mg/Kg wet	0.100		90.1	40-140	11.1	30	
gamma-Chlordane	0.091	0.0050	mg/Kg wet	0.100		90.9	40-140	11.3	30	
gamma-Chlordane [2C]	0.091	0.0050	mg/Kg wet	0.100		90.9	40-140	11.1	30	
Alachlor	0.087	0.020	mg/Kg wet	0.100		86.5	40-140	9.96	30	
Alachlor [2C]	0.084	0.020	mg/Kg wet	0.100		84.1	40-140	8.80	30	
Aldrin	0.093	0.0050	mg/Kg wet	0.100		92.9	40-140	10.2	30	
Aldrin [2C]	0.092	0.0050	mg/Kg wet	0.100		92.3	40-140	9.33	30	
alpha-BHC	0.092	0.0050	mg/Kg wet	0.100		92.4	40-140	11.0	30	
alpha-BHC [2C]	0.095	0.0050	mg/Kg wet	0.100		95.0	40-140	13.9	30	V-06
beta-BHC	0.092	0.0050	mg/Kg wet	0.100		92.1	40-140	10.7	30	
beta-BHC [2C]	0.086	0.0050	mg/Kg wet	0.100		86.3	40-140	16.7	30	
delta-BHC	0.092	0.0050	mg/Kg wet	0.100		92.0	40-140	11.5	30	
delta-BHC [2C]	0.093	0.0050	mg/Kg wet	0.100		93.2	40-140	13.5	30	
gamma-BHC (Lindane)	0.094	0.0020	mg/Kg wet	0.100		93.9	40-140	10.7	30	
gamma-BHC (Lindane) [2C]	0.096	0.0020	mg/Kg wet	0.100		96.2	40-140	12.3	30	
4,4'-DDD	0.095	0.0040	mg/Kg wet	0.100		94.6	40-140	11.1	30	
4,4'-DDD [2C]	0.093	0.0040	mg/Kg wet	0.100		92.9	40-140	11.9	30	
4,4'-DDE	0.097	0.0040	mg/Kg wet	0.100		96.9	40-140	11.1	30	
4,4'-DDE [2C]	0.094	0.0040	mg/Kg wet	0.100		94.2	40-140	11.6	30	
4,4'-DDT	0.10	0.0040	mg/Kg wet	0.100		99.7	40-140	11.0	30	
4,4'-DDT [2C]	0.096	0.0040	mg/Kg wet	0.100		96.2	40-140	11.6	30	
Dieldrin	0.093	0.0040	mg/Kg wet	0.100		93.2	40-140	10.7	30	
Dieldrin [2C]	0.089	0.0040	mg/Kg wet	0.100		88.9	40-140	10.3	30	
Endosulfan I	0.086	0.0050	mg/Kg wet	0.100		86.4	40-140	10.8	30	
Endosulfan I [2C]	0.087	0.0050	mg/Kg wet	0.100		87.1	40-140	10.3	30	
Endosulfan II	0.089	0.0080	mg/Kg wet	0.100		89.0	40-140	11.0	30	
Endosulfan II [2C]	0.086	0.0080	mg/Kg wet	0.100		86.4	40-140	10.7	30	
Endosulfan Sulfate	0.096	0.0080	mg/Kg wet	0.100		96.0	40-140	12.0	30	
Endosulfan Sulfate [2C]	0.088	0.0080	mg/Kg wet	0.100		87.6	40-140	10.8	30	
Endrin	0.088	0.0080	mg/Kg wet	0.100		88.4	40-140	10.3	30	
Endrin [2C]	0.087	0.0080	mg/Kg wet	0.100		87.1	40-140	10.0	30	
Endrin Aldehyde	0.086	0.0080	mg/Kg wet	0.100		85.8	40-140	10.2	30	
Endrin Aldehyde [2C]	0.083	0.0080	mg/Kg wet	0.100		83.4	40-140	9.21	30	
Endrin Ketone	0.091	0.0080	mg/Kg wet	0.100		91.3	40-140	12.6	30	
Endrin Ketone [2C]	0.088	0.0080	mg/Kg wet	0.100		87.7	40-140	10.9	30	
Heptachlor	0.089	0.0050	mg/Kg wet	0.100		89.2	40-140	9.70	30	
Heptachlor [2C]	0.091	0.0050	mg/Kg wet	0.100		91.0	40-140	10.3	30	
Heptachlor Epoxide	0.090	0.0050	mg/Kg wet	0.100		89.9	40-140	10.7	30	
Heptachlor Epoxide [2C]	0.086	0.0050	mg/Kg wet	0.100		86.4	40-140	10.5	30	
Hexachlorobenzene	0.089	0.0060	mg/Kg wet	0.100		89.2	40-140	10.3	30	
Hexachlorobenzene [2C]	0.090	0.0060	mg/Kg wet	0.100		89.5	40-140	11.4	30	
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		105	40-140	11.1	30	
Methoxychlor [2C]	0.12	0.050	mg/Kg wet	0.100		118	40-140	9.35	30	
Surrogate: Decachlorobiphenyl	*0.167*		mg/Kg wet	0.200		83.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.163*		mg/Kg wet	0.200		81.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.173*		mg/Kg wet	0.200		86.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.174*		mg/Kg wet	0.200		87.0	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242366 - SW-846 3546										
Matrix Spike (B242366-MS1)	**Source: 19J0333-01**			Prepared: 10/05/19 Analyzed: 10/10/19						
Alachlor	0.088	0.021	mg/Kg dry	0.107	ND	82.5	30-150			
Alachlor [2C]	0.085	0.021	mg/Kg dry	0.107	ND	79.8	30-150			
Aldrin	0.095	0.0053	mg/Kg dry	0.107	ND	89.0	30-150			
Aldrin [2C]	0.096	0.0053	mg/Kg dry	0.107	ND	89.6	30-150			
alpha-BHC	0.094	0.0053	mg/Kg dry	0.107	ND	87.9	30-150			
alpha-BHC [2C]	0.097	0.0053	mg/Kg dry	0.107	ND	90.5	30-150			V-06
beta-BHC	0.093	0.0053	mg/Kg dry	0.107	ND	87.5	30-150			
beta-BHC [2C]	0.087	0.0053	mg/Kg dry	0.107	ND	81.5	30-150			
delta-BHC	0.094	0.0053	mg/Kg dry	0.107	ND	87.9	30-150			
delta-BHC [2C]	0.094	0.0053	mg/Kg dry	0.107	ND	88.5	30-150			
gamma-BHC (Lindane)	0.094	0.0021	mg/Kg dry	0.107	ND	88.6	30-150			
gamma-BHC (Lindane) [2C]	0.098	0.0021	mg/Kg dry	0.107	ND	91.5	30-150			
4,4'-DDD	0.095	0.0043	mg/Kg dry	0.107	ND	89.3	30-150			
4,4'-DDD [2C]	0.094	0.0043	mg/Kg dry	0.107	ND	88.5	30-150			
4,4'-DDE	0.098	0.0043	mg/Kg dry	0.107	ND	92.1	30-150			
4,4'-DDE [2C]	0.097	0.0043	mg/Kg dry	0.107	ND	90.5	30-150			
4,4'-DDT	0.10	0.0043	mg/Kg dry	0.107	ND	96.0	30-150			
4,4'-DDT [2C]	0.099	0.0043	mg/Kg dry	0.107	ND	92.5	30-150			
Dieldrin	0.095	0.0043	mg/Kg dry	0.107	ND	88.9	30-150			
Dieldrin [2C]	0.092	0.0043	mg/Kg dry	0.107	ND	86.0	30-150			
Endosulfan I	0.088	0.0053	mg/Kg dry	0.107	ND	82.5	30-150			
Endosulfan I [2C]	0.090	0.0053	mg/Kg dry	0.107	ND	84.0	30-150			
Endosulfan II	0.090	0.0085	mg/Kg dry	0.107	ND	84.1	30-150			
Endosulfan II [2C]	0.089	0.0085	mg/Kg dry	0.107	ND	83.2	30-150			
Endosulfan Sulfate	0.096	0.0085	mg/Kg dry	0.107	ND	90.3	30-150			
Endosulfan Sulfate [2C]	0.089	0.0085	mg/Kg dry	0.107	ND	83.3	30-150			
Endrin	0.090	0.0085	mg/Kg dry	0.107	ND	84.8	30-150			
Endrin [2C]	0.091	0.0085	mg/Kg dry	0.107	ND	85.1	30-150			
Endrin Aldehyde	0.087	0.0085	mg/Kg dry	0.107	ND	81.4	30-150			
Endrin Aldehyde [2C]	0.087	0.0085	mg/Kg dry	0.107	ND	81.3	30-150			
Endrin Ketone	0.093	0.0085	mg/Kg dry	0.107	ND	86.8	30-150			
Endrin Ketone [2C]	0.090	0.0085	mg/Kg dry	0.107	ND	84.5	30-150			
Heptachlor	0.090	0.0053	mg/Kg dry	0.107	ND	84.4	30-150			
Heptachlor [2C]	0.095	0.0053	mg/Kg dry	0.107	ND	89.3	30-150			
Heptachlor Epoxide	0.091	0.0053	mg/Kg dry	0.107	ND	85.2	30-150			
Heptachlor Epoxide [2C]	0.089	0.0053	mg/Kg dry	0.107	ND	83.2	30-150			
Hexachlorobenzene	0.093	0.0064	mg/Kg dry	0.107	ND	87.6	30-150			
Hexachlorobenzene [2C]	0.093	0.0064	mg/Kg dry	0.107	ND	86.9	30-150			
Methoxychlor	0.11	0.053	mg/Kg dry	0.107	ND	100	30-150			
Methoxychlor [2C]	0.12	0.053	mg/Kg dry	0.107	ND	114	30-150			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg dry	0.213		81.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.173*		mg/Kg dry	0.213		80.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.181*		mg/Kg dry	0.213		84.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.182*		mg/Kg dry	0.213		85.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242366 - SW-846 3546										
Matrix Spike Dup (B242366-MSD1)	**Source: 19J0333-01**			Prepared: 10/05/19 Analyzed: 10/10/19						
Alachlor	0.093	0.021	mg/Kg dry	0.105	ND	88.4	30-150	5.35	30	
Alachlor [2C]	0.090	0.021	mg/Kg dry	0.105	ND	85.7	30-150	5.61	30	
Aldrin	0.098	0.0053	mg/Kg dry	0.105	ND	93.6	30-150	3.52	30	
Aldrin [2C]	0.099	0.0053	mg/Kg dry	0.105	ND	94.4	30-150	3.58	30	
alpha-BHC	0.098	0.0053	mg/Kg dry	0.105	ND	93.1	30-150	4.13	30	
alpha-BHC [2C]	0.10	0.0053	mg/Kg dry	0.105	ND	96.6	30-150	4.92	30	V-06
beta-BHC	0.10	0.0053	mg/Kg dry	0.105	ND	94.8	30-150	6.54	30	
beta-BHC [2C]	0.092	0.0053	mg/Kg dry	0.105	ND	87.8	30-150	5.82	30	
delta-BHC	0.10	0.0053	mg/Kg dry	0.105	ND	96.0	30-150	7.23	30	
delta-BHC [2C]	0.10	0.0053	mg/Kg dry	0.105	ND	96.9	30-150	7.45	30	
gamma-BHC (Lindane)	0.10	0.0021	mg/Kg dry	0.105	ND	95.5	30-150	5.94	30	
gamma-BHC (Lindane) [2C]	0.10	0.0021	mg/Kg dry	0.105	ND	98.5	30-150	5.78	30	
4,4'-DDD	0.10	0.0042	mg/Kg dry	0.105	ND	97.5	30-150	7.31	30	
4,4'-DDD [2C]	0.10	0.0042	mg/Kg dry	0.105	ND	96.3	30-150	6.87	30	
4,4'-DDE	0.10	0.0042	mg/Kg dry	0.105	ND	99.1	30-150	5.76	30	
4,4'-DDE [2C]	0.10	0.0042	mg/Kg dry	0.105	ND	96.7	30-150	5.11	30	
4,4'-DDT	0.11	0.0042	mg/Kg dry	0.105	ND	104	30-150	6.81	30	
4,4'-DDT [2C]	0.11	0.0042	mg/Kg dry	0.105	ND	100	30-150	6.49	30	
Dieldrin	0.10	0.0042	mg/Kg dry	0.105	ND	96.1	30-150	6.21	30	
Dieldrin [2C]	0.097	0.0042	mg/Kg dry	0.105	ND	92.4	30-150	5.65	30	
Endosulfan I	0.093	0.0053	mg/Kg dry	0.105	ND	89.0	30-150	6.07	30	
Endosulfan I [2C]	0.095	0.0053	mg/Kg dry	0.105	ND	90.0	30-150	5.34	30	
Endosulfan II	0.097	0.0084	mg/Kg dry	0.105	ND	92.0	30-150	7.36	30	
Endosulfan II [2C]	0.095	0.0084	mg/Kg dry	0.105	ND	90.3	30-150	6.69	30	
Endosulfan Sulfate	0.10	0.0084	mg/Kg dry	0.105	ND	99.9	30-150	8.50	30	
Endosulfan Sulfate [2C]	0.096	0.0084	mg/Kg dry	0.105	ND	91.6	30-150	8.01	30	
Endrin	0.097	0.0084	mg/Kg dry	0.105	ND	92.0	30-150	6.54	30	
Endrin [2C]	0.096	0.0084	mg/Kg dry	0.105	ND	91.7	30-150	5.92	30	
Endrin Aldehyde	0.095	0.0084	mg/Kg dry	0.105	ND	90.1	30-150	8.62	30	
Endrin Aldehyde [2C]	0.094	0.0084	mg/Kg dry	0.105	ND	89.4	30-150	8.05	30	
Endrin Ketone	0.10	0.0084	mg/Kg dry	0.105	ND	95.6	30-150	8.04	30	
Endrin Ketone [2C]	0.097	0.0084	mg/Kg dry	0.105	ND	92.4	30-150	7.35	30	
Heptachlor	0.095	0.0053	mg/Kg dry	0.105	ND	90.8	30-150	5.75	30	
Heptachlor [2C]	0.099	0.0053	mg/Kg dry	0.105	ND	94.2	30-150	3.80	30	
Heptachlor Epoxide	0.097	0.0053	mg/Kg dry	0.105	ND	92.3	30-150	6.42	30	
Heptachlor Epoxide [2C]	0.094	0.0053	mg/Kg dry	0.105	ND	89.4	30-150	5.59	30	
Hexachlorobenzene	0.096	0.0063	mg/Kg dry	0.105	ND	91.5	30-150	2.76	30	
Hexachlorobenzene [2C]	0.095	0.0063	mg/Kg dry	0.105	ND	90.4	30-150	2.29	30	
Methoxychlor	0.11	0.053	mg/Kg dry	0.105	ND	109	30-150	7.19	30	
Methoxychlor [2C]	0.13	0.053	mg/Kg dry	0.105	ND	124	30-150	6.84	30	
Surrogate: Decachlorobiphenyl	*0.185*		mg/Kg dry	0.210		88.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.182*		mg/Kg dry	0.210		86.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.182*		mg/Kg dry	0.210		86.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.182*		mg/Kg dry	0.210		86.5	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242365 - SW-846 3546										
Blank (B242365-BLK1)				Prepared: 10/05/19 Analyzed: 10/08/19						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.164*		mg/Kg wet	0.200		81.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.164*		mg/Kg wet	0.200		81.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.160*		mg/Kg wet	0.200		79.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.163*		mg/Kg wet	0.200		81.3	30-150			
LCS (B242365-BS1)				Prepared: 10/05/19 Analyzed: 10/08/19						
Aroclor-1016	0.14	0.020	mg/Kg wet	0.200		67.6	40-140			
Aroclor-1016 [2C]	0.14	0.020	mg/Kg wet	0.200		72.3	40-140			
Aroclor-1260	0.13	0.020	mg/Kg wet	0.200		65.4	40-140			
Aroclor-1260 [2C]	0.14	0.020	mg/Kg wet	0.200		67.9	40-140			
Surrogate: Decachlorobiphenyl	*0.145*		mg/Kg wet	0.200		72.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.147*		mg/Kg wet	0.200		73.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.141*		mg/Kg wet	0.200		70.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.145*		mg/Kg wet	0.200		72.3	30-150			
LCS Dup (B242365-BSD1)				Prepared: 10/05/19 Analyzed: 10/08/19						
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		77.9	40-140	14.1	30	
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		83.5	40-140	14.4	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.8	40-140	13.5	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		77.6	40-140	13.4	30	
Surrogate: Decachlorobiphenyl	*0.163*		mg/Kg wet	0.200		81.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.165*		mg/Kg wet	0.200		82.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.161*		mg/Kg wet	0.200		80.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.165*		mg/Kg wet	0.200		82.3	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242514 - SW-846 8151										
Blank (B242514-BLK1)				Prepared: 10/08/19 Analyzed: 10/09/19						
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	*73.4*		µg/kg wet	95.2		77.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*69.9*		µg/kg wet	95.2		73.4	30-150			
LCS (B242514-BS1)				Prepared: 10/08/19 Analyzed: 10/09/19						
2,4-D	97.1	25	µg/kg wet	125		77.7	40-140			
2,4-D [2C]	95.4	25	µg/kg wet	125		76.4	40-140			
2,4-DB	102	25	µg/kg wet	125		81.8	40-140			
2,4-DB [2C]	83.3	25	µg/kg wet	125		66.7	40-140			
2,4,5-TP (Silvex)	11.2	2.5	µg/kg wet	12.5		90.0	40-140			
2,4,5-TP (Silvex) [2C]	9.35	2.5	µg/kg wet	12.5		74.8	40-140			
2,4,5-T	9.79	2.5	µg/kg wet	12.5		78.4	40-140			
2,4,5-T [2C]	9.52	2.5	µg/kg wet	12.5		76.2	40-140			
Dalapon	190	62	µg/kg wet	312		60.9	40-140			
Dalapon [2C]	205	62	µg/kg wet	312		65.7	40-140			
Dicamba	10.3	2.5	µg/kg wet	12.5		82.5	40-140			
Dicamba [2C]	9.78	2.5	µg/kg wet	12.5		78.2	40-140			
Dichloroprop	103	25	µg/kg wet	125		82.7	40-140			
Dichloroprop [2C]	101	25	µg/kg wet	125		80.8	40-140			
Dinoseb	11.2	12	µg/kg wet	62.5		17.9	0-42.4			J
Dinoseb [2C]	11.2	12	µg/kg wet	62.5		17.9	0-41.1			V-06, J
MCPA	9930	2500	µg/kg wet	12500		79.5	40-140			
MCPA [2C]	8670	2500	µg/kg wet	12500		69.4	40-140			
MCPP	11200	2500	µg/kg wet	12500		89.7	40-140			
MCPP [2C]	9050	2500	µg/kg wet	12500		72.4	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	*79.4*		µg/kg wet	100		79.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*75.2*		µg/kg wet	100		75.2	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242514 - SW-846 8151										
LCS Dup (B242514-BSD1)				Prepared: 10/08/19 Analyzed: 10/09/19						
2,4-D	101	25	µg/kg wet	125		81.1	40-140	4.37	30	
2,4-D [2C]	99.9	25	µg/kg wet	125		79.9	40-140	4.60	30	
2,4-DB	114	25	µg/kg wet	125		91.0	40-140	10.7	30	
2,4-DB [2C]	88.4	25	µg/kg wet	125		70.7	40-140	5.86	30	
2,4,5-TP (Silvex)	11.7	2.5	µg/kg wet	12.5		93.8	40-140	4.16	30	
2,4,5-TP (Silvex) [2C]	9.82	2.5	µg/kg wet	12.5		78.6	40-140	4.90	30	
2,4,5-T	10.3	2.5	µg/kg wet	12.5		82.4	40-140	5.08	30	
2,4,5-T [2C]	9.82	2.5	µg/kg wet	12.5		78.5	40-140	3.04	30	
Dalapon	176	62	µg/kg wet	312		56.5	40-140	7.53	30	
Dalapon [2C]	190	62	µg/kg wet	312		60.9	40-140	7.61	30	
Dicamba	11.0	2.5	µg/kg wet	12.5		87.8	40-140	6.24	30	
Dicamba [2C]	10.2	2.5	µg/kg wet	12.5		81.3	40-140	3.82	30	
Dichloroprop	108	25	µg/kg wet	125		86.6	40-140	4.61	30	
Dichloroprop [2C]	104	25	µg/kg wet	125		83.2	40-140	2.98	30	
Dinoseb	10.9	12	µg/kg wet	62.5		17.4	0-42.4	2.35	30	J
Dinoseb [2C]	10.6	12	µg/kg wet	62.5		17.0	0-41.1	5.01	30	V-06, J
MCPA	10300	2500	µg/kg wet	12500		82.7	40-140	4.03	30	
MCPA [2C]	8940	2500	µg/kg wet	12500		71.5	40-140	3.05	30	
MCPP	12400	2500	µg/kg wet	12500		99.0	40-140	9.81	30	
MCPP [2C]	9350	2500	µg/kg wet	12500		74.8	40-140	3.25	30	
Surrogate: 2,4-Dichlorophenylacetic acid	*85.6*		µg/kg wet	100		85.6	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*78.1*		µg/kg wet	100		78.1	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242593 - SW-846 3050B										
Blank (B242593-BLK1)				Prepared: 10/08/19 Analyzed: 10/09/19						
Aluminum	ND	3.3	mg/Kg wet							
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Boron	ND	3.3	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Cobalt	ND	1.7	mg/Kg wet							
Copper	ND	0.33	mg/Kg wet							
Iron	20	1.7	mg/Kg wet							B-07
Lead	ND	0.50	mg/Kg wet							
Manganese	ND	0.33	mg/Kg wet							
Molybdenum	ND	3.3	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Tin	1.6	3.3	mg/Kg wet							J
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
LCS (B242593-BS1)				Prepared: 10/08/19 Analyzed: 10/09/19						
Aluminum	6510	9.8	mg/Kg wet	7700		84.5	45.3-154.5			
Antimony	32.8	4.9	mg/Kg wet	40.0		82.1	6.3-208			
Arsenic	120	4.9	mg/Kg wet	125		95.6	82.4-116.8			
Barium	509	4.9	mg/Kg wet	529		96.2	81.7-118.5			
Beryllium	160	0.49	mg/Kg wet	155		103	82.6-116.8			
Boron	189	9.8	mg/Kg wet	202		93.4	69.8-130.2			
Cadmium	37.8	0.49	mg/Kg wet	37.7		100	82.2-117.5			
Chromium	54.4	0.98	mg/Kg wet	58.3		93.3	82-118.2			
Cobalt	196	4.9	mg/Kg wet	196		100	83.7-116.8			
Copper	84.9	0.98	mg/Kg wet	78.0		109	83.7-116.3			
Iron	11500	4.9	mg/Kg wet	13800		83.4	59.5-140.6			B
Lead	111	1.5	mg/Kg wet	111		99.6	82.3-117.1			
Manganese	294	0.98	mg/Kg wet	310		94.8	81.6-118.1			
Molybdenum	82.0	9.8	mg/Kg wet	78.0		105	79.7-120.1			
Nickel	335	0.98	mg/Kg wet	333		101	82.6-117.4			
Selenium	231	9.8	mg/Kg wet	251		91.9	78.9-121.5			
Silver	30.3	0.98	mg/Kg wet	27.2		111	79-121			
Thallium	239	4.9	mg/Kg wet	241		99.4	80.5-119.1			
Tin	129	9.8	mg/Kg wet	139		92.7	78.4-122.3			
Vanadium	122	2.0	mg/Kg wet	125		97.4	78.6-120.8			
Zinc	339	2.0	mg/Kg wet	351		96.6	80.3-119.4			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B242593 - SW-846 3050B										
LCS Dup (B242593-BSD1)				Prepared: 10/08/19 Analyzed: 10/09/19						
Aluminum	6640	10	mg/Kg wet	7700		86.3	45.3-154.5	2.02	30	
Antimony	33.5	5.0	mg/Kg wet	40.0		83.7	6.3-208	2.00	30	
Arsenic	117	5.0	mg/Kg wet	125		93.2	82.4-116.8	2.53	30	
Barium	486	5.0	mg/Kg wet	529		91.9	81.7-118.5	4.57	20	
Beryllium	150	0.50	mg/Kg wet	155		97.0	82.6-116.8	6.00	30	
Boron	189	10	mg/Kg wet	202		93.4	69.8-130.2	0.00201	30	
Cadmium	34.8	0.50	mg/Kg wet	37.7		92.4	82.2-117.5	8.09	20	
Chromium	55.2	1.0	mg/Kg wet	58.3		94.6	82-118.2	1.39	30	
Cobalt	195	5.0	mg/Kg wet	196		99.3	83.7-116.8	0.864	20	
Copper	82.5	1.0	mg/Kg wet	78.0		106	83.7-116.3	2.78	30	
Iron	11800	5.0	mg/Kg wet	13800		85.2	59.5-140.6	2.14	30	B
Lead	110	1.5	mg/Kg wet	111		98.8	82.3-117.1	0.782	30	
Manganese	289	1.0	mg/Kg wet	310		93.2	81.6-118.1	1.70	30	
Molybdenum	81.1	10	mg/Kg wet	78.0		104	79.7-120.1	1.19	30	
Nickel	331	1.0	mg/Kg wet	333		99.5	82.6-117.4	1.02	30	
Selenium	225	10	mg/Kg wet	251		89.7	78.9-121.5	2.45	30	
Silver	30.4	1.0	mg/Kg wet	27.2		112	79-121	0.286	30	
Thallium	240	5.0	mg/Kg wet	241		99.5	80.5-119.1	0.0926	30	
Tin	127	10	mg/Kg wet	139		91.3	78.4-122.3	1.57	30	
Vanadium	123	2.0	mg/Kg wet	125		98.3	78.6-120.8	0.964	30	
Zinc	339	2.0	mg/Kg wet	351		96.7	80.3-119.4	0.128	30	
Duplicate (B242593-DUP1)	**Source: 19J0333-04**			Prepared: 10/08/19 Analyzed: 10/09/19						
Aluminum	8650	3.7	mg/Kg dry		8600			0.527	35	
Antimony	ND	1.8	mg/Kg dry		ND			NC	35	
Arsenic	6.34	1.8	mg/Kg dry		6.63			4.51	35	
Barium	32.6	1.8	mg/Kg dry		32.9			0.981	35	
Beryllium	0.460	0.18	mg/Kg dry		0.451			1.99	35	
Boron	3.23	3.7	mg/Kg dry		2.56			23.0	35	J
Cadmium	0.186	0.18	mg/Kg dry		0.190			1.77	35	
Chromium	12.6	0.37	mg/Kg dry		13.1			4.14	35	
Cobalt	9.40	1.8	mg/Kg dry		9.26			1.56	35	
Copper	26.5	0.37	mg/Kg dry		26.5			0.302	35	
Iron	25000	18	mg/Kg dry		26500			5.71	35	B
Lead	8.65	0.55	mg/Kg dry		8.82			1.95	35	
Manganese	370	0.37	mg/Kg dry		389			5.03	35	
Molybdenum	ND	3.7	mg/Kg dry		ND			NC	35	
Nickel	21.0	0.37	mg/Kg dry		21.3			1.20	35	
Selenium	ND	3.7	mg/Kg dry		ND			NC	35	
Silver	ND	0.37	mg/Kg dry		ND			NC	35	
Thallium	ND	1.8	mg/Kg dry		ND			NC	35	
Vanadium	14.4	0.73	mg/Kg dry		14.4			0.189	35	
Zinc	51.4	0.73	mg/Kg dry		51.7			0.651	35	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B242593 - SW-846 3050B											
MRL Check (B242593-MRL1)				Prepared: 10/08/19 Analyzed: 10/09/19							
Lead	0.548	0.49	mg/Kg wet	0.491		112		80-120			
Matrix Spike (B242593-MS1)		**Source: 19J0333-04**		Prepared: 10/08/19 Analyzed: 10/09/19							
Aluminum	8670	3.7	mg/Kg dry	18.3	8600	**379**	*	75-125			MS-19
Antimony	8.39	1.8	mg/Kg dry	18.3	ND	**45.7**	*	75-125			MS-07
Arsenic	22.7	1.8	mg/Kg dry	18.3	6.63	87.7		75-125			
Barium	50.1	1.8	mg/Kg dry	18.3	32.9	93.4		75-125			
Beryllium	17.6	0.18	mg/Kg dry	18.3	0.451	93.4		75-125			
Boron	31.0	3.7	mg/Kg dry	36.7	2.56	77.7		75-125			
Cadmium	17.4	0.18	mg/Kg dry	18.3	0.190	93.9		75-125			
Chromium	29.3	0.37	mg/Kg dry	18.3	13.1	88.0		75-125			
Cobalt	25.8	1.8	mg/Kg dry	18.3	9.26	90.3		75-125			
Copper	65.1	0.37	mg/Kg dry	36.7	26.5	105		75-125			
Iron	27200	18	mg/Kg dry	147	26500	**495**	*	75-125			MS-19, B
Lead	25.9	0.55	mg/Kg dry	18.3	8.82	93.3		75-125			
Manganese	437	0.37	mg/Kg dry	18.3	389	**262**	*	75-125			MS-19
Molybdenum	16.6	3.7	mg/Kg dry	18.3	ND	90.3		75-125			
Nickel	40.4	0.37	mg/Kg dry	18.3	21.3	104		75-125			
Selenium	11.5	3.7	mg/Kg dry	18.3	ND	**62.5**	*	75-125			MS-07
Silver	18.9	0.37	mg/Kg dry	18.3	0.315	101		75-125			
Thallium	24.3	1.8	mg/Kg dry	18.3	ND	**133**	*	75-125			MS-11
Vanadium	31.7	0.73	mg/Kg dry	18.3	14.4	94.6		75-125			
Zinc	87.0	0.73	mg/Kg dry	36.7	51.7	96.2		75-125			
Batch B242853 - SW-846 3050B											
Blank (B242853-BLK1)				Prepared & Analyzed: 10/10/19							
Tin	ND	3.3	mg/Kg wet								
LCS (B242853-BS1)				Prepared & Analyzed: 10/10/19							
Tin	123	10	mg/Kg wet	139		88.4		78.4-122.3			
LCS Dup (B242853-BSD1)				Prepared & Analyzed: 10/10/19							
Tin	130	9.9	mg/Kg wet	139		93.8		78.4-122.3	5.87	30	
Duplicate (B242853-DUP1)		**Source: 19J0333-04RE1**		Prepared & Analyzed: 10/10/19							
Tin	ND	3.5	mg/Kg dry		2.22				NC	35	
Matrix Spike (B242853-MS1)		**Source: 19J0333-04RE1**		Prepared: 10/10/19 Analyzed: 10/11/19							
Tin	143	3.5	mg/Kg dry	173	2.22	81.7		75-125			

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BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM1	Analyzed:	10/08/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.99
Endrin [1]	2.02

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.88
Endrin [2]	2.31

BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM2	Analyzed:	10/09/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.75
Endrin [1]	1.81

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.79
Endrin [2]	2.07

BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM3	Analyzed:	10/09/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.71
Endrin [1]	1.49

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BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM3	Analyzed:	10/09/2019

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.81
Endrin [2]	1.66

BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM4	Analyzed:	10/10/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.57
Endrin [1]	1.76

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.55
Endrin [2]	1.95

BREAKDOWN REPORT

Lab Sample ID:	S041287-PEM5	Analyzed:	10/10/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.47
Endrin [1]	1.75

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.48
Endrin [2]	2.20

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B242365-BS1 Date(s) Analyzed: 10/08/2019 10/08/2019

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.14	
	2	0.000	0.000	0.000	0.14	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.13	
	2	0.000	0.000	0.000	0.14	7.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B242365-BSD1 Date(s) Analyzed: 10/08/2019 10/08/2019

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.16	
	2	0.000	0.000	0.000	0.17	6.1
Aroclor-1260	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.16	6.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B242366-BS1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.561	7.530	7.590	0.085	
	2	7.703	7.672	7.732	0.083	2.4
4,4'-DDE	1	7.104	7.073	7.133	0.087	
	2	7.255	7.224	7.284	0.084	3.5
4,4'-DDT	1	7.778	7.748	7.808	0.089	
	2	7.949	7.919	7.979	0.086	3.4
Alachlor	1	6.518	6.487	6.547	0.078	
	2	6.384	6.353	6.413	0.077	1.3
Aldrin	1	6.427	6.397	6.457	0.084	
	2	6.467	6.437	6.497	0.084	0.0
alpha-BHC	1	5.673	5.643	5.703	0.083	
	2	5.696	5.666	5.726	0.083	0.0
alpha-Chlordane	1	7.054	7.023	7.083	0.082	
	2	7.131	7.100	7.160	0.081	1.2
beta-BHC	1	5.940	5.909	5.969	0.083	
	2	5.985	5.955	6.015	0.073	12.8
delta-BHC	1	6.064	6.034	6.094	0.082	
	2	6.189	6.159	6.219	0.081	1.2
Dieldrin	1	7.340	7.309	7.369	0.084	
	2	7.384	7.353	7.413	0.080	4.9
Endosulfan I	1	7.159	7.129	7.189	0.078	
	2	7.175	7.145	7.205	0.079	1.3
Endosulfan II	1	7.691	7.660	7.720	0.080	
	2	7.784	7.754	7.814	0.078	2.5
Endosulfan Sulfate	1	8.313	8.283	8.343	0.085	
	2	8.236	8.206	8.266	0.079	7.3
Endrin	1	7.519	7.488	7.548	0.080	
	2	7.620	7.589	7.649	0.079	1.3
Endrin Aldehyde	1	8.011	7.981	8.041	0.077	
	2	8.042	8.011	8.071	0.076	1.3
Endrin Ketone	1	8.492	8.462	8.522	0.080	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B242366-BS1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.578	8.549	8.609	0.079	2.5
gamma-BHC (Lindane)	1	5.885	5.855	5.915	0.084	
	2	5.933	5.903	5.963	0.085	1.2
gamma-Chlordane	1	6.955	6.925	6.985	0.081	
	2	7.020	6.990	7.050	0.081	0.0
Heptachlor	1	6.213	6.183	6.243	0.081	
	2	6.238	6.207	6.267	0.082	1.2
Heptachlor Epoxide	1	6.865	6.834	6.894	0.081	
	2	6.881	6.850	6.910	0.078	3.8
Hexachlorobenzene	1	5.561	5.531	5.591	0.080	
	2	5.604	5.574	5.634	0.080	0.0
Methoxychlor	1	8.135	8.104	8.164	0.094	
	2	8.424	8.394	8.454	0.11	15.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B242366-BSD1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.560	7.530	7.590	0.095	
	2	7.703	7.672	7.732	0.093	2.1
4,4'-DDE	1	7.105	7.073	7.133	0.097	
	2	7.255	7.224	7.284	0.094	3.1
4,4'-DDT	1	7.778	7.748	7.808	0.10	
	2	7.949	7.919	7.979	0.096	4.1
Alachlor	1	6.517	6.487	6.547	0.087	
	2	6.383	6.353	6.413	0.084	3.5
Aldrin	1	6.427	6.397	6.457	0.093	
	2	6.467	6.437	6.497	0.092	1.1
alpha-BHC	1	5.674	5.643	5.703	0.092	
	2	5.697	5.666	5.726	0.095	3.2
alpha-Chlordane	1	7.054	7.023	7.083	0.092	
	2	7.131	7.100	7.160	0.090	2.2
beta-BHC	1	5.940	5.909	5.969	0.092	
	2	5.986	5.955	6.015	0.086	6.7
delta-BHC	1	6.064	6.034	6.094	0.092	
	2	6.189	6.159	6.219	0.093	1.1
Dieldrin	1	7.339	7.309	7.369	0.093	
	2	7.384	7.353	7.413	0.089	4.4
Endosulfan I	1	7.160	7.129	7.189	0.086	
	2	7.175	7.145	7.205	0.087	1.2
Endosulfan II	1	7.691	7.660	7.720	0.089	
	2	7.784	7.754	7.814	0.086	3.4
Endosulfan Sulfate	1	8.313	8.283	8.343	0.096	
	2	8.235	8.206	8.266	0.088	8.7
Endrin	1	7.518	7.488	7.548	0.088	
	2	7.620	7.589	7.649	0.087	1.1
Endrin Aldehyde	1	8.011	7.981	8.041	0.086	
	2	8.041	8.011	8.071	0.083	3.6
Endrin Ketone	1	8.492	8.462	8.522	0.091	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B242366-BSD1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.578	8.549	8.609	0.088	3.4
gamma-BHC (Lindane)	1	5.885	5.855	5.915	0.094	
	2	5.933	5.903	5.963	0.096	2.1
gamma-Chlordane	1	6.955	6.925	6.985	0.091	
	2	7.021	6.990	7.050	0.091	0.0
Heptachlor	1	6.214	6.183	6.243	0.089	
	2	6.238	6.207	6.267	0.091	2.2
Heptachlor Epoxide	1	6.865	6.834	6.894	0.090	
	2	6.881	6.850	6.910	0.086	4.6
Hexachlorobenzene	1	5.561	5.531	5.591	0.089	
	2	5.604	5.574	5.634	0.090	1.1
Methoxychlor	1	8.135	8.104	8.164	0.11	
	2	8.423	8.394	8.454	0.12	8.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B242366-MS1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.560	7.530	7.590	0.095	
	2	7.703	7.672	7.732	0.094	1.1
4,4'-DDE	1	7.104	7.073	7.133	0.098	
	2	7.255	7.224	7.284	0.097	1.0
4,4'-DDT	1	7.777	7.748	7.808	0.10	
	2	7.949	7.919	7.979	0.099	1.0
Alachlor	1	6.517	6.487	6.547	0.088	
	2	6.383	6.353	6.413	0.085	3.5
Aldrin	1	6.426	6.397	6.457	0.095	
	2	6.467	6.437	6.497	0.096	1.1
alpha-BHC	1	5.673	5.643	5.703	0.094	
	2	5.696	5.666	5.726	0.097	3.1
beta-BHC	1	5.940	5.909	5.969	0.093	
	2	5.986	5.955	6.015	0.087	6.7
delta-BHC	1	6.064	6.034	6.094	0.094	
	2	6.189	6.159	6.219	0.094	0.0
Dieldrin	1	7.339	7.309	7.369	0.095	
	2	7.384	7.353	7.413	0.092	3.2
Endosulfan I	1	7.159	7.129	7.189	0.088	
	2	7.176	7.145	7.205	0.090	2.3
Endosulfan II	1	7.690	7.660	7.720	0.090	
	2	7.784	7.754	7.814	0.089	1.1
Endosulfan Sulfate	1	8.313	8.283	8.343	0.096	
	2	8.236	8.206	8.266	0.089	7.6
Endrin	1	7.518	7.488	7.548	0.090	
	2	7.620	7.589	7.649	0.091	0.0
Endrin Aldehyde	1	8.011	7.981	8.041	0.087	
	2	8.042	8.011	8.071	0.087	0.0
Endrin Ketone	1	8.492	8.462	8.522	0.093	
	2	8.579	8.549	8.609	0.090	3.3
gamma-BHC (Lindane)	1	5.885	5.855	5.915	0.094	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B242366-MS1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.933	5.903	5.963	0.098	3.1
Heptachlor	1	6.213	6.183	6.243	0.090	
	2	6.237	6.207	6.267	0.095	5.4
Heptachlor Epoxide	1	6.864	6.834	6.894	0.091	
	2	6.881	6.850	6.910	0.089	2.2
Hexachlorobenzene	1	5.561	5.531	5.591	0.093	
	2	5.604	5.574	5.634	0.093	1.1
Methoxychlor	1	8.135	8.104	8.164	0.11	
	2	8.424	8.394	8.454	0.12	8.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B242366-MSD1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.561	7.530	7.590	0.10	
	2	7.704	7.672	7.732	0.10	0.0
4,4'-DDE	1	7.105	7.073	7.133	0.10	
	2	7.255	7.224	7.284	0.10	0.0
4,4'-DDT	1	7.778	7.748	7.808	0.11	
	2	7.949	7.919	7.979	0.11	0.0
Alachlor	1	6.517	6.487	6.547	0.093	
	2	6.383	6.353	6.413	0.090	3.3
Aldrin	1	6.426	6.397	6.457	0.098	
	2	6.467	6.437	6.497	0.099	1.0
alpha-BHC	1	5.673	5.643	5.703	0.098	
	2	5.696	5.666	5.726	0.10	2.0
beta-BHC	1	5.940	5.909	5.969	0.10	
	2	5.985	5.955	6.015	0.092	8.3
delta-BHC	1	6.064	6.034	6.094	0.10	
	2	6.189	6.159	6.219	0.10	0.0
Dieldrin	1	7.340	7.309	7.369	0.10	
	2	7.384	7.353	7.413	0.097	3.1
Endosulfan I	1	7.160	7.129	7.189	0.093	
	2	7.175	7.145	7.205	0.095	1.1
Endosulfan II	1	7.691	7.660	7.720	0.097	
	2	7.784	7.754	7.814	0.095	2.1
Endosulfan Sulfate	1	8.314	8.283	8.343	0.10	
	2	8.237	8.206	8.266	0.096	13.6
Endrin	1	7.519	7.488	7.548	0.097	
	2	7.620	7.589	7.649	0.096	1.0
Endrin Aldehyde	1	8.011	7.981	8.041	0.095	
	2	8.042	8.011	8.071	0.094	1.1
Endrin Ketone	1	8.492	8.462	8.522	0.10	
	2	8.579	8.549	8.609	0.097	3.1
gamma-BHC (Lindane)	1	5.885	5.855	5.915	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B242366-MSD1 Date(s) Analyzed: 10/10/2019 10/10/2019

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.933	5.903	5.963	0.10	0.0
Heptachlor	1	6.213	6.183	6.243	0.095	
	2	6.237	6.207	6.267	0.099	4.1
Heptachlor Epoxide	1	6.864	6.834	6.894	0.097	
	2	6.881	6.850	6.910	0.094	3.1
Hexachlorobenzene	1	5.561	5.531	5.591	0.096	
	2	5.604	5.574	5.634	0.095	1.1
Methoxychlor	1	8.135	8.104	8.164	0.11	
	2	8.424	8.394	8.454	0.13	8.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B242514-BS1 Date(s) Analyzed: 10/09/2019 10/09/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.361	0.000	0.000	9.79	
	2	16.117	0.000	0.000	9.52	2.9
2,4,5-TP (Silvex)	1	15.732	0.000	0.000	11.2	
	2	15.266	0.000	0.000	9.35	16.2
2,4-D	1	13.874	0.000	0.000	97.1	
	2	13.516	0.000	0.000	95.4	1.7
2,4-DB	1	17.054	0.000	0.000	102	
	2	16.915	0.000	0.000	83.3	18.2
Dalapon	1	4.662	0.000	0.000	190	
	2	4.202	0.000	0.000	205	7.6
Dicamba	1	11.727	0.000	0.000	10.3	
	2	11.299	0.000	0.000	9.78	2.2
Dichloroprop	1	13.356	0.000	0.000	103	
	2	12.833	0.000	0.000	101	1.0
Dinoseb	1	17.683	0.000	0.000	11.2	
	2	17.139	0.000	0.000	11.2	1.8
MCPA	1	12.556	0.000	0.000	9930	
	2	12.137	0.000	0.000	8670	13.2
MCPP	1	12.222	0.000	0.000	11200	
	2	11.639	0.000	0.000	9050	19.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS Dup

Lab Sample ID: B242514-BSD1 Date(s) Analyzed: 10/09/2019 10/09/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	16.361	0.000	0.000	10.3	
	2	16.115	0.000	0.000	9.82	1.8
2,4,5-TP (Silvex)	1	15.732	0.000	0.000	11.7	
	2	15.264	0.000	0.000	9.82	20.0
2,4-D	1	13.870	0.000	0.000	101	
	2	13.514	0.000	0.000	99.9	0.1
2,4-DB	1	17.054	0.000	0.000	114	
	2	16.914	0.000	0.000	88.4	21.8
Dalapon	1	4.661	0.000	0.000	176	
	2	4.200	0.000	0.000	190	5.4
Dicamba	1	11.727	0.000	0.000	11.0	
	2	11.298	0.000	0.000	10.2	7.6
Dichloroprop	1	13.356	0.000	0.000	108	
	2	12.831	0.000	0.000	104	5.6
Dinoseb	1	17.684	0.000	0.000	10.9	
	2	17.138	0.000	0.000	10.6	3.7
MCPA	1	12.557	0.000	0.000	10300	
	2	12.136	0.000	0.000	8940	11.2
MCPP	1	12.221	0.000	0.000	12400	
	2	11.638	0.000	0.000	9350	24.8

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
B-07	Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.
PR-15	According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Molybdenum	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Tin	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA

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Analyte	Certifications
SW-846 8081B in Soil	
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA

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SW-846 8081B in Water	
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA

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Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA

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Analyte	Certifications
SW-846 8151A in Water	
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
SW-846 8260C-D in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
tert-Butyl Alcohol (TBA)	NY
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
1,2-Dibromo-3-chloropropane (DBCP)	NY
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
trans-1,4-Dichloro-2-butene	NY
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA

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SW-846 8260C-D in Soil	
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl Acetate	NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA

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SW-846 8270D in Soil	
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA

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SW-846 8270D in Soil	
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA

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SW-846 8270D in Water	
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD (New York)

KAF 19J0333

Company Name: LAND Remediation
Address: 74 Hudson River Rd
Phone:
Project Name: BASF - Rensselaer
Project Location: Rensselaer
Project Number:
Project Manager: Will Lindheimer
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: Amanda Lewis

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☑
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: wpl@land-remediation.com
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	VOC, SVOC, Herb, Pest, Metals, PCBs	VOC	# of Containers	[2] Preservation Code	[3] Container Code
1	AQFill 1	10/3/19 11:50		✓		S	C	✓		6	12	A
2	AQFill 1A	10/3/19	12:20		✓	S	C		✓		B	V
3	AQFill 1B	10/3/19	12:20		✓	S	C		✓			
4	AQFill 2	10/3/19	11:55	✓		S	C	✓				
5	AQFill 2A	10/3/19	1200		✓	S	C		✓			
6	AQFill 2B	10/3/19	1200		✓	S	C		✓			

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

VOCs canceled by client on samples -01 & -02 - MEK 10/10/19

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) Will	Date/Time:	
Received by: (signature)	Date/Time: 10-4-19 10:30	
Relinquished by: (signature)	Date/Time: 10-4-19 11:55	
Received by: (signature) 10/4/19	Date/Time: 1155	
Relinquished by: (signature) 10/4/19	Date/Time: 1640	
Received by: (signature) 10-4-19	Date/Time: 1646	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☐ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited
Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA
Other
☐ Chromatogram
☐ AIHA-LAP, LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Land Remediation

Received By SA Date 10/4/19 Time 1040

How were the samples received? In Cooler ____ No Cooler ____ On Ice ____ No Ice ____ Direct from Sampling ____ Ambient ____ Melted Ice ____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 2.2 By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? T

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Project T Analysis T ID's T Sampler Name T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? T Who was notified? Mike M.

Are there Short Holds? F Who was notified? ____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? Acid NA Base NA

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	4
Meoh-	4	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	2
Bisulfate-	7	Flashpoint		Col./Bacteria		2oz Amb/Clear	4
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

*Sample "QC fil 2B vial broken when rec.

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 12/2/2019	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 20-C PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Aquatic Fill Materials Analytical Testing		1	02 30 00		see below
2	Aquatic Fill Materials Geotechnical Testing		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for subaqueous Backfill and subaqueous restoration cover material	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: October 15, 2019 

Additional Notes:

Proposed Aquatic fill is proposed for both the Subaqueous Backfill Layer and the Subaqueous Restoration Cover Material based on its material properties.
This material was previously utilized as subaqueous backfill for the GE Hudson River Cleanup project. (>500,000CY)
There is estimated to be 34,000 CY of aquatic fill required for the BASF project.
The material certification letter from the the certified quarry operator was previously submitted.
Attached is the analytical testing (1 comp, 2 grabs) for the second 5,000 CY (1 comp, 2 discrete grabs / 5000 CY frequency). Total tested with this sample = 15,000CY
Attached is 1 geotechnical test reports for the next 5,000 CY (1 sample per 500/cy up to 1500cy, 1 every additional 5000). Total geotech tested with this sample = 16,500CY
See 2 geotechnical reports. Fines are increased to 10% in this sample by blending upper brown loam with aquatic backfill material to make material suitable for Restoration Cover Material as well as Subaqueous Backfill material.
Seperate test report shows fines in upper brown loam are at 14% passing 200 sieve.

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 11/19/19
SAMPLE NUMBER: 19077
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

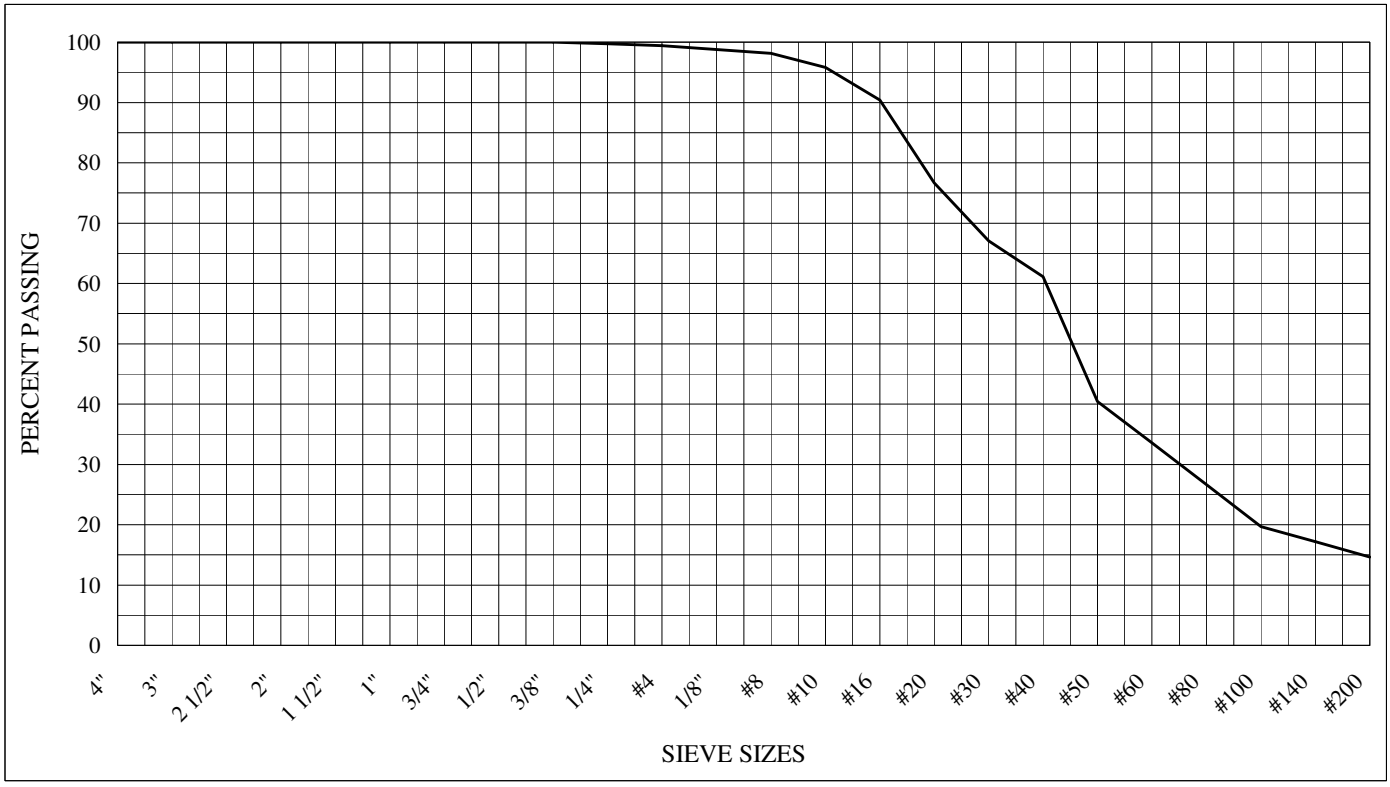
PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL BROWN LOAM**
MATERIAL DESCRIPTION: SAND, fine/medium; trace fine Gravel; little Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	0.3	99.7		#50	59.6	40.4	
3"				**#4**	0.6	**99.4**	**80 - 90**	#60			
2 1/2"				1/8"				#80			
2"				#8	1.8	98.2		#100	80.3	19.7	
1 1/2"				#10	4.2	95.8		#140			
1"		**100.0**	**100 - 100**	#16	9.6	90.4		**#200**	85.4	**14.6**	**10 - 20**
3/4"				#20				SILT			
1/2"				#30	33.0	67.0		CLAY			
3/8"		100.0		#40	38.9	61.1		COLLOID			

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
0.6%	**84.8%**	**14.6%**	**1.8%**	**6.6**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 11/19/19
SAMPLE NUMBER: 19076
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #5**
MATERIAL DESCRIPTION: SAND, medium; little fine Gravel; little Silt/Clay
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	12.3	87.7				#50	75.1	24.9			
3"						**#4**	14.2	**85.8**	**80**	**-**	**90**	#60					
2 1/2"						1/8"						#80					
2"		100.0				#8	19.9	80.1				#100	86.5	13.5			
1 1/2"	9.9	90.1				#10	23.1	76.9				#140					
1"	9.9	**90.1**	**100**	**-**	**100**	#16	30.5	69.5				**#200**	90.0	**10.0**	**10**	**-**	**20**
3/4"	9.9	90.1				#20						SILT					
1/2"	9.9	90.1				#30	54.9	45.1				CLAY					
3/8"	10.4	89.6				#40	64.2	35.8				COLLOID					

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ASTM D-2974 ORGANIC CONTENT	ASTM D-4972 pH VALUE
14.2%	**75.7%**	**10.0%**	**2.2%**	**6.3**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

December 2, 2019

Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project Location: NY
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 19K1179

Enclosed are results of analyses for samples received by the laboratory on November 19, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kaitlyn A. Feliciano
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Land Remediation
74 Hudson River Road
Waterford, NY 12188
ATTN: Will Lindheimer

REPORT DATE: 12/2/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19K1179

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
AQFill3	19K1179-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8270D-E	
AQFill3A	19K1179-02	Soil		SM 2540G	
				SW-846 8260C-D	
AQFill3B	19K1179-03	Soil		SM 2540G	
				SW-846 8260C-D	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151 samples were derivatized on 11/25/19

For method 8151 sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 8081B

Qualifications:

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobenzene
B246804-BS1, B246804-BSD1

Hexachlorobenzene [2C]
B246804-BS1, B246804-BSD1

SW-846 8151A

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Dinoseb
19K1179-01[AQFill3]

Dinoseb [2C]
19K1179-01[AQFill3]

SW-846 8260C-D

Qualifications:

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone
B246633-BS1, B246633-BSD1, S042917-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Bromomethane
19K1179-02[AQFill3A], 19K1179-03[AQFill3B], B246633-BLK1, B246633-BS1, B246633-BSD1, S042917-CCV1

SW-846 8270D-E

Qualifications:

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Benzidine
B246623-BS1, B246623-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine
19K1179-01[AQFill3], S043068-CCV1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Benzidine
19K1179-01[AQFill3], S042996-CCV1, S043068-CCV1

Hexachlorocyclopentadiene
19K1179-01[AQFill3], B246623-BLK1, B246623-BS1, B246623-BSD1, S042888-CCV1, S043068-CCV1

Pentachlorophenol
19K1179-01[AQFill3], B246623-BLK1, B246623-BS1, B246623-BSD1, S042888-CCV1, S043068-CCV1

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V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

2-Nitroaniline
B246623-BS1, B246623-BSD1, S042888-CCV1, S043068-CCV1

4-Nitrophenol
B246623-BS1, B246623-BSD1, S042888-CCV1

Aniline
S043068-CCV1

Phenol
S043068-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

2-Nitroaniline
19K1179-01[AQFill3], B246623-BLK1, S042996-CCV1

4-Nitrophenol
B246623-BLK1, S042996-CCV1

Aniline
19K1179-01[AQFill3]

Phenol
19K1179-01[AQFill3]

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzoic Acid
B246623-BLK1, B246623-BS1, B246623-BSD1, S042888-CCV1, S042996-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

4-Chloroaniline
19K1179-01[AQFill3], S043068-CCV1

Benzidine
19K1179-01[AQFill3], B246623-BLK1, B246623-BS1, B246623-BSD1, S042888-CCV1, S042996-CCV1, S043068-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Acetophenone	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Aniline	ND	0.35	0.083	mg/Kg dry	1	V-20	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Anthracene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-05, V-35	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Benzoic Acid	ND	1.0	0.61	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Bis(2-chloroethoxy)methane	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Butylbenzylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Carbazole	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-35	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Chlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Chlorophenylphenylether	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Dibenzofuran	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,4-Dichlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Diethylphthalate	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4-Dimethylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Dimethylphthalate	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Di-n-octylphthalate	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Hexachlorobutadiene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1	V-05	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Isophorone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1-Methylnaphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Methylphenol	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
3/4-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1	V-20	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
3-Nitroaniline	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Nitroaniline	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Nitrobenzene	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2-Nitrophenol	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
N-Nitrosodi-n-propylamine	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Pentachloronitrobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1	V-05	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Phenanthrene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Phenol	ND	0.35	0.13	mg/Kg dry	1	V-20	SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4,5-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB
2,4,6-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D-E	11/21/19	11/26/19 2:13	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	79.9	30-130		11/26/19 2:13
Phenol-d6	84.9	30-130		11/26/19 2:13
Nitrobenzene-d5	82.6	30-130		11/26/19 2:13
2-Fluorobiphenyl	76.6	30-130		11/26/19 2:13
2,4,6-Tribromophenol	70.5	30-130		11/26/19 2:13
p-Terphenyl-d14	106	30-130		11/26/19 2:13

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	0.010	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Aldrin [1]	ND	0.0053	0.0028	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
alpha-BHC [1]	ND	0.0053	0.0027	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
beta-BHC [1]	ND	0.0053	0.0029	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
delta-BHC [1]	ND	0.0053	0.0040	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
gamma-BHC (Lindane) [1]	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Chlordane [1]	ND	0.021	0.0083	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
4,4'-DDD [1]	ND	0.0043	0.0030	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
4,4'-DDE [1]	ND	0.0043	0.0030	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
4,4'-DDT [1]	ND	0.0043	0.0035	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Dieldrin [1]	ND	0.0043	0.0031	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endosulfan I [1]	ND	0.0053	0.0028	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endosulfan II [1]	ND	0.0085	0.0029	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endosulfan sulfate [1]	ND	0.0085	0.0030	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endrin [1]	ND	0.0085	0.0033	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endrin aldehyde [1]	ND	0.0085	0.0032	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Endrin ketone [1]	ND	0.0085	0.0040	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Heptachlor [1]	ND	0.0053	0.0034	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Heptachlor epoxide [1]	ND	0.0053	0.0029	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Hexachlorobenzene [1]	ND	0.0064	0.0045	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Methoxychlor [1]	ND	0.053	0.016	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG
Toxaphene [1]	ND	0.11	0.043	mg/Kg dry	1		SW-846 8081B	11/23/19	11/26/19 21:02	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	73.8	30-150		11/26/19 21:02
Decachlorobiphenyl [2]	87.9	30-150		11/26/19 21:02
Tetrachloro-m-xylene [1]	81.9	30-150		11/26/19 21:02
Tetrachloro-m-xylene [2]	91.6	30-150		11/26/19 21:02

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	0.051	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1221 [1]	ND	0.085	0.055	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1232 [1]	ND	0.085	0.038	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1242 [1]	ND	0.085	0.043	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1248 [1]	ND	0.085	0.051	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1254 [1]	ND	0.085	0.055	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1260 [1]	ND	0.085	0.060	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1262 [1]	ND	0.085	0.043	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL
Aroclor-1268 [1]	ND	0.085	0.034	mg/Kg dry	4		SW-846 8082A	11/27/19	11/27/19 13:11	WAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.9	30-150		11/27/19 13:11
Decachlorobiphenyl [2]	89.7	30-150		11/27/19 13:11
Tetrachloro-m-xylene [1]	66.0	30-150		11/27/19 13:11
Tetrachloro-m-xylene [2]	81.2	30-150		11/27/19 13:11

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [2]	ND	27	2.3	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
2,4-DB [2]	ND	27	5.3	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
2,4,5-TP (Silvex) [2]	ND	2.7	0.29	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
2,4,5-T [2]	ND	2.7	0.36	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
Dalapon [2]	ND	66	4.0	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
Dicamba [2]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
Dichloroprop [2]	ND	27	5.0	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
Dinoseb [2]	ND	13	0.55	µg/kg dry	1	V-20	SW-846 8151A	11/26/19	11/27/19 20:50	JMB
MCPA [2]	ND	2700	400	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB
MCPP [2]	ND	2700	350	µg/kg dry	1		SW-846 8151A	11/26/19	11/27/19 20:50	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	80.1	30-150		11/27/19 20:50
2,4-Dichlorophenylacetic acid [2]	71.5	30-150		11/27/19 20:50

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	6200	3.5	2.7	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 21:04	MJH
Antimony	ND	1.7	0.87	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Arsenic	3.0	1.7	0.34	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Barium	41	1.7	0.37	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Beryllium	0.40	0.17	0.084	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Boron	2.1	3.5	1.4	mg/Kg dry	1	J	SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Cadmium	0.11	0.17	0.063	mg/Kg dry	1	J	SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Chromium	12	0.35	0.25	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Cobalt	7.1	1.7	0.38	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Copper	20	0.35	0.31	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Iron	18000	17	17	mg/Kg dry	10		SW-846 6010D	11/22/19	11/24/19 19:58	MJH
Lead	8.5	0.52	0.21	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Manganese	320	0.35	0.22	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Molybdenum	ND	3.5	0.66	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Nickel	17	0.35	0.34	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Selenium	ND	3.5	1.7	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Silver	ND	0.35	0.15	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Thallium	ND	1.7	1.5	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Tin	1.7	3.5	1.4	mg/Kg dry	1	J	SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Vanadium	12	0.70	0.21	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH
Zinc	40	0.70	0.64	mg/Kg dry	1		SW-846 6010D	11/22/19	11/24/19 18:09	MJH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3 | Sampled: 11/19/2019 12:20

Sample ID: 19K1179-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.1		% Wt	1		SM 2540G	11/22/19	11/23/19 8:45	adb

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3A | Sampled: 11/19/2019 12:30

Sample ID: 19K1179-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.015	0.11	0.0089	mg/Kg dry	1	J	SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Acrylonitrile	ND	0.0064	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Benzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Bromobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Bromochloromethane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Bromodichloromethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Bromoform	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Bromomethane	ND	0.011	0.0012	mg/Kg dry	1	V-34	SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
2-Butanone (MEK)	ND	0.043	0.0058	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	0.0048	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
n-Butylbenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
sec-Butylbenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
tert-Butylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Carbon Disulfide	ND	0.0064	0.0057	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Carbon Tetrachloride	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Chlorobenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Chlorodibromomethane	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Chloroethane	ND	0.021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Chloroform	ND	0.0043	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Chloromethane	ND	0.011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
2-Chlorotoluene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
4-Chlorotoluene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Dibromomethane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0012	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1-Dichloroethane	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2-Dichloroethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1-Dichloroethylene	ND	0.0043	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2-Dichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,3-Dichloropropane	ND	0.0011	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
2,2-Dichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1-Dichloropropene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Diethyl Ether	ND	0.021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3A | Sampled: 11/19/2019 12:30

Sample ID: 19K1179-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,4-Dioxane	ND	0.11	0.0056	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Ethylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Hexachlorobutadiene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
2-Hexanone (MBK)	ND	0.021	0.0021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Methyl Acetate	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Methyl Cyclohexane	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Methylene Chloride	ND	0.021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0027	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Naphthalene	ND	0.0043	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
n-Propylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Styrene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Tetrachloroethylene	ND	0.0021	0.0013	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Tetrahydrofuran	0.0052	0.011	0.0012	mg/Kg dry	1	J	SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Toluene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1,1-Trichloroethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1,2-Trichloroethane	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Trichloroethylene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2,3-Trichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
Vinyl Chloride	ND	0.011	0.00096	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
m+p Xylene	ND	0.0043	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF
o-Xylene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		11/21/19 7:06
Toluene-d8	99.3	70-130		11/21/19 7:06
4-Bromofluorobenzene	103	70-130		11/21/19 7:06

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3A | Sampled: 11/19/2019 12:30

Sample ID: 19K1179-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.1		% Wt	1		SM 2540G	11/22/19	11/27/19 12:16	FWD

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Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3B | Sampled: 11/19/2019 12:40

Sample ID: 19K1179-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	0.0089	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Acrylonitrile	ND	0.0064	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Benzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Bromobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Bromochloromethane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Bromodichloromethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Bromoform	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Bromomethane	ND	0.011	0.0012	mg/Kg dry	1	V-34	SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
2-Butanone (MEK)	ND	0.043	0.0058	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.043	0.0048	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
n-Butylbenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
sec-Butylbenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
tert-Butylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Carbon Disulfide	ND	0.0064	0.0057	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Carbon Tetrachloride	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Chlorobenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Chlorodibromomethane	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Chloroethane	ND	0.021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Chloroform	ND	0.0043	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Chloromethane	ND	0.011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
2-Chlorotoluene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
4-Chlorotoluene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Dibromomethane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0012	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1-Dichloroethane	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2-Dichloroethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1-Dichloroethylene	ND	0.0043	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2-Dichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,3-Dichloropropane	ND	0.0011	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
2,2-Dichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1-Dichloropropene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Diethyl Ether	ND	0.021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF

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Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3B | Sampled: 11/19/2019 12:40

Sample ID: 19K1179-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,4-Dioxane	ND	0.11	0.0056	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Ethylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Hexachlorobutadiene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
2-Hexanone (MBK)	ND	0.021	0.0021	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Methyl Acetate	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Methyl Cyclohexane	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Methylene Chloride	ND	0.021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0027	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Naphthalene	ND	0.0043	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
n-Propylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Styrene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Tetrachloroethylene	ND	0.0021	0.0013	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Tetrahydrofuran	ND	0.011	0.0012	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Toluene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1,1-Trichloroethane	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1,2-Trichloroethane	ND	0.0021	0.00043	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Trichloroethylene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00074	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2,3-Trichloropropane	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00085	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
Vinyl Chloride	ND	0.011	0.00096	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
m+p Xylene	ND	0.0043	0.0011	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF
o-Xylene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C-D	11/21/19	11/21/19 7:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	106	70-130		11/21/19 7:33
Toluene-d8	98.7	70-130		11/21/19 7:33
4-Bromofluorobenzene	103	70-130		11/21/19 7:33

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Project Location: NY | Sample Description: | Work Order: 19K1179

Date Received: 11/19/2019

Field Sample #: AQFill3B | Sampled: 11/19/2019 12:40

Sample ID: 19K1179-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.1		% Wt	1		SM 2540G	11/22/19	11/27/19 12:16	FWD

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19K1179-01 [AQFill3]	B246785	11/22/19
19K1179-02 [AQFill3A]	B246785	11/22/19
19K1179-03 [AQFill3B]	B246785	11/22/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-01 [AQFill3]	B246802	1.52	50.0	11/22/19

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-01RE1 [AQFill3]	B246804	10.0	10.0	11/23/19

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-01RE1 [AQFill3]	B247202	10.0	10.0	11/27/19

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-01 [AQFill3]	B247009	20.0	5.00	11/26/19

Prep Method: SW-846 5035-SW-846 8260C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-02 [AQFill3A]	B246633	5.00	10.0	11/21/19
19K1179-03 [AQFill3B]	B246633	5.00	10.0	11/21/19

Prep Method: SW-846 3546-SW-846 8270D-E

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19K1179-01 [AQFill3]	B246623	30.6	1.00	11/21/19

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246633 - SW-846 5035										
Blank (B246633-BLK1)				Prepared & Analyzed: 11/21/19						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B246633 - SW-846 5035											
Blank (B246633-BLK1)				Prepared & Analyzed: 11/21/19							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet								
Methyl Cyclohexane	ND	0.0020	mg/Kg wet								
Methylene Chloride	ND	0.020	mg/Kg wet								
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet								
Naphthalene	ND	0.0040	mg/Kg wet								
n-Propylbenzene	ND	0.0020	mg/Kg wet								
Styrene	ND	0.0020	mg/Kg wet								
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet								
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet								
Tetrachloroethylene	ND	0.0020	mg/Kg wet								
Tetrahydrofuran	ND	0.010	mg/Kg wet								
Toluene	ND	0.0020	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet								
Trichloroethylene	ND	0.0020	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet								
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet								
Vinyl Chloride	ND	0.010	mg/Kg wet								
m+p Xylene	ND	0.0040	mg/Kg wet								
o-Xylene	ND	0.0020	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0494*		mg/Kg wet	0.0500		98.9	70-130				
Surrogate: Toluene-d8	*0.0500*		mg/Kg wet	0.0500		100	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0505*		mg/Kg wet	0.0500		101	70-130				
LCS (B246633-BS1)				Prepared & Analyzed: 11/21/19							
Acetone	0.229	0.10	mg/Kg wet	0.200		115	70-160			V-20	†
Acrylonitrile	0.0216	0.0060	mg/Kg wet	0.0200		108	70-130				
tert-Amyl Methyl Ether (TAME)	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130				
Benzene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130				
Bromobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130				
Bromochloromethane	0.0224	0.0020	mg/Kg wet	0.0200		112	70-130				
Bromodichloromethane	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130				
Bromoform	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130				
Bromomethane	0.0190	0.010	mg/Kg wet	0.0200		95.2	40-130			V-34	†
2-Butanone (MEK)	0.220	0.040	mg/Kg wet	0.200		110	70-160				†
tert-Butyl Alcohol (TBA)	0.216	0.040	mg/Kg wet	0.200		108	40-130				†
n-Butylbenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130				
sec-Butylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130				
tert-Butylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0208	0.0010	mg/Kg wet	0.0200		104	70-130				
Carbon Disulfide	0.221	0.0060	mg/Kg wet	0.200		111	70-130				
Carbon Tetrachloride	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130				
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130				
Chlorodibromomethane	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130				
Chloroethane	0.0232	0.020	mg/Kg wet	0.0200		116	70-130				
Chloroform	0.0194	0.0040	mg/Kg wet	0.0200		97.2	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B246633 - SW-846 5035											
LCS (B246633-BS1)				Prepared & Analyzed: 11/21/19							
Chloromethane	0.0209	0.010	mg/Kg wet	0.0200		105	70-130				
2-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.6	70-130				
4-Chlorotoluene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
1,2-Dibromoethane (EDB)	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130				
Dibromomethane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
1,2-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130				
1,3-Dichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130				
1,4-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130				
trans-1,4-Dichloro-2-butene	0.0196	0.0040	mg/Kg wet	0.0200		97.9	70-130				
Dichlorodifluoromethane (Freon 12)	0.0188	0.020	mg/Kg wet	0.0200		93.9	40-160			J	†
1,1-Dichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130				
1,2-Dichloroethane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130				
1,1-Dichloroethylene	0.0223	0.0040	mg/Kg wet	0.0200		111	70-130				
cis-1,2-Dichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130				
trans-1,2-Dichloroethylene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
1,2-Dichloropropane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130				
1,3-Dichloropropane	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130				
2,2-Dichloropropane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
1,1-Dichloropropene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
cis-1,3-Dichloropropene	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130				
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.2	70-130				
Diethyl Ether	0.0197	0.020	mg/Kg wet	0.0200		98.4	70-130			J	
Diisopropyl Ether (DIPE)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130				
1,4-Dioxane	0.183	0.10	mg/Kg wet	0.200		91.3	40-160				†
Ethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130				
Hexachlorobutadiene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-160				
2-Hexanone (MBK)	0.204	0.020	mg/Kg wet	0.200		102	70-160				†
Isopropylbenzene (Cumene)	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130				
p-Isopropyltoluene (p-Cymene)	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130				
Methyl Acetate	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130				
Methyl Cyclohexane	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130				
Methylene Chloride	0.0223	0.020	mg/Kg wet	0.0200		112	40-160				†
4-Methyl-2-pentanone (MIBK)	0.195	0.020	mg/Kg wet	0.200		97.7	70-160				†
Naphthalene	0.0176	0.0040	mg/Kg wet	0.0200		87.9	40-130				†
n-Propylbenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130				
Styrene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130				
1,1,1,2-Tetrachloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130				
1,1,2,2-Tetrachloroethane	0.0190	0.0010	mg/Kg wet	0.0200		94.9	70-130				
Tetrachloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Tetrahydrofuran	0.0212	0.010	mg/Kg wet	0.0200		106	70-130				
Toluene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130				
1,2,3-Trichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130				
1,2,4-Trichlorobenzene	0.0177	0.0020	mg/Kg wet	0.0200		88.5	70-130				
1,3,5-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130				
1,1,1-Trichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
1,1,2-Trichloroethane	0.0187	0.0020	mg/Kg wet	0.0200		93.6	70-130				
Trichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130				
Trichlorofluoromethane (Freon 11)	0.0227	0.010	mg/Kg wet	0.0200		113	70-130				
1,2,3-Trichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B246633 - SW-846 5035											
LCS (B246633-BS1)				Prepared & Analyzed: 11/21/19							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0221	0.010	mg/Kg wet	0.0200		111	70-130				
1,2,4-Trimethylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1	70-130				
1,3,5-Trimethylbenzene	0.0178	0.0020	mg/Kg wet	0.0200		89.1	70-130				
Vinyl Chloride	0.0224	0.010	mg/Kg wet	0.0200		112	40-130				†
m+p Xylene	0.0367	0.0040	mg/Kg wet	0.0400		91.8	70-130				
o-Xylene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0488*		mg/Kg wet	0.0500		97.6	70-130				
Surrogate: Toluene-d8	*0.0498*		mg/Kg wet	0.0500		99.6	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0516*		mg/Kg wet	0.0500		103	70-130				
LCS Dup (B246633-BSD1)				Prepared & Analyzed: 11/21/19							
Acetone	0.238	0.10	mg/Kg wet	0.200		119	70-160	3.76	25	V-20	†
Acrylonitrile	0.0214	0.0060	mg/Kg wet	0.0200		107	70-130	0.932	25		
tert-Amyl Methyl Ether (TAME)	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130	0.00	25		
Benzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	1.24	25		
Bromobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.2	70-130	2.69	25		
Bromochloromethane	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130	3.33	25		
Bromodichloromethane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	3.17	25		
Bromoform	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	0.100	25		
Bromomethane	0.0210	0.010	mg/Kg wet	0.0200		105	40-130	9.70	25	V-34	†
2-Butanone (MEK)	0.229	0.040	mg/Kg wet	0.200		115	70-160	4.11	25		†
tert-Butyl Alcohol (TBA)	0.221	0.040	mg/Kg wet	0.200		110	40-130	2.18	25		†
n-Butylbenzene	0.0167	0.0020	mg/Kg wet	0.0200		83.4	70-130	3.42	25		
sec-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	0.522	25		
tert-Butylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-160	0.216	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130	0.482	25		
Carbon Disulfide	0.212	0.0060	mg/Kg wet	0.200		106	70-130	4.28	25		
Carbon Tetrachloride	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130	4.32	25		
Chlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130	1.62	25		
Chlorodibromomethane	0.0197	0.0010	mg/Kg wet	0.0200		98.5	70-130	3.30	25		
Chloroethane	0.0226	0.020	mg/Kg wet	0.0200		113	70-130	2.80	25		
Chloroform	0.0191	0.0040	mg/Kg wet	0.0200		95.5	70-130	1.76	25		
Chloromethane	0.0201	0.010	mg/Kg wet	0.0200		101	70-130	3.90	25		
2-Chlorotoluene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	2.46	25		
4-Chlorotoluene	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	1.55	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	4.46	25		
1,2-Dibromoethane (EDB)	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130	6.67	25		
Dibromomethane	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	1.99	25		
1,2-Dichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.6	70-130	2.29	25		
1,3-Dichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130	2.05	25		
1,4-Dichlorobenzene	0.0180	0.0020	mg/Kg wet	0.0200		90.1	70-130	2.63	25		
trans-1,4-Dichloro-2-butene	0.0192	0.0040	mg/Kg wet	0.0200		96.1	70-130	1.86	25		
Dichlorodifluoromethane (Freon 12)	0.0215	0.020	mg/Kg wet	0.0200		108	40-160	13.5	25		†
1,1-Dichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	1.82	25		
1,2-Dichloroethane	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	1.63	25		
1,1-Dichloroethylene	0.0205	0.0040	mg/Kg wet	0.0200		103	70-130	8.22	25		
cis-1,2-Dichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	0.988	25		
trans-1,2-Dichloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	3.17	25		
1,2-Dichloropropane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	4.15	25		
1,3-Dichloropropane	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	1.97	25		
2,2-Dichloropropane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	3.77	25		
1,1-Dichloropropene	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	8.57	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246633 - SW-846 5035										
LCS Dup (B246633-BSD1)				Prepared & Analyzed: 11/21/19						
cis-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.3	70-130	3.56	25	
trans-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.3	70-130	0.101	25	
Diethyl Ether	0.0210	0.020	mg/Kg wet	0.0200		105	70-130	6.68	25	
Diisopropyl Ether (DIPE)	0.0201	0.0010	mg/Kg wet	0.0200		100	70-130	1.29	25	
1,4-Dioxane	0.211	0.10	mg/Kg wet	0.200		105	40-160	14.3	50	† ‡
Ethylbenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.1	70-130	2.67	25	
Hexachlorobutadiene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-160	3.06	25	
2-Hexanone (MBK)	0.203	0.020	mg/Kg wet	0.200		102	70-160	0.236	25	†
Isopropylbenzene (Cumene)	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	0.828	25	
p-Isopropyltoluene (p-Cymene)	0.0179	0.0020	mg/Kg wet	0.0200		89.6	70-130	5.64	25	
Methyl Acetate	0.0233	0.0020	mg/Kg wet	0.0200		116	70-130	8.14	25	
Methyl tert-Butyl Ether (MTBE)	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130	0.0990	25	
Methyl Cyclohexane	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	1.87	25	
Methylene Chloride	0.0231	0.020	mg/Kg wet	0.0200		115	40-160	3.17	25	†
4-Methyl-2-pentanone (MIBK)	0.205	0.020	mg/Kg wet	0.200		102	70-160	4.67	25	†
Naphthalene	0.0175	0.0040	mg/Kg wet	0.0200		87.3	40-130	0.685	25	†
n-Propylbenzene	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130	3.84	25	
Styrene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130	3.19	25	
1,1,1,2-Tetrachloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	2.62	25	
1,1,2,2-Tetrachloroethane	0.0187	0.0010	mg/Kg wet	0.0200		93.5	70-130	1.49	25	
Tetrachloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130	5.29	25	
Tetrahydrofuran	0.0227	0.010	mg/Kg wet	0.0200		114	70-130	6.74	25	
Toluene	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130	2.64	25	
1,2,3-Trichlorobenzene	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	4.42	25	
1,2,4-Trichlorobenzene	0.0174	0.0020	mg/Kg wet	0.0200		86.8	70-130	1.94	25	
1,3,5-Trichlorobenzene	0.0174	0.0020	mg/Kg wet	0.0200		87.2	70-130	4.37	25	
1,1,1-Trichloroethane	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130	6.49	25	
1,1,2-Trichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130	5.71	25	
Trichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	1.51	25	
Trichlorofluoromethane (Freon 11)	0.0213	0.010	mg/Kg wet	0.0200		106	70-130	6.28	25	
1,2,3-Trichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	2.99	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0210	0.010	mg/Kg wet	0.0200		105	70-130	5.39	25	
1,2,4-Trimethylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	0.113	25	
1,3,5-Trimethylbenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-130	1.02	25	
Vinyl Chloride	0.0212	0.010	mg/Kg wet	0.0200		106	40-130	5.59	25	†
m+p Xylene	0.0356	0.0040	mg/Kg wet	0.0400		89.0	70-130	2.99	25	
o-Xylene	0.0176	0.0020	mg/Kg wet	0.0200		87.8	70-130	3.69	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0482*		mg/Kg wet	0.0500		96.5	70-130			
Surrogate: Toluene-d8	*0.0500*		mg/Kg wet	0.0500		100	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0503*		mg/Kg wet	0.0500		101	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246623 - SW-846 3546										
Blank (B246623-BLK1)				Prepared & Analyzed: 11/21/19						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							V-34
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B246623 - SW-846 3546												
Blank (B246623-BLK1)			Prepared & Analyzed: 11/21/19									
2-Methylphenol	ND	0.34	mg/Kg wet									
3/4-Methylphenol	ND	0.34	mg/Kg wet									
Naphthalene	ND	0.17	mg/Kg wet									
2-Nitroaniline	ND	0.34	mg/Kg wet								V-20	
3-Nitroaniline	ND	0.34	mg/Kg wet									
4-Nitroaniline	ND	0.34	mg/Kg wet									
Nitrobenzene	ND	0.34	mg/Kg wet									
2-Nitrophenol	ND	0.34	mg/Kg wet									
4-Nitrophenol	ND	0.66	mg/Kg wet								V-20	
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet									
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet									
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet									
Pentachloronitrobenzene	ND	0.34	mg/Kg wet									
Pentachlorophenol	ND	0.34	mg/Kg wet								V-05	
Phenanthrene	ND	0.17	mg/Kg wet									
Phenol	ND	0.34	mg/Kg wet									
Pyrene	ND	0.17	mg/Kg wet									
Pyridine	ND	0.34	mg/Kg wet									
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet									
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet									
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet									
Surrogate: 2-Fluorophenol	*6.10*		mg/Kg wet	6.67		91.5		30-130				
Surrogate: Phenol-d6	*6.20*		mg/Kg wet	6.67		93.0		30-130				
Surrogate: Nitrobenzene-d5	*3.10*		mg/Kg wet	3.33		93.0		30-130				
Surrogate: 2-Fluorobiphenyl	*2.99*		mg/Kg wet	3.33		89.6		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.75*		mg/Kg wet	6.67		101		30-130				
Surrogate: p-Terphenyl-d14	*3.33*		mg/Kg wet	3.33		99.9		30-130				
LCS (B246623-BS1)			Prepared & Analyzed: 11/21/19									
Acenaphthene	1.25	0.17	mg/Kg wet	1.67		74.9		40-140				
Acenaphthylene	1.31	0.17	mg/Kg wet	1.67		78.5		40-140				
Acetophenone	1.22	0.34	mg/Kg wet	1.67		73.3		40-140				
Aniline	0.906	0.34	mg/Kg wet	1.67		54.3		10-140				†
Anthracene	1.39	0.17	mg/Kg wet	1.67		83.1		40-140				
Benzidine	2.38	0.66	mg/Kg wet	1.67		**143**	*	40-140			L-02, V-35	
Benzo(a)anthracene	1.36	0.17	mg/Kg wet	1.67		81.9		40-140				
Benzo(a)pyrene	1.38	0.17	mg/Kg wet	1.67		82.9		40-140				
Benzo(b)fluoranthene	1.46	0.17	mg/Kg wet	1.67		87.3		40-140				
Benzo(g,h,i)perylene	1.16	0.17	mg/Kg wet	1.67		69.6		40-140				
Benzo(k)fluoranthene	1.44	0.17	mg/Kg wet	1.67		86.3		40-140				
Benzoic Acid	0.568	1.0	mg/Kg wet	1.67		34.1		30-130			V-34, J	
Bis(2-chloroethoxy)methane	1.23	0.34	mg/Kg wet	1.67		73.9		40-140				
Bis(2-chloroethyl)ether	1.23	0.34	mg/Kg wet	1.67		73.7		40-140				
Bis(2-chloroisopropyl)ether	1.48	0.34	mg/Kg wet	1.67		88.7		40-140				
Bis(2-Ethylhexyl)phthalate	1.39	0.34	mg/Kg wet	1.67		83.3		40-140				
4-Bromophenylphenylether	1.29	0.34	mg/Kg wet	1.67		77.5		40-140				
Butylbenzylphthalate	1.44	0.34	mg/Kg wet	1.67		86.4		40-140				
Carbazole	1.36	0.17	mg/Kg wet	1.67		81.6		40-140				
4-Chloroaniline	0.903	0.66	mg/Kg wet	1.67		54.2		10-140				†
4-Chloro-3-methylphenol	1.44	0.66	mg/Kg wet	1.67		86.2		30-130				
2-Chloronaphthalene	1.10	0.34	mg/Kg wet	1.67		66.2		40-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B246623 - SW-846 3546											
LCS (B246623-BS1)				Prepared & Analyzed: 11/21/19							
2-Chlorophenol	1.18	0.34	mg/Kg wet	1.67		70.6	30-130				
4-Chlorophenylphenylether	1.28	0.34	mg/Kg wet	1.67		76.6	40-140				
Chrysene	1.35	0.17	mg/Kg wet	1.67		81.2	40-140				
Dibenz(a,h)anthracene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140				
Dibenzofuran	1.36	0.34	mg/Kg wet	1.67		81.9	40-140				
Di-n-butylphthalate	1.39	0.34	mg/Kg wet	1.67		83.5	40-140				
1,2-Dichlorobenzene	1.05	0.34	mg/Kg wet	1.67		62.9	40-140				
1,3-Dichlorobenzene	0.989	0.34	mg/Kg wet	1.67		59.3	40-140				
1,4-Dichlorobenzene	1.02	0.34	mg/Kg wet	1.67		61.2	40-140				
3,3-Dichlorobenzidine	1.23	0.17	mg/Kg wet	1.67		74.0	20-140				†
2,4-Dichlorophenol	1.28	0.34	mg/Kg wet	1.67		76.7	30-130				
Diethylphthalate	1.36	0.34	mg/Kg wet	1.67		81.9	40-140				
2,4-Dimethylphenol	1.29	0.34	mg/Kg wet	1.67		77.4	30-130				
Dimethylphthalate	1.28	0.34	mg/Kg wet	1.67		77.1	40-140				
4,6-Dinitro-2-methylphenol	0.839	0.34	mg/Kg wet	1.67		50.3	30-130				
2,4-Dinitrophenol	0.591	0.66	mg/Kg wet	1.67		35.5	30-130			J	
2,4-Dinitrotoluene	1.32	0.34	mg/Kg wet	1.67		79.1	40-140				
2,6-Dinitrotoluene	1.30	0.34	mg/Kg wet	1.67		77.9	40-140				
Di-n-octylphthalate	1.43	0.34	mg/Kg wet	1.67		85.8	40-140				
1,2-Diphenylhydrazine/Azobenzene	1.68	0.34	mg/Kg wet	1.67		101	40-140				
Fluoranthene	1.36	0.17	mg/Kg wet	1.67		81.7	40-140				
Fluorene	1.36	0.17	mg/Kg wet	1.67		81.3	40-140				
Hexachlorobenzene	1.36	0.34	mg/Kg wet	1.67		81.5	40-140				
Hexachlorobutadiene	1.04	0.34	mg/Kg wet	1.67		62.4	40-140				
Hexachlorocyclopentadiene	0.721	0.34	mg/Kg wet	1.67		43.3	40-140			V-05	
Hexachloroethane	1.07	0.34	mg/Kg wet	1.67		63.9	40-140				
Indeno(1,2,3-cd)pyrene	1.26	0.17	mg/Kg wet	1.67		75.6	40-140				
Isophorone	1.36	0.34	mg/Kg wet	1.67		81.7	40-140				
1-Methylnaphthalene	1.18	0.17	mg/Kg wet	1.67		71.1	40-140				
2-Methylnaphthalene	1.38	0.17	mg/Kg wet	1.67		82.6	40-140				
2-Methylphenol	1.20	0.34	mg/Kg wet	1.67		71.9	30-130				
3/4-Methylphenol	1.28	0.34	mg/Kg wet	1.67		76.8	30-130				
Naphthalene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140				
2-Nitroaniline	1.99	0.34	mg/Kg wet	1.67		120	40-140			V-06	
3-Nitroaniline	1.18	0.34	mg/Kg wet	1.67		71.0	30-140				†
4-Nitroaniline	1.41	0.34	mg/Kg wet	1.67		84.4	40-140				
Nitrobenzene	1.27	0.34	mg/Kg wet	1.67		76.1	40-140				
2-Nitrophenol	1.19	0.34	mg/Kg wet	1.67		71.3	30-130				
4-Nitrophenol	1.70	0.66	mg/Kg wet	1.67		102	30-130			V-06	
N-Nitrosodimethylamine	1.21	0.34	mg/Kg wet	1.67		72.5	40-140				
N-Nitrosodiphenylamine/Diphenylamine	1.43	0.34	mg/Kg wet	1.67		85.7	40-140				
N-Nitrosodi-n-propylamine	1.34	0.34	mg/Kg wet	1.67		80.2	40-140				
Pentachloronitrobenzene	1.34	0.34	mg/Kg wet	1.67		80.5	40-140				
Pentachlorophenol	0.904	0.34	mg/Kg wet	1.67		54.2	30-130			V-05	
Phenanthrene	1.38	0.17	mg/Kg wet	1.67		83.1	40-140				
Phenol	1.27	0.34	mg/Kg wet	1.67		76.0	30-130				
Pyrene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140				
Pyridine	0.713	0.34	mg/Kg wet	1.67		42.8	30-140				†
1,2,4,5-Tetrachlorobenzene	1.15	0.34	mg/Kg wet	1.67		69.0	40-140				
1,2,4-Trichlorobenzene	1.10	0.34	mg/Kg wet	1.67		65.8	40-140				
2,4,5-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.2	30-130				
2,4,6-Trichlorophenol	1.29	0.34	mg/Kg wet	1.67		77.2	30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B246623 - SW-846 3546												
LCS (B246623-BS1)				Prepared & Analyzed: 11/21/19								
Surrogate: 2-Fluorophenol	*5.14*		mg/Kg wet	6.67		77.1		30-130				
Surrogate: Phenol-d6	*5.46*		mg/Kg wet	6.67		81.9		30-130				
Surrogate: Nitrobenzene-d5	*2.72*		mg/Kg wet	3.33		81.5		30-130				
Surrogate: 2-Fluorobiphenyl	*2.76*		mg/Kg wet	3.33		82.8		30-130				
Surrogate: 2,4,6-Tribromophenol	*7.10*		mg/Kg wet	6.67		106		30-130				
Surrogate: p-Terphenyl-d14	*3.10*		mg/Kg wet	3.33		93.0		30-130				
LCS Dup (B246623-BSD1)				Prepared & Analyzed: 11/21/19								
Acenaphthene	1.28	0.17	mg/Kg wet	1.67		76.6		40-140	2.14	30		
Acenaphthylene	1.34	0.17	mg/Kg wet	1.67		80.6		40-140	2.69	30		
Acetophenone	1.15	0.34	mg/Kg wet	1.67		69.1		40-140	5.98	30		
Aniline	0.924	0.34	mg/Kg wet	1.67		55.5		10-140	2.04	50		† ‡
Anthracene	1.45	0.17	mg/Kg wet	1.67		86.8		40-140	4.33	30		
Benzidine	2.47	0.66	mg/Kg wet	1.67		**148**	*	40-140	3.60	30	L-02, V-35	
Benzo(a)anthracene	1.43	0.17	mg/Kg wet	1.67		85.9		40-140	4.77	30		
Benzo(a)pyrene	1.43	0.17	mg/Kg wet	1.67		85.5		40-140	3.06	30		
Benzo(b)fluoranthene	1.48	0.17	mg/Kg wet	1.67		88.8		40-140	1.68	30		
Benzo(g,h,i)perylene	1.21	0.17	mg/Kg wet	1.67		72.3		40-140	3.80	30		
Benzo(k)fluoranthene	1.50	0.17	mg/Kg wet	1.67		89.7		40-140	3.91	30		
Benzoic Acid	0.595	1.0	mg/Kg wet	1.67		35.7		30-130	4.70	50	V-34, J	‡
Bis(2-chloroethoxy)methane	1.21	0.34	mg/Kg wet	1.67		72.5		40-140	1.97	30		
Bis(2-chloroethyl)ether	1.11	0.34	mg/Kg wet	1.67		66.7		40-140	10.1	30		
Bis(2-chloroisopropyl)ether	1.34	0.34	mg/Kg wet	1.67		80.5		40-140	9.62	30		
Bis(2-Ethylhexyl)phthalate	1.47	0.34	mg/Kg wet	1.67		88.3		40-140	5.73	30		
4-Bromophenylphenylether	1.36	0.34	mg/Kg wet	1.67		81.4		40-140	4.91	30		
Butylbenzylphthalate	1.49	0.34	mg/Kg wet	1.67		89.6		40-140	3.68	30		
Carbazole	1.41	0.17	mg/Kg wet	1.67		84.4		40-140	3.33	30		
4-Chloroaniline	0.974	0.66	mg/Kg wet	1.67		58.5		10-140	7.64	30		†
4-Chloro-3-methylphenol	1.50	0.66	mg/Kg wet	1.67		89.7		30-130	4.00	30		
2-Chloronaphthalene	1.11	0.34	mg/Kg wet	1.67		66.6		40-140	0.632	30		
2-Chlorophenol	1.11	0.34	mg/Kg wet	1.67		66.4		30-130	6.16	30		
4-Chlorophenylphenylether	1.28	0.34	mg/Kg wet	1.67		77.1		40-140	0.573	30		
Chrysene	1.44	0.17	mg/Kg wet	1.67		86.2		40-140	6.02	30		
Dibenz(a,h)anthracene	1.21	0.17	mg/Kg wet	1.67		72.9		40-140	5.70	30		
Dibenzofuran	1.38	0.34	mg/Kg wet	1.67		82.8		40-140	1.09	30		
Di-n-butylphthalate	1.45	0.34	mg/Kg wet	1.67		87.2		40-140	4.29	30		
1,2-Dichlorobenzene	0.936	0.34	mg/Kg wet	1.67		56.2		40-140	11.4	30		
1,3-Dichlorobenzene	0.888	0.34	mg/Kg wet	1.67		53.3		40-140	10.8	30		
1,4-Dichlorobenzene	0.904	0.34	mg/Kg wet	1.67		54.2		40-140	12.0	30		
3,3-Dichlorobenzidine	1.37	0.17	mg/Kg wet	1.67		82.3		20-140	10.6	50		† ‡
2,4-Dichlorophenol	1.30	0.34	mg/Kg wet	1.67		78.1		30-130	1.81	30		
Diethylphthalate	1.40	0.34	mg/Kg wet	1.67		84.0		40-140	2.60	30		
2,4-Dimethylphenol	1.29	0.34	mg/Kg wet	1.67		77.2		30-130	0.181	30		
Dimethylphthalate	1.34	0.34	mg/Kg wet	1.67		80.3		40-140	4.12	30		
4,6-Dinitro-2-methylphenol	0.921	0.34	mg/Kg wet	1.67		55.2		30-130	9.28	30		
2,4-Dinitrophenol	0.617	0.66	mg/Kg wet	1.67		37.0		30-130	4.36	30	J	
2,4-Dinitrotoluene	1.33	0.34	mg/Kg wet	1.67		79.7		40-140	0.856	30		
2,6-Dinitrotoluene	1.37	0.34	mg/Kg wet	1.67		82.0		40-140	5.13	30		
Di-n-octylphthalate	1.46	0.34	mg/Kg wet	1.67		87.4		40-140	1.82	30		
1,2-Diphenylhydrazine/Azobenzene	1.75	0.34	mg/Kg wet	1.67		105		40-140	4.22	30		
Fluoranthene	1.40	0.17	mg/Kg wet	1.67		84.1		40-140	2.85	30		
Fluorene	1.39	0.17	mg/Kg wet	1.67		83.3		40-140	2.38	30		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B246623 - SW-846 3546											
LCS Dup (B246623-BSD1)				Prepared & Analyzed: 11/21/19							
Hexachlorobenzene	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	3.54	30		
Hexachlorobutadiene	0.930	0.34	mg/Kg wet	1.67		55.8	40-140	11.2	30		
Hexachlorocyclopentadiene	0.682	0.34	mg/Kg wet	1.67		40.9	40-140	5.51	30	V-05	
Hexachloroethane	0.958	0.34	mg/Kg wet	1.67		57.5	40-140	10.6	30		
Indeno(1,2,3-cd)pyrene	1.34	0.17	mg/Kg wet	1.67		80.1	40-140	5.73	30		
Isophorone	1.32	0.34	mg/Kg wet	1.67		79.5	40-140	2.73	30		
1-Methylnaphthalene	1.17	0.17	mg/Kg wet	1.67		70.1	40-140	1.42	30		
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.5	40-140	1.37	30		
2-Methylphenol	1.18	0.34	mg/Kg wet	1.67		71.1	30-130	1.09	30		
3/4-Methylphenol	1.32	0.34	mg/Kg wet	1.67		79.4	30-130	3.30	30		
Naphthalene	1.09	0.17	mg/Kg wet	1.67		65.1	40-140	6.07	30		
2-Nitroaniline	2.07	0.34	mg/Kg wet	1.67		124	40-140	3.69	30	V-06	
3-Nitroaniline	1.22	0.34	mg/Kg wet	1.67		73.0	30-140	2.78	30		†
4-Nitroaniline	1.45	0.34	mg/Kg wet	1.67		87.1	40-140	3.13	30		
Nitrobenzene	1.18	0.34	mg/Kg wet	1.67		70.9	40-140	7.07	30		
2-Nitrophenol	1.10	0.34	mg/Kg wet	1.67		65.8	30-130	8.02	30		
4-Nitrophenol	1.71	0.66	mg/Kg wet	1.67		103	30-130	0.411	50	V-06	‡
N-Nitrosodimethylamine	1.09	0.34	mg/Kg wet	1.67		65.2	40-140	10.6	30		
N-Nitrosodiphenylamine/Diphenylamine	1.48	0.34	mg/Kg wet	1.67		89.1	40-140	3.87	30		
N-Nitrosodi-n-propylamine	1.27	0.34	mg/Kg wet	1.67		76.5	40-140	4.75	30		
Pentachloronitrobenzene	1.41	0.34	mg/Kg wet	1.67		84.7	40-140	5.16	30		
Pentachlorophenol	0.951	0.34	mg/Kg wet	1.67		57.0	30-130	5.03	30	V-05	
Phenanthrene	1.46	0.17	mg/Kg wet	1.67		87.6	40-140	5.27	30		
Phenol	1.25	0.34	mg/Kg wet	1.67		74.7	30-130	1.67	30		
Pyrene	1.48	0.17	mg/Kg wet	1.67		88.7	40-140	6.21	30		
Pyridine	0.642	0.34	mg/Kg wet	1.67		38.5	30-140	10.5	30		†
1,2,4,5-Tetrachlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.2	40-140	2.64	30		
1,2,4-Trichlorobenzene	0.994	0.34	mg/Kg wet	1.67		59.7	40-140	9.82	30		
2,4,5-Trichlorophenol	1.35	0.34	mg/Kg wet	1.67		81.0	30-130	4.78	30		
2,4,6-Trichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.0	30-130	2.38	30		
Surrogate: 2-Fluorophenol	*4.65*		mg/Kg wet	6.67		69.8	30-130				
Surrogate: Phenol-d6	*5.28*		mg/Kg wet	6.67		79.1	30-130				
Surrogate: Nitrobenzene-d5	*2.46*		mg/Kg wet	3.33		73.9	30-130				
Surrogate: 2-Fluorobiphenyl	*2.77*		mg/Kg wet	3.33		83.0	30-130				
Surrogate: 2,4,6-Tribromophenol	*7.22*		mg/Kg wet	6.67		108	30-130				
Surrogate: p-Terphenyl-d14	*3.26*		mg/Kg wet	3.33		97.7	30-130				

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246804 - SW-846 3546										
Blank (B246804-BLK1)				Prepared: 11/23/19 Analyzed: 11/25/19						
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.171*		mg/Kg wet	0.200		85.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.172*		mg/Kg wet	0.200		86.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.178*		mg/Kg wet	0.200		88.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.173*		mg/Kg wet	0.200		86.5	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246804 - SW-846 3546										
LCS (B246804-BS1)				Prepared: 11/23/19 Analyzed: 11/25/19						
alpha-Chlordane	0.090	0.0050	mg/Kg wet	0.100		90.0	40-140			
alpha-Chlordane [2C]	0.092	0.0050	mg/Kg wet	0.100		92.5	40-140			
gamma-Chlordane	0.088	0.0050	mg/Kg wet	0.100		88.0	40-140			
gamma-Chlordane [2C]	0.095	0.0050	mg/Kg wet	0.100		94.9	40-140			
Alachlor	0.082	0.020	mg/Kg wet	0.100		81.7	40-140			
Alachlor [2C]	0.078	0.020	mg/Kg wet	0.100		78.1	40-140			
Aldrin	0.089	0.0050	mg/Kg wet	0.100		88.9	40-140			
Aldrin [2C]	0.090	0.0050	mg/Kg wet	0.100		90.5	40-140			
alpha-BHC	0.089	0.0050	mg/Kg wet	0.100		89.3	40-140			
alpha-BHC [2C]	0.096	0.0050	mg/Kg wet	0.100		96.4	40-140			
beta-BHC	0.090	0.0050	mg/Kg wet	0.100		90.5	40-140			
beta-BHC [2C]	0.088	0.0050	mg/Kg wet	0.100		88.3	40-140			
delta-BHC	0.078	0.0050	mg/Kg wet	0.100		78.4	40-140			
delta-BHC [2C]	0.093	0.0050	mg/Kg wet	0.100		92.7	40-140			
gamma-BHC (Lindane)	0.087	0.0020	mg/Kg wet	0.100		87.1	40-140			
gamma-BHC (Lindane) [2C]	0.092	0.0020	mg/Kg wet	0.100		91.5	40-140			
4,4'-DDD	0.093	0.0040	mg/Kg wet	0.100		92.7	40-140			
4,4'-DDD [2C]	0.093	0.0040	mg/Kg wet	0.100		93.5	40-140			
4,4'-DDE	0.095	0.0040	mg/Kg wet	0.100		95.0	40-140			
4,4'-DDE [2C]	0.096	0.0040	mg/Kg wet	0.100		96.1	40-140			
4,4'-DDT	0.093	0.0040	mg/Kg wet	0.100		92.9	40-140			
4,4'-DDT [2C]	0.089	0.0040	mg/Kg wet	0.100		89.5	40-140			
Dieldrin	0.091	0.0040	mg/Kg wet	0.100		90.5	40-140			
Dieldrin [2C]	0.090	0.0040	mg/Kg wet	0.100		89.5	40-140			
Endosulfan I	0.089	0.0050	mg/Kg wet	0.100		89.4	40-140			
Endosulfan I [2C]	0.087	0.0050	mg/Kg wet	0.100		87.0	40-140			
Endosulfan II	0.091	0.0080	mg/Kg wet	0.100		90.8	40-140			
Endosulfan II [2C]	0.090	0.0080	mg/Kg wet	0.100		89.5	40-140			
Endosulfan Sulfate	0.088	0.0080	mg/Kg wet	0.100		88.0	40-140			
Endosulfan Sulfate [2C]	0.086	0.0080	mg/Kg wet	0.100		86.2	40-140			
Endrin	0.091	0.0080	mg/Kg wet	0.100		90.9	40-140			
Endrin [2C]	0.093	0.0080	mg/Kg wet	0.100		93.1	40-140			
Endrin Aldehyde	0.094	0.0080	mg/Kg wet	0.100		93.9	40-140			
Endrin Aldehyde [2C]	0.089	0.0080	mg/Kg wet	0.100		89.5	40-140			
Endrin Ketone	0.087	0.0080	mg/Kg wet	0.100		86.7	40-140			
Endrin Ketone [2C]	0.084	0.0080	mg/Kg wet	0.100		84.0	40-140			
Heptachlor	0.064	0.0050	mg/Kg wet	0.100		64.3	40-140			
Heptachlor [2C]	0.098	0.0050	mg/Kg wet	0.100		97.8	40-140			
Heptachlor Epoxide	0.086	0.0050	mg/Kg wet	0.100		86.4	40-140			
Heptachlor Epoxide [2C]	0.087	0.0050	mg/Kg wet	0.100		86.6	40-140			
Hexachlorobenzene	0.10	0.0060	mg/Kg wet	0.100		103	40-140			V-06
Hexachlorobenzene [2C]	0.099	0.0060	mg/Kg wet	0.100		99.4	40-140			V-06
Methoxychlor	0.088	0.050	mg/Kg wet	0.100		88.5	40-140			
Methoxychlor [2C]	0.088	0.050	mg/Kg wet	0.100		88.4	40-140			
Surrogate: Decachlorobiphenyl	*0.176*		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.175*		mg/Kg wet	0.200		87.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.176*		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.174*		mg/Kg wet	0.200		87.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246804 - SW-846 3546										
LCS Dup (B246804-BSD1)				Prepared: 11/23/19 Analyzed: 11/25/19						
alpha-Chlordane	0.092	0.0050	mg/Kg wet	0.100		91.8	40-140	1.94	30	
alpha-Chlordane [2C]	0.094	0.0050	mg/Kg wet	0.100		93.8	40-140	1.42	30	
gamma-Chlordane	0.090	0.0050	mg/Kg wet	0.100		89.6	40-140	1.80	30	
gamma-Chlordane [2C]	0.096	0.0050	mg/Kg wet	0.100		96.3	40-140	1.39	30	
Alachlor	0.085	0.020	mg/Kg wet	0.100		85.4	40-140	4.48	30	
Alachlor [2C]	0.080	0.020	mg/Kg wet	0.100		80.1	40-140	2.45	30	
Aldrin	0.090	0.0050	mg/Kg wet	0.100		89.8	40-140	1.11	30	
Aldrin [2C]	0.091	0.0050	mg/Kg wet	0.100		90.7	40-140	0.317	30	
alpha-BHC	0.091	0.0050	mg/Kg wet	0.100		91.5	40-140	2.45	30	
alpha-BHC [2C]	0.098	0.0050	mg/Kg wet	0.100		97.8	40-140	1.44	30	
beta-BHC	0.093	0.0050	mg/Kg wet	0.100		93.0	40-140	2.80	30	
beta-BHC [2C]	0.090	0.0050	mg/Kg wet	0.100		89.8	40-140	1.66	30	
delta-BHC	0.080	0.0050	mg/Kg wet	0.100		79.7	40-140	1.66	30	
delta-BHC [2C]	0.094	0.0050	mg/Kg wet	0.100		93.6	40-140	0.955	30	
gamma-BHC (Lindane)	0.090	0.0020	mg/Kg wet	0.100		90.1	40-140	3.30	30	
gamma-BHC (Lindane) [2C]	0.093	0.0020	mg/Kg wet	0.100		92.9	40-140	1.47	30	
4,4'-DDD	0.094	0.0040	mg/Kg wet	0.100		93.7	40-140	1.03	30	
4,4'-DDD [2C]	0.094	0.0040	mg/Kg wet	0.100		94.1	40-140	0.692	30	
4,4'-DDE	0.097	0.0040	mg/Kg wet	0.100		96.8	40-140	1.87	30	
4,4'-DDE [2C]	0.097	0.0040	mg/Kg wet	0.100		97.4	40-140	1.31	30	
4,4'-DDT	0.094	0.0040	mg/Kg wet	0.100		94.3	40-140	1.52	30	
4,4'-DDT [2C]	0.090	0.0040	mg/Kg wet	0.100		90.1	40-140	0.726	30	
Dieldrin	0.092	0.0040	mg/Kg wet	0.100		91.9	40-140	1.51	30	
Dieldrin [2C]	0.091	0.0040	mg/Kg wet	0.100		90.5	40-140	1.12	30	
Endosulfan I	0.091	0.0050	mg/Kg wet	0.100		91.0	40-140	1.77	30	
Endosulfan I [2C]	0.089	0.0050	mg/Kg wet	0.100		88.8	40-140	2.09	30	
Endosulfan II	0.092	0.0080	mg/Kg wet	0.100		92.2	40-140	1.59	30	
Endosulfan II [2C]	0.091	0.0080	mg/Kg wet	0.100		90.7	40-140	1.31	30	
Endosulfan Sulfate	0.090	0.0080	mg/Kg wet	0.100		89.9	40-140	2.11	30	
Endosulfan Sulfate [2C]	0.088	0.0080	mg/Kg wet	0.100		87.7	40-140	1.71	30	
Endrin	0.092	0.0080	mg/Kg wet	0.100		92.2	40-140	1.42	30	
Endrin [2C]	0.094	0.0080	mg/Kg wet	0.100		94.0	40-140	0.962	30	
Endrin Aldehyde	0.094	0.0080	mg/Kg wet	0.100		94.2	40-140	0.320	30	
Endrin Aldehyde [2C]	0.090	0.0080	mg/Kg wet	0.100		89.9	40-140	0.404	30	
Endrin Ketone	0.089	0.0080	mg/Kg wet	0.100		89.1	40-140	2.77	30	
Endrin Ketone [2C]	0.086	0.0080	mg/Kg wet	0.100		86.2	40-140	2.58	30	
Heptachlor	0.065	0.0050	mg/Kg wet	0.100		65.1	40-140	1.24	30	
Heptachlor [2C]	0.10	0.0050	mg/Kg wet	0.100		99.7	40-140	1.99	30	
Heptachlor Epoxide	0.088	0.0050	mg/Kg wet	0.100		87.7	40-140	1.55	30	
Heptachlor Epoxide [2C]	0.088	0.0050	mg/Kg wet	0.100		88.0	40-140	1.52	30	
Hexachlorobenzene	0.11	0.0060	mg/Kg wet	0.100		106	40-140	3.07	30	V-06
Hexachlorobenzene [2C]	0.10	0.0060	mg/Kg wet	0.100		101	40-140	1.55	30	V-06
Methoxychlor	0.089	0.050	mg/Kg wet	0.100		89.2	40-140	0.835	30	
Methoxychlor [2C]	0.090	0.050	mg/Kg wet	0.100		89.6	40-140	1.27	30	
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.176*		mg/Kg wet	0.200		87.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.180*		mg/Kg wet	0.200		90.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.176*		mg/Kg wet	0.200		87.9	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B247202 - SW-846 3546										
Blank (B247202-BLK1)				Prepared & Analyzed: 11/27/19						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.193*		mg/Kg wet	0.200		96.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.192*		mg/Kg wet	0.200		96.2	30-150			
Surrogate: Tetrachloro-m-xylene	*0.185*		mg/Kg wet	0.200		92.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.214*		mg/Kg wet	0.200		107	30-150			
LCS (B247202-BS1)				Prepared & Analyzed: 11/27/19						
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		81.2	40-140			
Aroclor-1016 [2C]	0.17	0.020	mg/Kg wet	0.200		82.8	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		74.4	40-140			
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		72.9	40-140			
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		86.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.170*		mg/Kg wet	0.200		84.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.169*		mg/Kg wet	0.200		84.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.191*		mg/Kg wet	0.200		95.7	30-150			
LCS Dup (B247202-BSD1)				Prepared & Analyzed: 11/27/19						
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		94.5	40-140	15.0	30	
Aroclor-1016 [2C]	0.19	0.020	mg/Kg wet	0.200		95.4	40-140	14.2	30	
Aroclor-1260	0.18	0.020	mg/Kg wet	0.200		88.4	40-140	17.2	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		86.6	40-140	17.2	30	
Surrogate: Decachlorobiphenyl	*0.201*		mg/Kg wet	0.200		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.197*		mg/Kg wet	0.200		98.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.195*		mg/Kg wet	0.200		97.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.216*		mg/Kg wet	0.200		108	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B247009 - SW-846 8151										
Blank (B247009-BLK1)				Prepared: 11/26/19 Analyzed: 11/27/19						
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	60	µg/kg wet							
Dalapon [2C]	ND	60	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	*77.5*		µg/kg wet	95.2		81.4	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*69.7*		µg/kg wet	95.2		73.1	30-150			
LCS (B247009-BS1)				Prepared: 11/26/19 Analyzed: 11/27/19						
2,4-D	112	25	µg/kg wet	125		89.6	40-140			
2,4-D [2C]	107	25	µg/kg wet	125		85.3	40-140			
2,4-DB	115	25	µg/kg wet	125		91.8	40-140			
2,4-DB [2C]	107	25	µg/kg wet	125		85.2	40-140			
2,4,5-TP (Silvex)	12.1	2.5	µg/kg wet	12.5		96.6	40-140			
2,4,5-TP (Silvex) [2C]	11.2	2.5	µg/kg wet	12.5		89.6	40-140			
2,4,5-T	11.9	2.5	µg/kg wet	12.5		95.2	40-140			
2,4,5-T [2C]	11.6	2.5	µg/kg wet	12.5		92.8	40-140			
Dalapon	186	62	µg/kg wet	312		59.7	40-140			
Dalapon [2C]	258	62	µg/kg wet	312		82.4	40-140			
Dicamba	12.2	2.5	µg/kg wet	12.5		97.8	40-140			
Dicamba [2C]	10.7	2.5	µg/kg wet	12.5		85.3	40-140			
Dichloroprop	118	25	µg/kg wet	125		94.2	40-140			
Dichloroprop [2C]	112	25	µg/kg wet	125		89.3	40-140			
Dinoseb	9.93	12	µg/kg wet	62.5		15.9	0-42.4			J
Dinoseb [2C]	11.1	12	µg/kg wet	62.5		17.7	0-41.1			J
MCPA	11000	2500	µg/kg wet	12500		87.9	40-140			
MCPA [2C]	9650	2500	µg/kg wet	12500		77.2	40-140			
MCPP	12500	2500	µg/kg wet	12500		99.6	40-140			
MCPP [2C]	10000	2500	µg/kg wet	12500		80.4	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	*86.0*		µg/kg wet	100		86.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*77.8*		µg/kg wet	100		77.8	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B247009 - SW-846 8151										
LCS Dup (B247009-BSD1)				Prepared: 11/26/19 Analyzed: 11/27/19						
2,4-D	106	25	µg/kg wet	125		84.9	40-140	5.42	30	
2,4-D [2C]	103	25	µg/kg wet	125		82.2	40-140	3.77	30	
2,4-DB	105	25	µg/kg wet	125		84.4	40-140	8.42	30	
2,4-DB [2C]	96.3	25	µg/kg wet	125		77.1	40-140	10.1	30	
2,4,5-TP (Silvex)	11.5	2.5	µg/kg wet	12.5		91.8	40-140	5.15	30	
2,4,5-TP (Silvex) [2C]	10.6	2.5	µg/kg wet	12.5		84.9	40-140	5.42	30	
2,4,5-T	11.2	2.5	µg/kg wet	12.5		89.2	40-140	6.48	30	
2,4,5-T [2C]	10.9	2.5	µg/kg wet	12.5		86.9	40-140	6.52	30	
Dalapon	226	62	µg/kg wet	312		72.2	40-140	19.1	30	
Dalapon [2C]	236	62	µg/kg wet	312		75.6	40-140	8.66	30	
Dicamba	11.6	2.5	µg/kg wet	12.5		92.4	40-140	5.64	30	
Dicamba [2C]	10.4	2.5	µg/kg wet	12.5		82.9	40-140	2.85	30	
Dichloroprop	111	25	µg/kg wet	125		88.5	40-140	6.25	30	
Dichloroprop [2C]	107	25	µg/kg wet	125		85.3	40-140	4.65	30	
Dinoseb	11.9	12	µg/kg wet	62.5		19.0	0-42.4	17.9	30	J
Dinoseb [2C]	13.3	12	µg/kg wet	62.5		21.2	0-41.1	18.1	30	
MCPA	10500	2500	µg/kg wet	12500		84.1	40-140	4.47	30	
MCPA [2C]	9130	2500	µg/kg wet	12500		73.1	40-140	5.49	30	
MCPP	12900	2500	µg/kg wet	12500		103	40-140	3.75	30	
MCPP [2C]	9670	2500	µg/kg wet	12500		77.3	40-140	3.87	30	
Surrogate: 2,4-Dichlorophenylacetic acid	*80.8*		µg/kg wet	100		80.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*74.1*		µg/kg wet	100		74.1	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246802 - SW-846 3050B										
Blank (B246802-BLK1)				Prepared: 11/22/19 Analyzed: 11/24/19						
Aluminum	ND	3.3	mg/Kg wet							
Antimony	ND	1.7	mg/Kg wet							
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Boron	1.9	3.3	mg/Kg wet							J
Cadmium	0.096	0.17	mg/Kg wet							J
Chromium	ND	0.33	mg/Kg wet							
Cobalt	ND	1.7	mg/Kg wet							
Copper	ND	0.33	mg/Kg wet							
Iron	ND	1.7	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Manganese	ND	0.33	mg/Kg wet							
Molybdenum	ND	3.3	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Thallium	ND	1.7	mg/Kg wet							
Tin	1.4	3.3	mg/Kg wet							J
Vanadium	ND	0.67	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
LCS (B246802-BS1)				Prepared: 11/22/19 Analyzed: 11/24/19						
Aluminum	6070	9.9	mg/Kg wet	7700		78.8	45.3-154.5			
Antimony	26.7	5.0	mg/Kg wet	40.0		66.8	6.3-208			
Arsenic	119	5.0	mg/Kg wet	125		95.1	82.4-116.8			
Barium	596	5.0	mg/Kg wet	529		113	81.7-118.5			
Beryllium	153	0.50	mg/Kg wet	155		98.6	82.6-116.8			
Boron	189	9.9	mg/Kg wet	202		93.6	69.8-130.2			
Cadmium	40.5	0.50	mg/Kg wet	37.7		107	82.2-117.5			
Chromium	52.8	0.99	mg/Kg wet	58.3		90.6	82-118.2			
Cobalt	200	5.0	mg/Kg wet	196		102	83.7-116.8			
Copper	79.1	0.99	mg/Kg wet	78.0		101	83.7-116.3			
Iron	10500	5.0	mg/Kg wet	13800		76.4	59.5-140.6			
Lead	103	1.5	mg/Kg wet	111		92.5	82.3-117.1			
Manganese	290	0.99	mg/Kg wet	310		93.6	81.6-118.1			
Molybdenum	76.2	9.9	mg/Kg wet	78.0		97.6	79.7-120.1			
Nickel	342	0.99	mg/Kg wet	333		103	82.6-117.4			
Selenium	247	9.9	mg/Kg wet	251		98.2	78.9-121.5			
Silver	27.1	0.99	mg/Kg wet	27.2		99.7	79-121			
Thallium	241	5.0	mg/Kg wet	241		100	80.5-119.1			
Tin	132	9.9	mg/Kg wet	139		94.9	78.4-122.3			
Vanadium	118	2.0	mg/Kg wet	125		94.2	78.6-120.8			
Zinc	334	2.0	mg/Kg wet	351		95.2	80.3-119.4			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246802 - SW-846 3050B										
LCS Dup (B246802-BSD1)				Prepared: 11/22/19 Analyzed: 11/24/19						
Aluminum	6330	10	mg/Kg wet	7700		82.3	45.3-154.5	4.33	30	
Antimony	28.9	5.1	mg/Kg wet	40.0		72.3	6.3-208	7.92	30	
Arsenic	115	5.1	mg/Kg wet	125		92.2	82.4-116.8	3.11	30	
Barium	613	5.1	mg/Kg wet	529		116	81.7-118.5	2.74	20	
Beryllium	148	0.51	mg/Kg wet	155		95.6	82.6-116.8	3.03	30	
Boron	188	10	mg/Kg wet	202		93.2	69.8-130.2	0.407	30	
Cadmium	36.5	0.51	mg/Kg wet	37.7		96.9	82.2-117.5	10.3	20	
Chromium	51.3	1.0	mg/Kg wet	58.3		87.9	82-118.2	2.97	30	
Cobalt	194	5.1	mg/Kg wet	196		99.0	83.7-116.8	2.91	20	
Copper	76.3	1.0	mg/Kg wet	78.0		97.8	83.7-116.3	3.61	30	
Iron	10700	5.1	mg/Kg wet	13800		77.7	59.5-140.6	1.70	30	
Lead	102	1.5	mg/Kg wet	111		92.3	82.3-117.1	0.174	30	
Manganese	318	1.0	mg/Kg wet	310		103	81.6-118.1	9.13	30	
Molybdenum	75.6	10	mg/Kg wet	78.0		96.9	79.7-120.1	0.782	30	
Nickel	331	1.0	mg/Kg wet	333		99.5	82.6-117.4	3.10	30	
Selenium	241	10	mg/Kg wet	251		96.2	78.9-121.5	2.09	30	
Silver	26.9	1.0	mg/Kg wet	27.2		98.9	79-121	0.756	30	
Thallium	227	5.1	mg/Kg wet	241		94.4	80.5-119.1	5.76	30	
Tin	128	10	mg/Kg wet	139		92.0	78.4-122.3	3.17	30	
Vanadium	115	2.0	mg/Kg wet	125		92.3	78.6-120.8	2.02	30	
Zinc	321	2.0	mg/Kg wet	351		91.4	80.3-119.4	4.08	30	
MRL Check (B246802-MRL1)				Prepared: 11/22/19 Analyzed: 11/24/19						
Lead	0.584	0.50	mg/Kg wet	0.497		118	80-120			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B246785 - % Solids										
Duplicate (B246785-DUP1)	**Source: 19K1179-01**			Prepared: 11/22/19 Analyzed: 11/23/19						
% Solids	93.3		% Wt		94.1			0.886	20	

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BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM1	Analyzed:	11/25/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.95
Endrin [1]	3.94

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.91
Endrin [2]	4.12

BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM2	Analyzed:	11/25/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.96
Endrin [1]	3.30

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.96
Endrin [2]	3.47

BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM3	Analyzed:	11/25/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.40
Endrin [1]	4.23

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BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM3	Analyzed:	11/25/2019

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.41
Endrin [2]	4.49

BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM4	Analyzed:	11/26/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	6.13
Endrin [1]	5.03

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	6.17
Endrin [2]	5.25

BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM5	Analyzed:	11/26/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.21
Endrin [1]	4.88

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.22
Endrin [2]	5.23

BREAKDOWN REPORT

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BREAKDOWN REPORT

Lab Sample ID:	S043025-PEM6	Analyzed:	11/26/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.23
Endrin [1]	2.96

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.26
Endrin [2]	3.42

BREAKDOWN REPORT

Lab Sample ID:	S043106-PEM1	Analyzed:	11/26/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.67
Endrin [1]	8.26

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.55
Endrin [2]	8.97

BREAKDOWN REPORT

Lab Sample ID:	S043106-PEM2	Analyzed:	11/26/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.12
Endrin [1]	5.21

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BREAKDOWN REPORT

Lab Sample ID:	S043106-PEM2	Analyzed:	11/26/2019

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.75
Endrin [2]	5.68

BREAKDOWN REPORT

Lab Sample ID:	S043106-PEM3	Analyzed:	11/27/2019

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.99
Endrin [1]	3.89

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.72
Endrin [2]	4.26

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B246804-BS1 Date(s) Analyzed: 11/25/2019 11/25/2019

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.312	7.284	7.344	0.093	
	2	7.487	7.457	7.517	0.093	0.0
4,4'-DDE	1	6.869	6.840	6.900	0.095	
	2	7.047	7.017	7.077	0.096	1.1
4,4'-DDT	1	7.526	7.498	7.558	0.093	
	2	7.732	7.702	7.762	0.089	4.4
Alachlor	1	6.300	6.271	6.331	0.082	
	2	6.200	6.169	6.229	0.078	5.0
Aldrin	1	6.208	6.179	6.239	0.089	
	2	6.272	6.243	6.303	0.090	1.1
alpha-BHC	1	5.490	5.460	5.520	0.089	
	2	5.536	5.506	5.566	0.096	7.6
alpha-Chlordane	1	6.814	6.786	6.846	0.090	
	2	6.919	6.889	6.949	0.092	2.2
beta-BHC	1	5.744	5.715	5.775	0.090	
	2	5.817	5.785	5.845	0.088	3.4
delta-BHC	1	5.862	5.832	5.892	0.078	
	2	6.011	5.980	6.040	0.093	17.5
Dieldrin	1	7.090	7.060	7.120	0.091	
	2	7.165	7.135	7.195	0.090	1.1
Endosulfan I	1	6.914	6.885	6.945	0.089	
	2	6.960	6.930	6.990	0.087	2.3
Endosulfan II	1	7.430	7.402	7.462	0.091	
	2	7.559	7.529	7.589	0.090	1.1
Endosulfan Sulfate	1	8.078	8.048	8.108	0.088	
	2	8.034	8.003	8.063	0.086	2.3
Endrin	1	7.262	7.233	7.293	0.091	
	2	7.395	7.366	7.426	0.093	2.2
Endrin Aldehyde	1	7.752	7.722	7.782	0.094	
	2	7.823	7.794	7.854	0.089	5.5
Endrin Ketone	1	8.267	8.237	8.297	0.087	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B246804-BS1 Date(s) Analyzed: 11/25/2019 11/25/2019

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.393	8.362	8.422	0.084	3.5
gamma-BHC (Lindane)	1	5.690	5.661	5.721	0.087	
	2	5.762	5.732	5.792	0.092	5.6
gamma-Chlordane	1	6.718	6.690	6.750	0.088	
	2	6.812	6.782	6.842	0.095	7.7
Heptachlor	1	6.004	5.974	6.034	0.064	
	2	6.052	6.022	6.082	0.098	42.0
Heptachlor Epoxide	1	6.629	6.600	6.660	0.086	
	2	6.675	6.646	6.706	0.087	1.2
Hexachlorobenzene	1	5.384	5.354	5.414	0.10	
	2	5.448	5.418	5.478	0.099	1.0
Methoxychlor	1	7.906	7.876	7.936	0.088	
	2	8.244	8.214	8.274	0.088	1.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B246804-BSD1 Date(s) Analyzed: 11/25/2019 11/25/2019

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.313	7.284	7.344	0.094	
	2	7.487	7.457	7.517	0.094	0.0
4,4'-DDE	1	6.870	6.840	6.900	0.097	
	2	7.047	7.017	7.077	0.097	0.0
4,4'-DDT	1	7.526	7.498	7.558	0.094	
	2	7.732	7.702	7.762	0.090	4.4
Alachlor	1	6.301	6.271	6.331	0.085	
	2	6.200	6.169	6.229	0.080	6.1
Aldrin	1	6.209	6.179	6.239	0.090	
	2	6.273	6.243	6.303	0.091	1.1
alpha-BHC	1	5.490	5.460	5.520	0.091	
	2	5.537	5.506	5.566	0.098	6.3
alpha-Chlordane	1	6.815	6.786	6.846	0.092	
	2	6.920	6.889	6.949	0.094	2.2
beta-BHC	1	5.745	5.715	5.775	0.093	
	2	5.817	5.785	5.845	0.090	3.3
delta-BHC	1	5.863	5.832	5.892	0.080	
	2	6.011	5.980	6.040	0.094	16.1
Dieldrin	1	7.091	7.060	7.120	0.092	
	2	7.165	7.135	7.195	0.091	1.1
Endosulfan I	1	6.914	6.885	6.945	0.091	
	2	6.961	6.930	6.990	0.089	2.2
Endosulfan II	1	7.431	7.402	7.462	0.092	
	2	7.559	7.529	7.589	0.091	1.1
Endosulfan Sulfate	1	8.078	8.048	8.108	0.090	
	2	8.034	8.003	8.063	0.088	2.3
Endrin	1	7.263	7.233	7.293	0.092	
	2	7.396	7.366	7.426	0.094	2.2
Endrin Aldehyde	1	7.751	7.722	7.782	0.094	
	2	7.823	7.794	7.854	0.090	4.4
Endrin Ketone	1	8.267	8.237	8.297	0.089	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B246804-BSD1 Date(s) Analyzed: 11/25/2019 11/25/2019

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.393	8.362	8.422	0.086	3.4
gamma-BHC (Lindane)	1	5.691	5.661	5.721	0.090	
	2	5.763	5.732	5.792	0.093	3.3
gamma-Chlordane	1	6.719	6.690	6.750	0.090	
	2	6.812	6.782	6.842	0.096	6.5
Heptachlor	1	6.005	5.974	6.034	0.065	
	2	6.053	6.022	6.082	0.10	42.4
Heptachlor Epoxide	1	6.630	6.600	6.660	0.088	
	2	6.675	6.646	6.706	0.088	0.0
Hexachlorobenzene	1	5.384	5.354	5.414	0.11	
	2	5.448	5.418	5.478	0.10	9.5
Methoxychlor	1	7.907	7.876	7.936	0.089	
	2	8.245	8.214	8.274	0.090	1.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B247009-BS1 Date(s) Analyzed: 11/27/2019 11/27/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	14.948	0.000	0.000	11.9	
	2	14.924	0.000	0.000	11.6	3.4
2,4,5-TP (Silvex)	1	14.345	0.000	0.000	12.1	
	2	14.100	0.000	0.000	11.2	6.9
2,4-D	1	12.576	0.000	0.000	112	
	2	12.426	0.000	0.000	107	2.8
2,4-DB	1	16.114	0.000	0.000	115	
	2	16.016	0.000	0.000	107	11.5
Dalapon	1	4.153	0.000	0.000	186	
	2	3.771	0.000	0.000	258	30.4
Dicamba	1	10.575	0.000	0.000	12.2	
	2	10.338	0.000	0.000	10.7	11.5
Dichloroprop	1	12.093	0.000	0.000	118	
	2	11.781	0.000	0.000	112	6.9
Dinoseb	1	17.257	0.000	0.000	9.93	
	2	16.605	0.000	0.000	11.1	11.4
MCPA	1	11.353	0.000	0.000	11000	
	2	11.130	0.000	0.000	9650	13.1
MCPP	1	11.045	0.000	0.000	12500	
	2	10.668	0.000	0.000	10000	26.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS Dup

Lab Sample ID: B247009-BSD1 Date(s) Analyzed: 11/27/2019 11/27/2019

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-T	1	14.948	0.000	0.000	11.2	
	2	14.925	0.000	0.000	10.9	0.9
2,4,5-TP (Silvex)	1	14.345	0.000	0.000	11.5	
	2	14.100	0.000	0.000	10.6	12.4
2,4-D	1	12.576	0.000	0.000	106	
	2	12.426	0.000	0.000	103	6.6
2,4-DB	1	16.114	0.000	0.000	105	
	2	16.015	0.000	0.000	96.3	13.3
Dalapon	1	4.152	0.000	0.000	226	
	2	3.770	0.000	0.000	236	2.6
Dicamba	1	10.575	0.000	0.000	11.6	
	2	10.338	0.000	0.000	10.4	14.3
Dichloroprop	1	12.092	0.000	0.000	111	
	2	11.780	0.000	0.000	107	2.8
Dinoseb	1	17.257	0.000	0.000	11.9	
	2	16.603	0.000	0.000	13.3	10.3
MCPA	1	11.353	0.000	0.000	10500	
	2	11.128	0.000	0.000	9130	18.6
MCPP	1	11.044	0.000	0.000	12900	
	2	10.666	0.000	0.000	9670	29.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B247202-BS1 Date(s) Analyzed: 11/27/2019 11/27/2019

Instrument ID (1): ECD4 Instrument ID (2): ECD4

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.16	
	2	0.000	0.000	0.000	0.17	6.1
Aroclor-1260	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.15	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B247202-BSD1 Date(s) Analyzed: 11/27/2019 11/27/2019

Instrument ID (1): ECD4 Instrument ID (2): ECD4

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.19	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.18	
	2	0.000	0.000	0.000	0.17	5.7

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Molybdenum	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Tin	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA

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Analyte	Certifications
SW-846 8081B in Soil	
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA

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Analyte	Certifications
SW-846 8081B in Water	
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT

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Analyte	Certifications
SW-846 8151A in Soil	
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
SW-846 8260C-D in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
tert-Butyl Alcohol (TBA)	NY,ME
n-Butylbenzene	CT,NH,NY,ME,VA

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Analyte	Certifications
SW-846 8260C-D in Soil	
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
1,2-Dibromo-3-chloropropane (DBCP)	NY,ME
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
trans-1,4-Dichloro-2-butene	NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Diethyl Ether	ME
1,4-Dioxane	NY,ME
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl Acetate	NY,ME
Methyl tert-Butyl Ether (MTBE)	NY,ME,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY,ME
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA

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Analyte	Certifications
SW-846 8260C-D in Soil	
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D-E in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA

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Analyte	Certifications
SW-846 8270D-E in Soil	
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270D-E in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA

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Analyte	Certifications
SW-846 8270D-E in Water	
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D-E in Water	
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

39 Spruce Street
East Longmeadow, MA 01028

Company Name: AND Remediation
Address: 74 Hudson River Rd
Phone: 518 937 0473
Project Name: BASF Rensselaer
Project Location: Rensselaer
Project Number: 1
Project Manager: Will Lindheimer
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: Anna Deer

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: WIP@aland-remed.com
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1] Matrix Code	Conc Code	SVOCs, nwb, pest, PCBs, metals	VOC (only)	# of Containers	[2] Preservation Code	[3] Container Code
								1	6			
								/	B			
								A	✓			
1	AQF113	11/19/19	12:20	✓		S	C	✓				
2	AQF113A	11/19/19	12:30		✓	S	C		✓			
3	AQF113B	11/19/19	12:40		✓	S	C		✓			

ANALYSIS REQUESTED

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:
Per client request run report the same as 19J0333 11/22/19

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 11/19/19 1530	
Received by: (signature)	Date/Time: 11-19-19 1400	
Relinquished by: (signature)	Date/Time: 11-19-19 1500	
Received by: (signature)	Date/Time: 11/20/19 10:18	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☐ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Table of Contents

FedEx

777026250880

Delivered
Wednesday 11/20/2019 at 10:18 am

DELIVERED

Signed for by: R.PETRAITIS

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM
ALBANY, NY US

TO
EAST LONGMEADOW, MA US

Shipment Facts

TRACKING NUMBER
777026250880

SERVICE
FedEx Priority Overnight

WEIGHT
9 lbs / 4.08 kgs

DIMENSIONS
13x10x9 in.

DELIVERED TO
Shipping/Receiving

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
9 lbs / 4.08 kgs

TERMS
Recipient

SHIPPER REFERENCE
85

PACKAGING
Your Packaging

SPECIAL HANDLING SECTION
Deliver Weekday

STANDARD TRANSIT
11/20/2019 by 10:30 am

SHIP DATE
Tue 11/19/2019

ACTUAL DELIVERY
Wed 11/20/2019 10:18 am

Travel History

Local Scan Time

Wednesday , 11/20/2019

10:18 am	EAST LONGMEADOW, MA	Delivered
7:40 am	WINDSOR LOCKS, CT	On FedEx vehicle for delivery
7:30 am	WINDSOR LOCKS, CT	At local FedEx facility

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

UDA 11/20/19

Client Land remediation

Received By JDA Date 11/20/19 Time 1500 10.18

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

By Gun # 5 Actual Temp - 4.0

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	1
Meoh-	3	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	3	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

no % solids jar received for samples 2 + 3.

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 12/20/2019	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 20-D PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Aquatic Fill Materials Analytical Testing		1	02 30 00		see below
2	Aquatic Fill Materials Geotechnical Testing		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for subaqueous restoration cover material	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: December 20, 2019

Additional Notes:

Proposed Aquatic fill is proposed for the Subaqueous Restoration Cover Material based on its material properties.
There is estimated to be 12,100 CY of Restoration Cover Material required for the BASF project. 1300 CY of Type B and 10,800 CY of Type A (previously approved).
Attached is the analytical testing (1 comp, 2 grabs) for the next 10,000 CY (1 comp, 2 discrete grabs / 5000 CY frequency). Total tested with these samples = 15,000CY
Attached are 4 geotechnical test reports for the next 15,000 CY (1 every additional 5000). Total geotech tested with this sample = 20,000CY
The remainder of the Restoration Cover Type A Material is represented by Aquafill Sample No. 6 and Aquafill Sample No. 7. Also included is the additional analytical testing for the remainder of the Restoration Cover Type A Materials.
2 Seperate sources of highly organic peat were sampled for geotechnical properties and analytical testing. A blend of Valente Type A Restoration Cover and Peat were sampled. LRI will utilize the Hudson Peat Source and Valente's material to create the Type B Restoration Cover Material that will be used in the SAV area. LRI will ensure all materials are properly blended using a mechanical mixer prior to placement. 1,300 CY of Type B Restoration Cover Material is anticipated to be placed in the SAV Area.

RJ Valente Restoration Cover Material Type A

Geotechnical Testing – Aquafill 6 and Aquafill 7

Proposed for Remaining Restoration Cover Material Type A

Aquafill 5 previously approved

Analytical Testing – GCE87863 Lab Report

AQ Fill 4, AQ Fill 4A, AQ Fill 4B

AQ Fill 5, AQ Fill 5A, AQ Fill 5B

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 12/17/19
SAMPLE NUMBER: 19123
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #6**
MATERIAL DESCRIPTION: SAND, fine/medium; little Silt/Clay; trace fine Gravel
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	2.8	97.2		#50	55.9	44.1	
3"				**#4**	3.7	**96.3**	**80 - 90**	#60			
2 1/2"				1/8"				#80			
2"				#8	6.4	93.6		#100	80.6	19.4	
1 1/2"				#10	7.7	92.3		#140			
1"		**100.0**	**100 - 100**	#16	10.7	89.3		**#200**	87.5	**12.5**	**10 - 20**
3/4"		100.0		#20				SILT			
1/2"	0.6	99.4		#30	22.1	77.9		CLAY			
3/8"	1.6	98.4		#40	32.5	67.5		COLLOID			

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ORGANIC CONTENT	pH VALUE
3.7%	**83.8%**	**12.5%**	**1.6%**	**6.7**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 12/17/19
SAMPLE NUMBER: 19124
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE PIT: AQUAFILL SAMPLE #7**
MATERIAL DESCRIPTION: SAND, medium/fine; trace Silt/Clay; trace fine Gravel
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	0.4	99.6		#50	45.6	54.4	
3"				**#4**	0.9	**99.1**	**80 - 90**	#60			
2 1/2"				1/8"				#80			
2"				#8	3.5	96.5		#100	76.4	23.6	
1 1/2"				#10	4.8	95.2		#140			
1"		**100.0**	**100 - 100**	#16	7.6	92.4		**#200**	86.0	**14.0**	**10 - 20**
3/4"				#20				SILT			
1/2"		100.0		#30	16.8	83.2		CLAY			
3/8"	0.1	99.9		#40	25.6	74.4		COLLOID			

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ORGANIC CONTENT	pH VALUE
0.9%	**85.1%**	**14.0%**	**1.7%**	**6.6**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:30
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87863

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.32	0.32	mg/Kg	1	12/14/19	CPP	SW6010D
Arsenic	3.43	0.63	mg/Kg	1	12/14/19	CPP	SW6010D
Barium	36.6	0.32	mg/Kg	1	12/14/19	EK	SW6010D
Beryllium	0.31	0.25	mg/Kg	1	12/14/19	CPP	SW6010D
Cadmium	< 0.32	0.32	mg/Kg	1	12/14/19	CPP	SW6010D
Chromium	8.24	0.32	mg/Kg	1	12/14/19	EK	SW6010D
Copper	14.1	0.6	mg/kg	1	12/14/19	CPP	SW6010D
Manganese	275	3.2	mg/Kg	10	12/17/19	TH	SW6010D
Nickel	11.2	0.32	mg/Kg	1	12/14/19	CPP	SW6010D
Lead	4.47	0.32	mg/Kg	1	12/14/19	CPP	SW6010D
Selenium	< 1.3	1.3	mg/Kg	1	12/14/19	CPP	SW6010D
Zinc	34.1	0.6	mg/Kg	1	12/14/19	CPP	SW6010D
Percent Solid	93		%		12/13/19	JS	SW846-%Solid
Soil Extraction for PCB	Completed				12/13/19	MM/LL	SW3545A
Soil Extraction for Pesticides	Completed				12/13/19	MM/LL	SW3545A
Soil Extraction for SVOA	Completed				12/13/19	RR/LA	SW3545A
Soil Extraction for Herbicide	Completed				12/13/19	J/D	SW8151A
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Chlorinated Herbicides							
2,4,5-T	ND	0.089	mg/Kg	10	12/16/19	JRB	SW8151A
2,4,5-TP (Silvex)	ND	0.089	mg/Kg	10	12/16/19	JRB	SW8151A
2,4-D	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A
2,4-DB	ND	1.8	mg/Kg	10	12/16/19	JRB	SW8151A
Dalapon	ND	0.089	mg/Kg	10	12/16/19	JRB	SW8151A
Dicamba	ND	0.089	mg/Kg	10	12/16/19	JRB	SW8151A
Dichloroprop	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A
Dinoseb	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% DCAA	55		%	10	12/16/19	JRB	30 - 150 %
% DCAA (Confirmation)	58		%	10	12/16/19	JRB	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1221	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1232	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1242	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1248	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1254	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1260	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1262	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1268	ND	0.35	mg/Kg	10	12/16/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	68		%	10	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	77		%	10	12/16/19	SC	30 - 150 %
% TCMX	66		%	10	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	64		%	10	12/16/19	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	0.0021	mg/Kg	2	12/17/19	CG	SW8081B
4,4' -DDE	ND	0.0021	mg/Kg	2	12/17/19	CG	SW8081B
4,4' -DDT	ND	0.0021	mg/Kg	2	12/17/19	CG	SW8081B
a-BHC	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
a-Chlordane	ND	0.0035	mg/Kg	2	12/17/19	CG	SW8081B
Aldrin	ND	0.0035	mg/Kg	2	12/17/19	CG	SW8081B
b-BHC	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Chlordane	ND	0.035	mg/Kg	2	12/17/19	CG	SW8081B
d-BHC	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Dieldrin	ND	0.0035	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan I	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan II	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan sulfate	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Endrin	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Endrin aldehyde	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Endrin ketone	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
g-BHC	ND	0.0014	mg/Kg	2	12/17/19	CG	SW8081B
g-Chlordane	ND	0.0035	mg/Kg	2	12/17/19	CG	SW8081B
Heptachlor	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Heptachlor epoxide	ND	0.0071	mg/Kg	2	12/17/19	CG	SW8081B
Methoxychlor	ND	0.035	mg/Kg	2	12/17/19	CG	SW8081B
Toxaphene	ND	0.14	mg/Kg	2	12/17/19	CG	SW8081B
QA/QC Surrogates							
% DCBP	62		%	2	12/17/19	CG	30 - 150 %
% DCBP (Confirmation)	46		%	2	12/17/19	CG	30 - 150 %
% TCMX	53		%	2	12/17/19	CG	30 - 150 %
% TCMX (Confirmation)	51		%	2	12/17/19	CG	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
1,3-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,4-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dimethylphenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dinitrophenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dinitrotoluene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,6-Dinitrotoluene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Chloronaphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Chlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Methylnaphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Nitroaniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
2-Nitrophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
3-Nitroaniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Chloroaniline	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Nitroaniline	ND	0.57	mg/Kg	1	12/15/19	WB	SW8270D
4-Nitrophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acenaphthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acenaphthylene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acetophenone	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Aniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benz(a)anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzidine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(a)pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(b)fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(ghi)perylene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(k)fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzoic acid	ND	0.71	mg/Kg	1	12/15/19	WB	SW8270D
Benzyl butyl phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Carbazole	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Chrysene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Dibenzofuran	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Diethyl phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Dimethylphthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Di-n-butylphthalate	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Di-n-octylphthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Fluorene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorobutadiene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachloroethane	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Isophorone	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Naphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Nitrobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodimethylamine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Pentachloronitrobenzene	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Pentachlorophenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Phenanthrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Phenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Pyridine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	43		%	1	12/15/19	WB	30 - 130 %
% 2-Fluorobiphenyl	49		%	1	12/15/19	WB	30 - 130 %
% 2-Fluorophenol	44		%	1	12/15/19	WB	30 - 130 %
% Nitrobenzene-d5	46		%	1	12/15/19	WB	30 - 130 %
% Phenol-d5	47		%	1	12/15/19	WB	30 - 130 %
% Terphenyl-d14	53		%	1	12/15/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

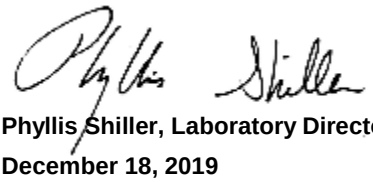
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:35
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87864

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Hexanone	ND	0.021	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.021	mg/Kg	1	12/14/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4A

Phoenix I.D.: CE87864

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.021	mg/Kg	1	12/14/19	JLI	SW8260C	
Acrylonitrile	ND	0.0082	mg/Kg	1	12/14/19	JLI	SW8260C	
Benzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromochloromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromodichloromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromoform	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromomethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon Disulfide	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Chlorobenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroform	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromochloromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromomethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Ethylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Isopropylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
m&p-Xylene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.021	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.0082	mg/Kg	1	12/14/19	JLI	SW8260C	
Methylene chloride	ND	0.0082	mg/Kg	1	12/14/19	JLI	SW8260C	
Naphthalene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Butylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Propylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
o-Xylene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Styrene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrachloroethene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.0082	mg/Kg	1	12/14/19	JLI	SW8260C	1
Toluene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Total Xylenes	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.0082	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichloroethene	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
Vinyl chloride	ND	0.0041	mg/Kg	1	12/14/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	12/14/19	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	12/14/19	JLI	70 - 130 %	
% Dibromofluoromethane	95		%	1	12/14/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4A

Phoenix I.D.: CE87864

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	98		%	1	12/14/19	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	0.062	mg/Kg	1	12/14/19	JLI	SW8260C	
Field Extraction	Completed				12/13/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:40
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87865

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Hexanone	ND	0.019	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.019	mg/Kg	1	12/14/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4B

Phoenix I.D.: CE87865

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.019	mg/Kg	1	12/14/19	JLI	SW8260C	
Acrylonitrile	ND	0.0075	mg/Kg	1	12/14/19	JLI	SW8260C	
Benzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromochloromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromodichloromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromoform	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromomethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon Disulfide	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Chlorobenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroform	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromochloromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromomethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Ethylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Isopropylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
m&p-Xylene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.019	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.0075	mg/Kg	1	12/14/19	JLI	SW8260C	
Methylene chloride	ND	0.0075	mg/Kg	1	12/14/19	JLI	SW8260C	
Naphthalene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Butylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Propylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
o-Xylene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Styrene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrachloroethene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.0075	mg/Kg	1	12/14/19	JLI	SW8260C	1
Toluene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Total Xylenes	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.0075	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichloroethene	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
Vinyl chloride	ND	0.0038	mg/Kg	1	12/14/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	98		%	1	12/14/19	JLI	70 - 130 %	
% Bromofluorobenzene	97		%	1	12/14/19	JLI	70 - 130 %	
% Dibromofluoromethane	95		%	1	12/14/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 4B

Phoenix I.D.: CE87865

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	98		%	1	12/14/19	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	0.056	mg/Kg	1	12/14/19	JLI	SW8260C	
Field Extraction	Completed				12/13/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:45
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87866

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.35	0.35	mg/Kg	1	12/14/19	CPP	SW6010D
Arsenic	4.73	0.69	mg/Kg	1	12/14/19	CPP	SW6010D
Barium	41.5	0.35	mg/Kg	1	12/14/19	EK	SW6010D
Beryllium	0.47	0.28	mg/Kg	1	12/14/19	CPP	SW6010D
Cadmium	< 0.35	0.35	mg/Kg	1	12/14/19	CPP	SW6010D
Chromium	13.5	0.35	mg/Kg	1	12/14/19	EK	SW6010D
Copper	19.6	0.7	mg/kg	1	12/14/19	CPP	SW6010D
Manganese	305	3.5	mg/Kg	10	12/17/19	TH	SW6010D
Nickel	15.6	0.35	mg/Kg	1	12/14/19	CPP	SW6010D
Lead	7.90	0.35	mg/Kg	1	12/14/19	CPP	SW6010D
Selenium	< 1.4	1.4	mg/Kg	1	12/14/19	CPP	SW6010D
Zinc	41.4	0.7	mg/Kg	1	12/14/19	CPP	SW6010D
Percent Solid	90		%		12/13/19	JS	SW846-%Solid
Soil Extraction for PCB	Completed				12/13/19	MM/LL	SW3545A
Soil Extraction for Pesticides	Completed				12/13/19	MM/LL	SW3545A
Soil Extraction for SVOA	Completed				12/13/19	RR/LA	SW3545A
Soil Extraction for Herbicide	Completed				12/13/19	J/D	SW8151A
Total Metals Digest	Completed				12/13/19	JJ/AG	SW3050B
Chlorinated Herbicides							
2,4,5-T	ND	0.091	mg/Kg	10	12/16/19	JRB	SW8151A
2,4,5-TP (Silvex)	ND	0.091	mg/Kg	10	12/16/19	JRB	SW8151A
2,4-D	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A
2,4-DB	ND	1.8	mg/Kg	10	12/16/19	JRB	SW8151A
Dalapon	ND	0.091	mg/Kg	10	12/16/19	JRB	SW8151A
Dicamba	ND	0.091	mg/Kg	10	12/16/19	JRB	SW8151A
Dichloroprop	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A
Dinoseb	ND	0.18	mg/Kg	10	12/16/19	JRB	SW8151A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% DCAA	55		%	10	12/16/19	JRB	30 - 150 %
% DCAA (Confirmation)	57		%	10	12/16/19	JRB	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1221	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1232	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1242	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1248	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1254	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1260	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1262	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
PCB-1268	ND	0.36	mg/Kg	10	12/16/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	77		%	10	12/16/19	SC	30 - 150 %
% DCBP (Confirmation)	79		%	10	12/16/19	SC	30 - 150 %
% TCMX	71		%	10	12/16/19	SC	30 - 150 %
% TCMX (Confirmation)	70		%	10	12/16/19	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	0.0022	mg/Kg	2	12/17/19	CG	SW8081B
4,4' -DDE	ND	0.0022	mg/Kg	2	12/17/19	CG	SW8081B
4,4' -DDT	ND	0.0022	mg/Kg	2	12/17/19	CG	SW8081B
a-BHC	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
a-Chlordane	ND	0.0036	mg/Kg	2	12/17/19	CG	SW8081B
Aldrin	ND	0.0036	mg/Kg	2	12/17/19	CG	SW8081B
b-BHC	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Chlordane	ND	0.036	mg/Kg	2	12/17/19	CG	SW8081B
d-BHC	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Dieldrin	ND	0.0036	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan I	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan II	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Endosulfan sulfate	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Endrin	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Endrin aldehyde	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Endrin ketone	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
g-BHC	ND	0.0014	mg/Kg	2	12/17/19	CG	SW8081B
g-Chlordane	ND	0.0036	mg/Kg	2	12/17/19	CG	SW8081B
Heptachlor	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Heptachlor epoxide	ND	0.0072	mg/Kg	2	12/17/19	CG	SW8081B
Methoxychlor	ND	0.036	mg/Kg	2	12/17/19	CG	SW8081B
Toxaphene	ND	0.14	mg/Kg	2	12/17/19	CG	SW8081B
QA/QC Surrogates							
% DCBP	75		%	2	12/17/19	CG	30 - 150 %
% DCBP (Confirmation)	55		%	2	12/17/19	CG	30 - 150 %
% TCMX	64		%	2	12/17/19	CG	30 - 150 %
% TCMX (Confirmation)	55		%	2	12/17/19	CG	30 - 150 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
1,3-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
1,4-Dichlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dichlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dimethylphenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dinitrophenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
2,4-Dinitrotoluene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2,6-Dinitrotoluene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Chloronaphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Chlorophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Methylnaphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
2-Nitroaniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
2-Nitrophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
3-Nitroaniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Chloroaniline	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
4-Nitroaniline	ND	0.57	mg/Kg	1	12/15/19	WB	SW8270D
4-Nitrophenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acenaphthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acenaphthylene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Acetophenone	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Aniline	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benz(a)anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzidine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(a)pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(b)fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(ghi)perylene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzo(k)fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Benzoic acid	ND	0.72	mg/Kg	1	12/15/19	WB	SW8270D
Benzyl butyl phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Carbazole	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Chrysene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Dibenzofuran	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Diethyl phthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Dimethylphthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Di-n-butylphthalate	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Di-n-octylphthalate	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Fluoranthene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Fluorene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorobutadiene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Hexachloroethane	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Isophorone	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Naphthalene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Nitrobenzene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodimethylamine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Pentachloronitrobenzene	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Pentachlorophenol	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
Phenanthrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Phenol	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Pyrene	ND	0.25	mg/Kg	1	12/15/19	WB	SW8270D
Pyridine	ND	0.36	mg/Kg	1	12/15/19	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	55		%	1	12/15/19	WB	30 - 130 %
% 2-Fluorobiphenyl	52		%	1	12/15/19	WB	30 - 130 %
% 2-Fluorophenol	51		%	1	12/15/19	WB	30 - 130 %
% Nitrobenzene-d5	48		%	1	12/15/19	WB	30 - 130 %
% Phenol-d5	52		%	1	12/15/19	WB	30 - 130 %
% Terphenyl-d14	57		%	1	12/15/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

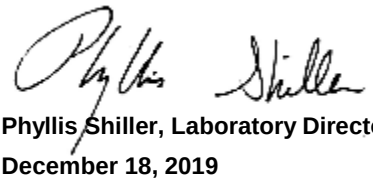
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:50
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87867

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Hexanone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5A

Phoenix I.D.: CE87867

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	0.074	S 0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
Acrylonitrile	ND	0.01	mg/Kg	1	12/14/19	JLI	SW8260C	
Benzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromochloromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromodichloromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromoform	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromomethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon Disulfide	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Chlorobenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroform	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromochloromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromomethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Ethylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Isopropylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
m&p-Xylene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.01	mg/Kg	1	12/14/19	JLI	SW8260C	
Methylene chloride	ND	0.01	mg/Kg	1	12/14/19	JLI	SW8260C	
Naphthalene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Butylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Propylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
o-Xylene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Styrene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrachloroethene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.01	mg/Kg	1	12/14/19	JLI	SW8260C	1
Toluene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Total Xylenes	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.01	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichloroethene	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
Vinyl chloride	ND	0.0051	mg/Kg	1	12/14/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	99		%	1	12/14/19	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	12/14/19	JLI	70 - 130 %	
% Dibromofluoromethane	95		%	1	12/14/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5A

Phoenix I.D.: CE87867

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	99		%	1	12/14/19	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	0.076	mg/Kg	1	12/14/19	JLI	SW8260C	
Field Extraction	Completed				12/13/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 18, 2019

FOR: Attn: Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/13/19	10:55
Location Code:	LANDREM	Received by:	LB	12/13/19	17:20
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE87863
Phoenix ID: CE87868

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Hexanone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5B

Phoenix I.D.: CE87868

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	0.16	S 0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
Acrylonitrile	ND	0.0099	mg/Kg	1	12/14/19	JLI	SW8260C	
Benzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromochloromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromodichloromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromoform	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Bromomethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon Disulfide	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Chlorobenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloroform	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Chloromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromochloromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Dibromomethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Ethylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Isopropylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
m&p-Xylene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.025	mg/Kg	1	12/14/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.0099	mg/Kg	1	12/14/19	JLI	SW8260C	
Methylene chloride	ND	0.0099	mg/Kg	1	12/14/19	JLI	SW8260C	
Naphthalene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Butylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
n-Propylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
o-Xylene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Styrene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrachloroethene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.0099	mg/Kg	1	12/14/19	JLI	SW8260C	1
Toluene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Total Xylenes	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.0099	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichloroethene	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
Vinyl chloride	ND	0.005	mg/Kg	1	12/14/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	101		%	1	12/14/19	JLI	70 - 130 %	
% Bromofluorobenzene	96		%	1	12/14/19	JLI	70 - 130 %	
% Dibromofluoromethane	94		%	1	12/14/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: AQ FILL 5B

Phoenix I.D.: CE87868

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	98		%	1	12/14/19	JLI	70 - 130 %	
1,4-dioxane								
1,4-dioxane	ND	0.074	mg/Kg	1	12/14/19	JLI	SW8260C	
Field Extraction	Completed				12/13/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
December 18, 2019
Official Report Release To Follow

Sample Criteria Exceedances Report

GCE87863 - LANDREM

Criteria: None

State: NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Temp 3.2 °C Pg of

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☑ Email: wpl@land-remediation.com

Customer: LARD Remediation
Address: 74 Hudson River Rd
Waterford, NY 12188

Project: BASF Rensselaer
Report to: Will Lindheimer
Invoice to:
QUOTE #

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 12/13/19

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil
B=Bulk L=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	VOC	SVOC, Pest, Herb, PCB, Metals	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container [ ] oz	GL Soil container [ ] oz	40 ml VOA Vial [ ]	GL Amber 1000ml [ ] As is [ ] HCl	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/hio	Bacteria Bottle as is
87863	AQ Fill 4	S	12/13	10:30	✓	✓			✓									
87864	AQ Fill 4A	S	12/13	10:35	✓			✓										
87865	AQ Fill 4B	S	12/13	10:40	✓			✓										
87866	AQ Fill 5	S	12/13	10:45		✓			✓									
87867	AQ Fill 5A	S	12/13	10:50	✓			✓										
87868	AQ Fill 5B	S	12/13	10:55	✓			✓										

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	12/13/19	12:15
			3:40
[signature]	[signature]	12/13/19	17:20

Comments, Special Requirements or Regulations:
* See attached for analysis

Turnaround:
☐ 1 Day*
☐ 2 Days*
☑ 3 Days*
☐ Standard
☐ Other
* SURCHARGE APPLIES

RI
☐ Direct Exposure (Residential)
☐ GW
☐ Other

CT
☐ RCP Cert
☐ GW Protection
☐ SW Protection
☐ GA Mobility
☐ GB Mobility
☐ Residential DEC
☐ I/C DEC
☐ Other

MA
☐ MCP Certification
☐ GW-1
☐ GW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ MWRA eSMART
☐ Other

Data Format
☐ Excel
☐ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist
☐ Full Data Package*
☐ Phoenix Std Report
☐ Other
* SURCHARGE APPLIES

State where samples were collected: New York

Restoration Cover Fill Compared to New York State Criteria

Laboratory ID Client ID Date Sampled Date Received Matrix		NY 375-6.8(b) & CP-51 T-1 Ecological Resources Soil Cleanup Criteria	NYSDEC - DFWMR Screening and Assessment of Contaminated Sediment Table 5 - Class A Freshwater Sediment & Table 7 - Sediment Guidance Values for PAHs	19J0333-01 AQ Fill 1 03-Oct-2019 04-Oct-2019 Soil	19J0333-02 AQ Fill 1A 03-Oct-2019 04-Oct-2019 Soil	19J0333-03 AQ Fill 1B 03-Oct-2019 04-Oct-2019 Soil	19J0333-04 AQ Fill 2 03-Oct-2019 04-Oct-2019 Soil	19J0333-05 AQ Fill 2A 03-Oct-2019 04-Oct-2019 Soil	19J0333-06 AQ Fill 2B 03-Oct-2019 04-Oct-2019 Soil
Analyte	**Units**								
Volatile Organic Compounds by GC/MS									
Acetone	mg/Kg	2.2		0.062	<0.0070	0.013	0.022	0.008	0.022
Benzene	mg/Kg	70	0.53	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
2-Butanone (MEK)	mg/Kg	100		<0.0067	<0.0046	<0.0045	<0.0065	<0.0043	<0.0068
Carbon Tetrachloride	mg/Kg		1.07	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
Chlorobenzene	mg/Kg	40	0.2	<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
Chloroform	mg/Kg	12		<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
1,2-Dichlorobenzene	mg/Kg		0.28	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,3-Dichlorobenzene	mg/Kg		1.8	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,4-Dichlorobenzene	mg/Kg	20	0.72	<0.00098	<0.00067	<0.00065	<0.00094	<0.00063	<0.00099
1,2-Dichloroethane	mg/Kg	10		<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
1,1-Dichloroethylene	mg/Kg		0.52	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
trans-1,2-Dichloroethylene	mg/Kg		1.2	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
1,4-Dioxane	mg/Kg	0.1		<0.0065	<0.0044	<0.0043	<0.0063	<0.0041	<0.0065
Ethylbenzene	mg/Kg		0.43	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
Hexachlorobutadiene	mg/Kg		1.2	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
Isopropylbenzene (Cumene)	mg/Kg		0.21	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
Methylene Chloride	mg/Kg	12		0.0059	<0.00084	0.00083	0.026	<0.00078	<0.0012
Naphthalene	mg/Kg		7.7	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,1,1,2-Tetrachloroethane	mg/Kg		9	<0.0012	<0.00084	<0.00081	<0.0012	<0.00078	<0.0012
1,1,2,2-Tetrachloroethane	mg/Kg		2.8	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
Tetrachloroethylene	mg/Kg	2	16	<0.0015	<0.0010	<0.00098	<0.0014	<0.00094	<0.0015
Toluene	mg/Kg	36	0.93	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
1,2,3-Trichlorobenzene	mg/Kg		0.23	<0.0012	<0.00084	<0.00081	<0.0012	<0.00078	<0.0012
1,2,4-Trichlorobenzene	mg/Kg		35	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
Trichloroethylene	mg/Kg	2	1.8	<0.00098	<0.00067	<0.00065	<0.00094	<0.00063	<0.00099
1,2,4-Trimethylbenzene	mg/Kg		3.4	<0.00037	<0.00025	<0.00024	<0.00035	<0.00023	<0.00037
Semivolatile Organic Compounds by GC/MS									
Acenaphthene	mg/Kg	20	9.82	<0.097			<0.097		
Acenaphthylene	mg/Kg		9.04	<0.12			<0.12		
Anthracene	mg/Kg		11.88	<0.097			<0.097		
Benzo(a)anthracene	mg/Kg		16.82	<0.12			<0.12		
Benzo(a)pyrene	mg/Kg	2.6	19.28	<0.12			<0.12		
Benzo(b)fluoranthene	mg/Kg		19.58	<0.12			<0.12		
Benzo(g,h,i)perylene	mg/Kg		21.9	<0.11			<0.11		
Benzo(k)fluoranthene	mg/Kg		19.6	<0.12			<0.12		
Chrysene	mg/Kg		16.86	<0.12			<0.12		
Dibenz(a,h)anthracene	mg/Kg		22.44	<0.11			<0.11		
1,2-Dichlorobenzene	mg/Kg		0.28	<0.11			<0.11		
1,3-Dichlorobenzene	mg/Kg		1.8	<0.11			<0.11		
1,4-Dichlorobenzene	mg/Kg	20	0.72	<0.097			<0.097		
Fluoranthene	mg/Kg		14.16	<0.11			<0.11		
Fluorene	mg/Kg	30	10.78	<0.13			<0.13		
Hexachlorobutadiene	mg/Kg		1.2	<0.14			<0.14		
Hexachlorocyclopentadiene	mg/Kg		0.81	<0.30			<0.30		
Indeno(1,2,3-cd)pyrene	mg/Kg		22.3	<0.13			<0.13		
Naphthalene	mg/Kg		7.7	<0.12			<0.12		
Pentachlorophenol	mg/Kg	0.8	14	<0.25			<0.25		
Phenanthrene	mg/Kg		11.94	<0.097			<0.097		
Phenol	mg/Kg	30		<0.13			<0.13		
Pyrene	mg/Kg		13.96	<0.12			<0.12		
Organochloride Pesticides by GC/ECD									
Aldrin	mg/Kg	0.14		<0.0028			<0.0028		
alpha-BHC	mg/Kg	0.04		<0.0027			<0.0027		
beta-BHC	mg/Kg	0.6		<0.0029			<0.0029		
delta-BHC	mg/Kg	0.04		<0.0041			<0.0041		
gamma-BHC (Lindane)	mg/Kg	6	0.047	<0.00054			<0.00054		
Chlordane	mg/Kg	1.3	0.068	<0.0085			<0.0084		
4,4'-DDD	mg/Kg	0.0033		<0.0030			<0.0030		
4,4'-DDE	mg/Kg	0.0033		<0.0030			<0.0030		
4,4'-DDT	mg/Kg	0.0033	0.044*	<0.0036			<0.0036		
Dieldrin	mg/Kg	0.006	0.18	<0.0032			<0.0031		
Endosulfan I	mg/Kg		0.001*	<0.0028			<0.0028		
Endosulfan II	mg/Kg		0.001*	<0.0029			<0.0029		
Endrin	mg/Kg	0.014	0.09	<0.0034			<0.0033		
Heptachlor	mg/Kg	0.14	0.075	<0.0035			<0.0034		
Heptachlor Epoxide	mg/Kg		0.015	<0.0029			<0.0029		
Methoxychlor	mg/Kg		0.059	<0.016			<0.016		
Toxaphene	mg/Kg		0.006*	<0.044			<0.044		
Polychlorinated Biphenyls By GC/ECD									
Aroclor-1016	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1221	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1232	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1242	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1248	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1254	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1260	mg/Kg	1*	0.1*	<0.022			<0.022		

Restoration Cover Fill Compared to New York State Criteria

Laboratory ID Client ID Date Sampled Date Received Matrix		NY 375-6.8(b) & CP-51 T-1 Ecological Resources Soil Cleanup Criteria	NYSDEC - DFWMR Screening and Assessment of Contaminated Sediment Table 5 - Class A Freshwater Sediment & Table 7 - Sediment Guidance Values for PAHs	19J0333-01 AQ Fill 1 03-Oct-2019 04-Oct-2019 Soil	19J0333-02 AQ Fill 1A 03-Oct-2019 04-Oct-2019 Soil	19J0333-03 AQ Fill 1B 03-Oct-2019 04-Oct-2019 Soil	19J0333-04 AQ Fill 2 03-Oct-2019 04-Oct-2019 Soil	19J0333-05 AQ Fill 2A 03-Oct-2019 04-Oct-2019 Soil	19J0333-06 AQ Fill 2B 03-Oct-2019 04-Oct-2019 Soil
Aroclor-1262	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1268	mg/Kg	1*	0.1*	<0.022			<0.022		
Herbicides by GC/ECD									
Dicamba	µg/kg		180	<0.38			<0.38		
Metals Analyses (Total)									
Arsenic	mg/Kg	13	10	5.6			6.6		
Barium	mg/Kg	433		35			33		
Beryllium	mg/Kg	10		0.4			0.45		
Cadmium	mg/Kg	4	1	0.15			0.19		
Chromium	mg/Kg	41/1**	43	10***			13***		
Copper	mg/Kg	50	32	18			26		
Lead	mg/Kg	63	36	6.5			8.8		
Manganese	mg/Kg	1600		420			390		
Nickel	mg/Kg	30	23	16			21		
Selenium	mg/Kg	3.9		<1.8			<1.7		
Silver	mg/Kg	2	1	<0.37			<0.35		
Zinc	mg/Kg	109	120	38			52		

Notes:

* Laboratory detection limit exceeds cleanup standard.
* Standards are for Total PCBs

** The soil clean up objective is 41 mg/kg for Hexavalent Chromium and 1 mg/kg for Trivalent Chromium.

*** The laboratory results are for Total Chromium. The material is from a virgan quarry source and there are no data suggesting that hexavalent chromium is present.

Blank cell indicates no standard available or sample not analyzed for constituent

< indicates constituent not detected at detection limit

GC 887863

Restoration Cover Fill Compared to New York State Criteria

Laboratory ID / Client ID / Date Sampled / Date Received / Matrix		NY 375-6.8(b) & CP-51 T-1 Ecological Resources Soil Cleanup Criteria	NYSDEC - DFWMR Screening and Assessment of Contaminated Sediment Table 5 - Class A Freshwater Sediment & Table 7 - Sediment Guidance Values for PAHs	19J0333-01 AQ Fill 1 03-Oct-2019 04-Oct-2019 Soil	19J0333-02 AQ Fill 1A 03-Oct-2019 04-Oct-2019 Soil	19J0333-03 AQ Fill 1B 03-Oct-2019 04-Oct-2019 Soil	19J0333-04 AQ Fill 2 03-Oct-2019 04-Oct-2019 Soil	19J0333-05 AQ Fill 2A 03-Oct-2019 04-Oct-2019 Soil	19J0333-06 AQ Fill 2B 03-Oct-2019 04-Oct-2019 Soil
Analyte	**Units**								
Volatile Organic Compounds by GC/MS									
Acetone	mg/Kg	2.2		0.062	<0.0070	0.013	0.022	0.008	0.022
Benzene	mg/Kg	70	0.53	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
2-Butanone (MEK)	mg/Kg	100		<0.0067	<0.0046	<0.0045	<0.0065	<0.0043	<0.0068
Carbon Tetrachloride	mg/Kg		1.07	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
Chlorobenzene	mg/Kg	40	0.2	<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
Chloroform	mg/Kg	12		<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
1,2-Dichlorobenzene	mg/Kg		0.28	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,3-Dichlorobenzene	mg/Kg		1.8	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,4-Dichlorobenzene	mg/Kg	20	0.72	<0.00098	<0.00067	<0.00065	<0.00094	<0.00063	<0.00099
1,2-Dichloroethane	mg/Kg	10		<0.00061	<0.00042	<0.00041	<0.00059	<0.00039	<0.00062
1,1-Dichloroethylene	mg/Kg		0.52	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
trans-1,2-Dichloroethylene	mg/Kg		1.2	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
1,4-Dioxane	mg/Kg	0.1		<0.0085	<0.0044	<0.0043	<0.0063	<0.0041	<0.0065
Ethylbenzene	mg/Kg		0.43	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
Hexachlorobutadiene	mg/Kg		1.2	<0.00085	<0.00059	<0.00057	<0.00083	<0.00055	<0.00086
Isopropylbenzene (Cumene)	mg/Kg		0.21	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
Methylene Chloride	mg/Kg	12		0.0059	<0.00084	0.00083	0.026	<0.00078	<0.0012
Naphthalene	mg/Kg		7.7	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
1,1,1,2-Tetrachloroethane	mg/Kg		9	<0.0012	<0.00084	<0.00081	<0.0012	<0.00078	<0.0012
1,1,2,2-Tetrachloroethene	mg/Kg		2.8	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
Tetrachloroethylene	mg/Kg	2	16	<0.0015	<0.0010	<0.00098	<0.0014	<0.00094	<0.0015
Toluene	mg/Kg	36	0.93	<0.00073	<0.00050	<0.00049	<0.00071	<0.00047	<0.00074
1,2,3-Trichlorobenzene	mg/Kg		0.23	<0.0012	<0.00084	<0.00081	<0.0012	<0.00078	<0.0012
1,2,4-Trichlorobenzene	mg/Kg		35	<0.00049	<0.00034	<0.00033	<0.00047	<0.00031	<0.00049
Trichloroethylene	mg/Kg	2	1.8	<0.00098	<0.00067	<0.00065	<0.00094	<0.00063	<0.00099
1,2,4-Trimethylbenzene	mg/Kg		3.4	<0.00037	<0.00025	<0.00024	<0.00035	<0.00023	<0.00037
Semivolatile Organic Compounds by GC/MS									
Acenaphthene	mg/Kg	20	9.82	<0.097			<0.097		
Acenaphthylene	mg/Kg		9.04	<0.12			<0.12		
Anthracene	mg/Kg		11.88	<0.097			<0.097		
Benzo(a)anthracene	mg/Kg		16.82	<0.12			<0.12		
Benzo(a)pyrene	mg/Kg	2.6	19.28	<0.12			<0.12		
Benzo(b)fluoranthene	mg/Kg		19.58	<0.12			<0.12		
Benzo(g,h,i)perylene	mg/Kg		21.9	<0.11			<0.11		
Benzo(k)fluoranthene	mg/Kg		19.6	<0.12			<0.12		
Chrysene	mg/Kg		16.86	<0.12			<0.12		
Dibenz(a,h)anthracene	mg/Kg		22.44	<0.11			<0.11		
1,2-Dichlorobenzene	mg/Kg		0.28	<0.11			<0.11		
1,3-Dichlorobenzene	mg/Kg		1.8	<0.11			<0.11		
1,4-Dichlorobenzene	mg/Kg	20	0.72	<0.097			<0.097		
Fluoranthene	mg/Kg		14.16	<0.11			<0.11		
Fluorene	mg/Kg	30	10.78	<0.13			<0.13		
Hexachlorobutadiene	mg/Kg		1.2	<0.14			<0.14		
Hexachlorocyclopentadiene	mg/Kg		0.81	<0.30			<0.30		
Indeno(1,2,3-cd)pyrene	mg/Kg		22.3	<0.13			<0.13		
Naphthalene	mg/Kg		7.7	<0.12			<0.12		
Pentachlorophenol	mg/Kg	0.8	14	<0.25			<0.25		
Phenanthrene	mg/Kg		11.94	<0.097			<0.097		
Phenol	mg/Kg	30		<0.13			<0.13		
Pyrene	mg/Kg		13.96	<0.12			<0.12		
Organochloride Pesticides by GC/ECD									
Aldrin	mg/Kg	0.14		<0.0028			<0.0028		
alpha-BHC	mg/Kg	0.04		<0.0027			<0.0027		
beta-BHC	mg/Kg	0.6		<0.0029			<0.0029		
delta-BHC	mg/Kg	0.04		<0.0041			<0.0041		
gamma-BHC (Lindane)	mg/Kg	6	0.047	<0.00054			<0.00054		
Chlordane	mg/Kg	1.3	0.068	<0.0085			<0.0084		
4,4'-DDD	mg/Kg	0.0033		<0.0030			<0.0030		
4,4'-DDE	mg/Kg	0.0033		<0.0030			<0.0030		
4,4'-DDT	mg/Kg	0.0033	0.044*	<0.0036			<0.0036		
Dieldrin	mg/Kg	0.006	0.18	<0.0032			<0.0031		
Endosulfan I	mg/Kg		0.001*	<0.0028			<0.0028		
Endosulfan II	mg/Kg		0.001*	<0.0029			<0.0029		
Endrin	mg/Kg	0.014	0.09	<0.0034			<0.0033		
Heptachlor	mg/Kg	0.14	0.075	<0.0035			<0.0034		
Heptachlor Epoxide	mg/Kg		0.015	<0.0029			<0.0029		
Methoxychlor	mg/Kg		0.059	<0.016			<0.016		
Toxaphene	mg/Kg		0.006*	<0.044			<0.044		
Polychlorinated Biphenyls By GC/ECD									
Aroclor-1016	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1221	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1232	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1242	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1248	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1254	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1260	mg/Kg	1*	0.1*	<0.022			<0.022		

GCE 87863

Restoration Cover Fill Compared to New York State Criteria

Laboratory ID Client ID Date Sampled Date Received Matrix		NY 375-6.8(b) & CP-51 T-1 Ecological Resources Soil Cleanup Criteria	NYSDEC - DFWMR Screening and Assessment of Contaminated Sediment Table 5 - Class A Freshwater Sediment & Table 7 - Sediment Guidance Values for PAHs	19J0333-01 AQ Fill 1 03-Oct-2019 04-Oct-2019 Soil	19J0333-02 AQ Fill 1A 03-Oct-2019 04-Oct-2019 Soil	19J0333-03 AQ Fill 1B 03-Oct-2019 04-Oct-2019 Soil	19J0333-04 AQ Fill 2 03-Oct-2019 04-Oct-2019 Soil	19J0333-05 AQ Fill 2A 03-Oct-2019 04-Oct-2019 Soil	19J0333-06 AQ Fill 2B 03-Oct-2019 04-Oct-2019 Soil
Aroclor-1262	mg/Kg	1*	0.1*	<0.022			<0.022		
Aroclor-1268	mg/Kg	1*	0.1*	<0.022			<0.022		
Herbicides by GC/ECD									
Dicamba	µg/kg		180	<0.38			<0.38		
Metals Analyses (Total)									
Arsenic	mg/Kg	13	10	5.6			6.6		
Barium	mg/Kg	433		35			33		
Beryllium	mg/Kg	10		0.4			0.45		
Cadmium	mg/Kg	4	1	0.15			0.19		
Chromium	mg/Kg	41/1**	43	10***			13***		
Copper	mg/Kg	50	32	18			26		
Lead	mg/Kg	63	36	6.5			8.8		
Manganese	mg/Kg	1600		420			390		
Nickel	mg/Kg	30	23	16			21		
Selenium	mg/Kg	3.9		<1.8			<1.7		
Silver	mg/Kg	2	1	<0.37			<0.35		
Zinc	mg/Kg	109	120	38			52		

Notes:

* Laboratory detection limit exceeds cleanup standard
* Standards are for Total PCBs

** The soil clean up objective is 41 mg/kg for Hexavalent Chromium and 1 mg/kg for Trivalent Chromium.
*** The laboratory results are for Total Chromium. The material is from a virgin quarry source and there are no data suggesting that hexavalent chromium is present.
Blank cell indicates no standard available or sample not analyzed for constituent
< indicates constituent not detected at detection limit

RJ Valente Restoration Cover Material / Hudson Peat Blend

Geotechnical Testing – Valente / Hudson Peat Blend

Proposed for Restoration Cover Material Type B

<u>Valente Base Material</u>

Previously tested with

Analytical Testing – GCE87863 Lab Report

AQ Fill 4, AQ Fill 4A, AQ Fill 4B

AQ Fill 5, AQ Fill 5A, AQ Fill 5B

<u>Hudson Peat Material Source</u>

Analytical Testing – GCE86525 Lab Report

HP-01, HP-01-A, HP-01-B, HP-PFOA

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 12/19/19
SAMPLE NUMBER: 19131
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

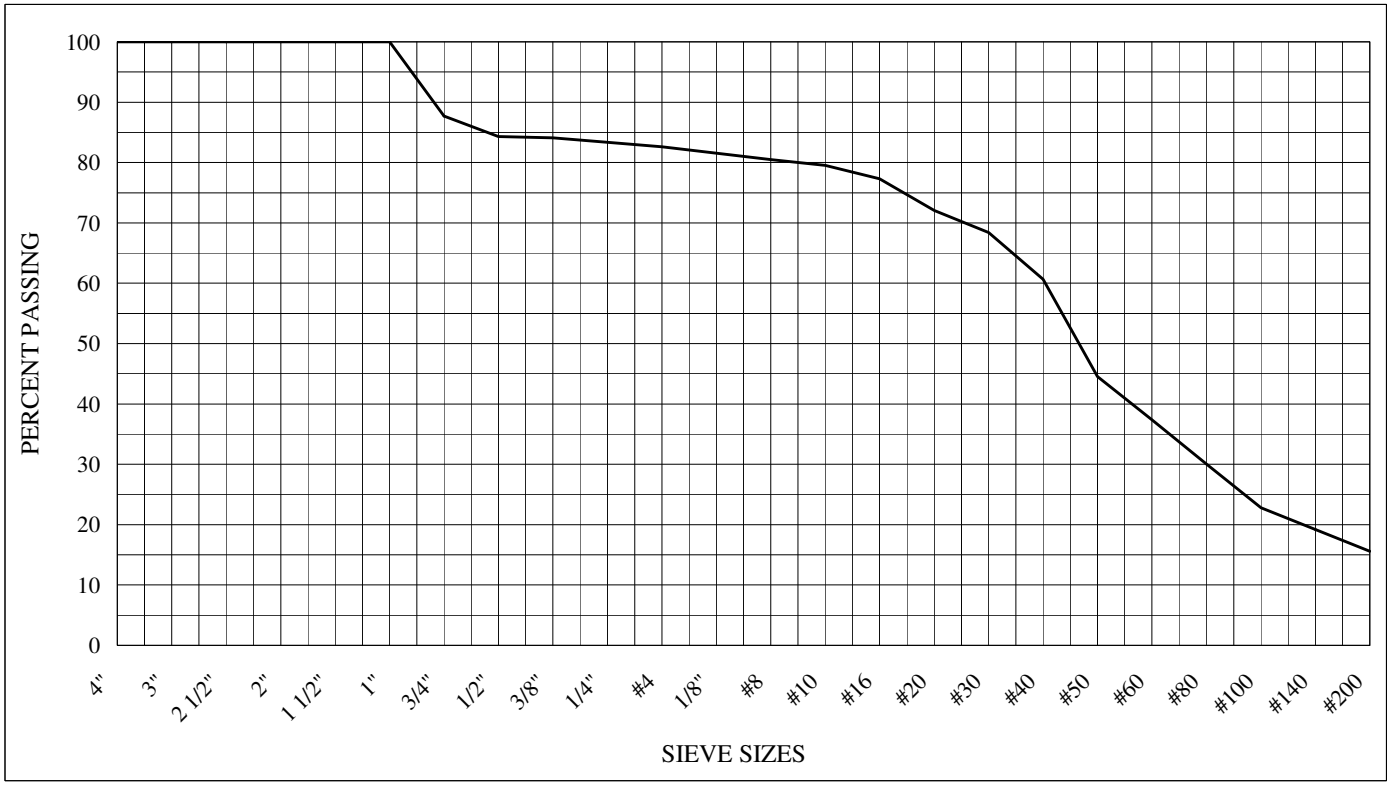
PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE / HUDSON PEAT BLEND**
MATERIAL DESCRIPTION: SAND, fine/medium; little Silt/Clay; little fine Gravel
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	16.7	83.3				#50	55.5	44.5			
3"						**#4**	17.4	**82.6**	**80**	**-**	**90**	#60					
2 1/2"						1/8"						#80					
2"						#8	19.5	80.5				#100	77.2	22.8			
1 1/2"						#10	20.5	79.5				#140					
1"		**100.0**	**100**	**-**	**100**	#16	22.7	77.3				**#200**	84.4	**15.6**	**10**	**-**	**20**
3/4"	12.3	87.7				#20						SILT					
1/2"	15.7	84.3				#30	31.6	68.4				CLAY					
3/8"	15.9	84.1				#40	39.4	60.6				COLLOID					

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ORGANIC CONTENT	pH VALUE
17.4%	**67.0%**	**15.6%**	**6.0%**	**6.5**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 16, 2019

FOR: Attn: William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/11/19	13:10
Location Code:	LANDREM	Received by:	SW	12/12/19	17:31
Rush Request:	48 Hour	Analyzed by:	see "By" below		
P.O.#:	BASF				

Laboratory Data

SDG ID: GCE86525
Phoenix ID: CE86525

Project ID: BASF RENSSELAER
Client ID: HP-01

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 1.2	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Arsenic	7.5	2.5	mg/Kg	1	12/13/19	EK	SW6010D
Barium	197	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Beryllium	1.53	0.99	mg/Kg	1	12/13/19	EK	SW6010D
Cadmium	< 1.2	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Chromium	17.1	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Copper	104	2.5	mg/kg	1	12/13/19	EK	SW6010D
Manganese	864	12	mg/Kg	10	12/13/19	EK	SW6010D
Nickel	24.6	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Lead	16.6	1.2	mg/Kg	1	12/13/19	EK	SW6010D
Selenium	< 5.0	5.0	mg/Kg	1	12/13/19	EK	SW6010D
Zinc	108	2.5	mg/Kg	1	12/13/19	EK	SW6010D
Percent Solid	24		%		12/12/19	VT	SW846-%Solid
Total Cyanide (SW9010C Distill.)	< 1.89	1.89	mg/Kg	1	12/16/19	O/GD	SW9012B
Soil Extraction for PCB	Completed				12/12/19	MM/L	SW3545A
Soil Extraction for Pesticides	Completed				12/12/19	MM/L	SW3545A
Soil Extraction for SVOA	Completed				12/12/19	K/R/LA	SW3545A
Soil Extraction for Herbicide	Completed				12/12/19	J/D	SW8151A
Total Metals Digest	Completed				12/12/19	JJ/AG/BF	SW3050B
Chlorinated Herbicides							
2,4,5-T	ND	0.35	mg/Kg	10	12/13/19	JRB	SW8151A
2,4,5-TP (Silvex)	ND	0.35	mg/Kg	10	12/13/19	JRB	SW8151A
2,4-D	ND	0.69	mg/Kg	10	12/13/19	JRB	SW8151A
2,4-DB	ND	6.9	mg/Kg	10	12/13/19	JRB	SW8151A
Dalapon	ND	0.35	mg/Kg	10	12/13/19	JRB	SW8151A
Dicamba	ND	0.35	mg/Kg	10	12/13/19	JRB	SW8151A
Dichloroprop	ND	0.69	mg/Kg	10	12/13/19	JRB	SW8151A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dinoseb	ND	0.69	mg/Kg	10	12/13/19	JRB	SW8151A
QA/QC Surrogates							
% DCAA	62		%	10	12/13/19	JRB	30 - 150 %
% DCAA (Confirmation)	59		%	10	12/13/19	JRB	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1221	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1232	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1242	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1248	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1254	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1260	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1262	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
PCB-1268	ND	0.69	mg/Kg	10	12/13/19	SC	SW8082A
QA/QC Surrogates							
% DCBP	93		%	10	12/13/19	SC	30 - 150 %
% DCBP (Confirmation)	88		%	10	12/13/19	SC	30 - 150 %
% TCMX	80		%	10	12/13/19	SC	30 - 150 %
% TCMX (Confirmation)	75		%	10	12/13/19	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	0.0083	mg/Kg	2	12/14/19	CG	SW8081B
4,4' -DDE	ND	0.0083	mg/Kg	2	12/14/19	CG	SW8081B
4,4' -DDT	ND	0.0083	mg/Kg	2	12/14/19	CG	SW8081B
a-BHC	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
a-Chlordane	ND	0.014	mg/Kg	2	12/14/19	CG	SW8081B
Aldrin	ND	0.014	mg/Kg	2	12/14/19	CG	SW8081B
b-BHC	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Chlordane	ND	0.14	mg/Kg	2	12/14/19	CG	SW8081B
d-BHC	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Dieldrin	ND	0.014	mg/Kg	2	12/14/19	CG	SW8081B
Endosulfan I	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Endosulfan II	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Endosulfan sulfate	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Endrin	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Endrin aldehyde	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Endrin ketone	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
g-BHC	ND	0.0056	mg/Kg	2	12/14/19	CG	SW8081B
g-Chlordane	ND	0.014	mg/Kg	2	12/14/19	CG	SW8081B
Heptachlor	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Heptachlor epoxide	ND	0.028	mg/Kg	2	12/14/19	CG	SW8081B
Methoxychlor	ND	0.14	mg/Kg	2	12/14/19	CG	SW8081B
Toxaphene	ND	0.56	mg/Kg	2	12/14/19	CG	SW8081B
QA/QC Surrogates							
% DCBP	62		%	2	12/14/19	CG	30 - 150 %
% DCBP (Confirmation)	70		%	2	12/14/19	CG	30 - 150 %
% TCMX	61		%	2	12/14/19	CG	30 - 150 %
% TCMX (Confirmation)	59		%	2	12/14/19	CG	30 - 150 %

Project ID: BASF RENSSELAER
Client ID: HP-01

Phoenix I.D.: CE86525

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Semivolatiles								
1,1-Biphenyl	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
1,2,4,5-Tetrachlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,3,4,6-tetrachlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,4,5-Trichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,4,6-Trichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,4-Dichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,4-Dimethylphenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,4-Dinitrophenol	ND	2.2	mg/Kg	1	12/13/19	WB	SW8270D	
2,4-Dinitrotoluene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2,6-Dinitrotoluene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2-Chloronaphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2-Chlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2-Methylnaphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2-Methylphenol (o-cresol)	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
2-Nitroaniline	ND	2.2	mg/Kg	1	12/13/19	WB	SW8270D	
2-Nitrophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
3&4-Methylphenol (m&p-cresol)	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D	1
3,3'-Dichlorobenzidine	ND	1.6	mg/Kg	1	12/13/19	WB	SW8270D	
3-Nitroaniline	ND	2.2	mg/Kg	1	12/13/19	WB	SW8270D	
4,6-Dinitro-2-methylphenol	ND	4	mg/Kg	1	12/13/19	WB	SW8270D	
4-Bromophenyl phenyl ether	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D	
4-Chloro-3-methylphenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
4-Chloroaniline	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
4-Chlorophenyl phenyl ether	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
4-Nitroaniline	ND	2.2	mg/Kg	1	12/13/19	WB	SW8270D	
4-Nitrophenol	ND	4	mg/Kg	1	12/13/19	WB	SW8270D	
Acenaphthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Acenaphthylene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Acetophenone	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Anthracene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Atrazine	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benz(a)anthracene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzaldehyde	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzo(a)pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzo(b)fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzo(ghi)perylene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzo(k)fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Benzyl butyl phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Bis(2-chloroethoxy)methane	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D	
Bis(2-chloroisopropyl)ether	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Bis(2-ethylhexyl)phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Caprolactam	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Carbazole	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D	
Chrysene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Dibenz(a,h)anthracene	ND	0.69	mg/Kg	1	12/13/19	WB	SW8270D	
Dibenzofuran	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	
Diethyl phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D	

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Dimethylphthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Di-n-butylphthalate	ND	2.7	mg/Kg	1	12/13/19	WB	SW8270D
Di-n-octylphthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Fluorene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorobutadiene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachloroethane	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Isophorone	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Naphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Nitrobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodimethylamine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.69	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Pentachlorophenol	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Phenanthrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Phenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	46		%	1	12/13/19	WB	30 - 130 %
% 2-Fluorobiphenyl	39		%	1	12/13/19	WB	30 - 130 %
% 2-Fluorophenol	55		%	1	12/13/19	WB	30 - 130 %
% Nitrobenzene-d5	45		%	1	12/13/19	WB	30 - 130 %
% Phenol-d5	55		%	1	12/13/19	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/13/19	WB	30 - 130 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
1,2-Dichlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
1,3-Dichlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
1,4-Dichlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,4-Dichlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,4-Dimethylphenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,4-Dinitrophenol	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
2,4-Dinitrotoluene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2,6-Dinitrotoluene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2-Chloronaphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2-Chlorophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2-Methylnaphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
2-Nitroaniline	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
2-Nitrophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
3-Nitroaniline	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
4-Chloroaniline	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
4-Nitroaniline	ND	2.2	mg/Kg	1	12/13/19	WB	SW8270D
4-Nitrophenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Acenaphthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Acenaphthylene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Acetophenone	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Aniline	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Anthracene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benz(a)anthracene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzidine	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzo(a)pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzo(b)fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzo(ghi)perylene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzo(k)fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Benzoic acid	ND	2.7	mg/Kg	1	12/13/19	WB	SW8270D
Benzyl butyl phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Carbazole	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Chrysene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Dibenz(a,h)anthracene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Dibenzofuran	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Diethyl phthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Dimethylphthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Di-n-butylphthalate	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Di-n-octylphthalate	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Fluoranthene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Fluorene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorobutadiene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Hexachloroethane	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Isophorone	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Naphthalene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Nitrobenzene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodimethylamine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Pentachloronitrobenzene	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Pentachlorophenol	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
Phenanthrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D

Project ID: BASF RENSSELAER
Client ID: HP-01

Phoenix I.D.: CE86525

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenol	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Pyrene	ND	0.96	mg/Kg	1	12/13/19	WB	SW8270D
Pyridine	ND	1.4	mg/Kg	1	12/13/19	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	46		%	1	12/13/19	WB	30 - 130 %
% 2-Fluorobiphenyl	39		%	1	12/13/19	WB	30 - 130 %
% 2-Fluorophenol	55		%	1	12/13/19	WB	30 - 130 %
% Nitrobenzene-d5	45		%	1	12/13/19	WB	30 - 130 %
% Phenol-d5	55		%	1	12/13/19	WB	30 - 130 %
% Terphenyl-d14	54		%	1	12/13/19	WB	30 - 130 %
Semivolatile Library Search	Completed				12/13/19	WB	

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

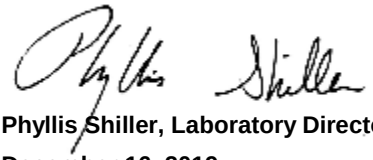
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 16, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 16, 2019

FOR: Attn: William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/11/19	13:15
Location Code:	LANDREM	Received by:	SW	12/12/19	17:31
Rush Request:	48 Hour	Analyzed by:	see "By" below		
P.O.#:	BASF				

Laboratory Data

SDG ID: GCE86525
Phoenix ID: CE86526

Project ID: BASF RENSSELAER
Client ID: HP-01-A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Hexanone	ND	0.038	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.038	mg/Kg	1	12/13/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: HP-01-A

Phoenix I.D.: CE86526

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.038	mg/Kg	1	12/13/19	JLI	SW8260C	
Acrylonitrile	ND	0.015	mg/Kg	1	12/13/19	JLI	SW8260C	
Benzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromochloromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromodichloromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromoform	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromomethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Carbon Disulfide	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Chlorobenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloroform	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Dibromochloromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Dibromomethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Ethylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Isopropylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
m&p-Xylene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.038	mg/Kg	1	12/13/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.015	mg/Kg	1	12/13/19	JLI	SW8260C	
Methylene chloride	ND	0.015	mg/Kg	1	12/13/19	JLI	SW8260C	
Naphthalene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
n-Butylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
n-Propylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
o-Xylene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Styrene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Tetrachloroethene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.015	mg/Kg	1	12/13/19	JLI	SW8260C	1
Toluene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Total Xylenes	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.015	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichloroethene	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
Vinyl chloride	ND	0.0076	mg/Kg	1	12/13/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	96		%	1	12/13/19	JLI	70 - 130 %	
% Bromofluorobenzene	96		%	1	12/13/19	JLI	70 - 130 %	
% Dibromofluoromethane	95		%	1	12/13/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: HP-01-A

Phoenix I.D.: CE86526

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	100		%	1	12/13/19	JLI	70 - 130 %	
Field Extraction	Completed				12/11/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 16, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 16, 2019

FOR: Attn: William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/11/19	13:20
Location Code:	LANDREM	Received by:	SW	12/12/19	17:31
Rush Request:	48 Hour	Analyzed by:	see "By" below		
P.O.#:	BASF				

Laboratory Data

SDG ID: GCE86525
Phoenix ID: CE86527

Project ID: BASF RENSSELAER
Client ID: HP-01-B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Hexanone	ND	0.061	mg/Kg	1	12/13/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.061	mg/Kg	1	12/13/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: HP-01-B

Phoenix I.D.: CE86527

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.061	mg/Kg	1	12/13/19	JLI	SW8260C	
Acrylonitrile	ND	0.025	mg/Kg	1	12/13/19	JLI	SW8260C	
Benzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromochloromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromodichloromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromoform	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Bromomethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Carbon Disulfide	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Chlorobenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloroform	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Chloromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Dibromochloromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Dibromomethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Ethylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Isopropylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
m&p-Xylene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.061	mg/Kg	1	12/13/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.025	mg/Kg	1	12/13/19	JLI	SW8260C	
Methylene chloride	ND	0.025	mg/Kg	1	12/13/19	JLI	SW8260C	
Naphthalene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
n-Butylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
n-Propylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
o-Xylene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Styrene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Tetrachloroethene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.025	mg/Kg	1	12/13/19	JLI	SW8260C	1
Toluene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Total Xylenes	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.025	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichloroethene	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
Vinyl chloride	ND	0.012	mg/Kg	1	12/13/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	94		%	1	12/13/19	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	12/13/19	JLI	70 - 130 %	
% Dibromofluoromethane	97		%	1	12/13/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: HP-01-B

Phoenix I.D.: CE86527

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	102		%	1	12/13/19	JLI	70 - 130 %	
Field Extraction	Completed				12/11/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 16, 2019
Official Report Release To Follow

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Analysis Report

December 16, 2019

FOR: Attn: William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/11/19	13:25
Location Code:	LANDREM	Received by:	SW	12/12/19	17:31
Rush Request:	48 Hour	Analyzed by:	see "By" below		
P.O.#:	BASF				

Laboratory Data

SDG ID: GCE86525
Phoenix ID: CE86528

Project ID: BASF RENSSELAER
Client ID: HP-PFOA

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference	
Percent Solid	25			%		12/12/19	VT	SW846-%Solid	
Extraction for SVOA SIM	Completed					12/12/19	RR/LA	SW3545A	
PFOA/PFOS - Sludge	Pending							E537	C
1,4-Dioxane									
1,4-dioxane	ND	0.26	0.26	mg/Kg	1	12/13/19	WB	SW8270D (SIM)	
QA/QC Surrogates									
% 2-Fluorobiphenyl	28			%	1	12/13/19	WB	30 - 130 %	3
% Nitrobenzene-d5	45			%	1	12/13/19	WB	30 - 130 %	
% Terphenyl-d14	39			%	1	12/13/19	WB	30 - 130 %	

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference

3 = This parameter exceeds laboratory specified limits.
C = This parameter is subcontracted.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

*See attached

Semi-Volatile Comment:
Poor surrogate recovery was observed for one acid and/or one base surrogate. The other surrogates associated with this sample were within QA/QC criteria. No significant bias suspected.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

PFOA/PFOS - Sludge (E537) was analyzed by NY certified lab #10854.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 16, 2019
Official Report Release To Follow

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT ID: HP-01

Lab Name: Phoenix Environmental Labs | Client: LANDREM

Lab Code: Phoenix | Case No.: | SAS No.: | SDG No.: GCE86525

Matrix:(soil/water): SOIL | Lab Sample ID: CE86525

Sample wt/vol: 15.17 (g/mL) g | Lab File ID: 1212_47.D

Level: (low/med): Low | Date Received: 12/12/19

% Moisture: not dec. 76 decanted:(Y/N) NA | Date Extracted: 12/13/19

GPC Cleanup (Y/N): N | pH: NA | Date Analyzed: 12/13/2019

Conc. Extract Volume: 1000 (uL) | Dilution Factor 1

Injection Volume: 1 (uL)

Number TICs found: 4 | CONCENTRATION UNITS: (ug/L or ug/KG) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.693	5000	JNA
000112-95-8	Eicosane	10.392	1300	JN
000629-94-7	Heneicosane	11.775	1900	JN
	Heneicosane Isomer	13.616	1300	JN

FORM I SEMIVOA-TIC

A - Indicates that the tentatively identified compound is a suspected aldol condensation product. Aldol condensation products are produced during the extraction process.

Sample Criteria Exceedances Report

GCE86525 - LANDREM

Criteria: None

State: NY

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Cooler: Yes [X] No [ ]
Coolant: IPK [X] ICE [ ] No [ ]
Temp 8 °C Pg of

PHOENIX Environmental Laboratories, Inc.

NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
[ ] Phone:
[ ] Fax:
[X] Email: WPI@land-remediation.com

Customer: LAND Remediation
Address: 74 Hudson River Rd
Waterford NY 12188

Project: BASF Rensselaer
Report to: Will Lindheimer
Invoice to: //
QUOTE # :

Project P.O: BASF

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 12/11/19

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PFDA	1,4 dioxane	VOC	SVOC, Pest / PCB, RCRA Metals	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [X] methanol [ ] H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
86525	HP-D1	S	12/11/19	1:10				✓		✓										
86526	HP-D1-A	S	12/11/19	1:15			✓			✓										
86527	HP-D1-B	S	12/11/19	1:20			✓			✓										
86528	HP-PFDA	S	12/11/19	1:25	✓	✓								✓						

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	12/11/19	2:45
[signature]	[signature]		
[signature]	[signature]	12/12/19	17:31

Comments, Special Requirements or Regulations:

Data Format:
[ ] Phoenix Std Report [ ] EQuIS
[ ] Excel [ ] NJ Hazsite EDD
[ ] PDF [ ] NY EZ EDD (ASP)
[ ] GIS/Key [ ] Other

Turnaround:
[ ] 1 Day*
[X] 2 Days*
[ ] 3 Days*
[ ] 5 Days
[ ] 10 Days
[ ] Other
* SURCHARGE

NJ
[ ] Res. Criteria
[ ] Non-Res. Criteria
[ ] Impact to GW Soil Cleanup Criteria
[ ] Impact to GW soil screen Criteria
[ ] GW Criteria

Data Package:
[ ] NJ Reduced Deliv. * [ ] Other
[ ] NY Enhanced (ASP B) *

NY
[ ] TOGS GW
[ ] CP-51 SOIL
[ ] 375SCO Unrestricted Soil
[ ] 375SCO Residential Soil
[ ] 375SCO Residential
[ ] 375SCO Commercial Soil
[ ] 375SCO Industrial Soil
[ ] Subpart 5 DW

PA
[ ] Clean Fill Limits
[ ] PA-GW
[ ] Reg Fill Limits
[ ] PA Soil Restricted
[ ] PA Soil non-restricted

State Samples Collected?

Technical Report

prepared for:

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Report Date: 12/20/2019
Client Project ID: CE86528
York Project (SDG) No.: 19L0580

Report Date: 12/20/2019
Client Project ID: CE86528
York Project (SDG) No.: 19L0580

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 16, 2019 and listed below. The project was identified as your project: **CE86528**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
19L0580-01	CE86528	Soil	12/11/2019	12/16/2019

General Notes for York Project (SDG) No.: 19L0580

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 12/20/2019

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: CE86528 **York Sample ID:** 19L0580-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
19L0580	CE86528	Soil	December 11, 2019 1:25 pm	12/16/2019

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
335-67-1	Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
375-95-1	Perfluorononanoic acid (PFNA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
335-76-2	Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
2355-31-9	N-MeFOSAA	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
2991-50-6	N-EtFOSAA	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
754-91-6	Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
375-92-8	Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
335-77-3	Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT
375-22-4	Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	2.55	1	EPA 537m Certifications:	12/17/2019 16:30	12/20/2019 00:38	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*67.9 %*	*25-150*

Sample Information

Client Sample ID: CE86528 **York Sample ID:** 19L0580-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
19L0580	CE86528	Soil	December 11, 2019 1:25 pm	12/16/2019

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate: M5PFHxA	*64.2 %*		*25-150*						
	Surrogate: M4PFHpA	*59.8 %*		*25-150*						
	Surrogate: M3PFHxS	*66.9 %*		*25-150*						
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*57.6 %*		*25-150*						
	Surrogate: M6PFDA	*51.1 %*		*25-150*						
	Surrogate: M7PFUdA	*46.0 %*		*25-150*						
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*40.6 %*		*25-150*						
	Surrogate: M2PFTeDA	*34.9 %*		*10-150*						
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*76.6 %*		*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*58.8 %*		*25-150*						
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*71.7 %*		*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*44.2 %*		*10-150*						
	Surrogate: d3-N-MeFOSAA	*66.0 %*		*25-150*						
	Surrogate: d5-N-EtFOSAA	*74.4 %*		*25-150*						
	Surrogate: M2-6:2 FTS	*212 %*	PFSu-H	*25-150*						
	Surrogate: M2-8:2 FTS	*327 %*	PFSu-H	*25-150*						
	Surrogate: M9PFNA	*55.0 %*		*25-150*						

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	**% Solids**	**27.0**		%	0.100	1	SM 2540G	12/18/2019 16:08	12/18/2019 16:13	WL
							Certifications: CTDOH			

Analytical Batch Summary

Batch ID: BL90966 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** WL

YORK Sample ID	Client Sample ID	Preparation Date
19L0580-01	CE86528	12/17/19

Batch ID: BL91031 **Preparation Method:** % Solids Prep **Prepared By:** WL

YORK Sample ID	Client Sample ID	Preparation Date
19L0580-01	CE86528	12/18/19

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag


YORK

Sample and Data Qualifiers Relating to This Work Order

PFSu-H The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐
Temp °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726 19L0360

Contact Options:
☐ Fax: 860-645-0823
☐ Phone 800-827-5426
☐ Email HelenG@PhoenixLabs.com

Customer: York Analytical Laboratories
Address: 20 Research Drive
Stratford, CT 06615

Project:
Report to: HelenG@PhoenixLabs.com / Helen Geoghegan
Invoice to: AccountsPayable@PhoenixLabs.com
Quote# :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	1 PRES
196588		S	12/11/19	13:25	X

GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is	PL 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
						1						

Relinquished by:	Accepted by:	Date:	Time:
		12/12/19	

Turnaround:
☐ 1 Day
☐ 2 Days
☐ 3 Days
☐ 5 Days
☐ 10 Days
☐ Standard
☐ Other_____

Report Type:
☒ Standard PDF
☐ Full Data Package
☐ NJ Reduced Deliverable
☐ NJ Full Deliverable
☐ NY ASP B

EDD Format:
☐ Excel
☐ GIS/Key
☐ EQuIS
☐ NJ Hazsite EDD
☐ NY EZ EDD (ASP)
☐ Other:_____

State Criteria:
☐ MA MCP CAM Cert.
☐ CT RCP Cert.
☐ _____
☐ _____
☐ _____

Comments, Special Requirements or Regulations:
PFAS 11 - 10 3 days

Please send notice as soon as possible not exceeding 24 hours of obtaining valid data, of the results of all drinking water samples that exceed any EPA or Department-established maximum contaminant level, maximum residual disinfectant level or reportable concentration.

Please notify Phoenix Environmental Laboratories, Inc. immediately and prior to conducting analysis if certification is not held for the analyses requested.

What State were samples collected?
NY

RJ Valente Restoration Cover Material / Mariaville Peat Blend

Geotechnical Testing – Valente / Mariaville Peat Blend

Alternate for Restoration Cover Material Type B

(Alternate Peat Source and Blend if needed based on weather, material conditions, and source availability)

<u>Valente Base Material</u>

Previously tested with

Analytical Testing – GCE87863 Lab Report

AQ Fill 4, AQ Fill 4A, AQ Fill 4B

AQ Fill 5, AQ Fill 5A, AQ Fill 5B

<u>Mariaville Peat Material Source</u>

Analytical Testing – GCE85521 Lab Report

MP-01, MP-01-A, MP-01-B, MP-PFOA

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 12/19/19
SAMPLE NUMBER: 19132
OUR FILE NO: 1526.000

Tom Joslin

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: TOM JOSLIN, SET, NICET

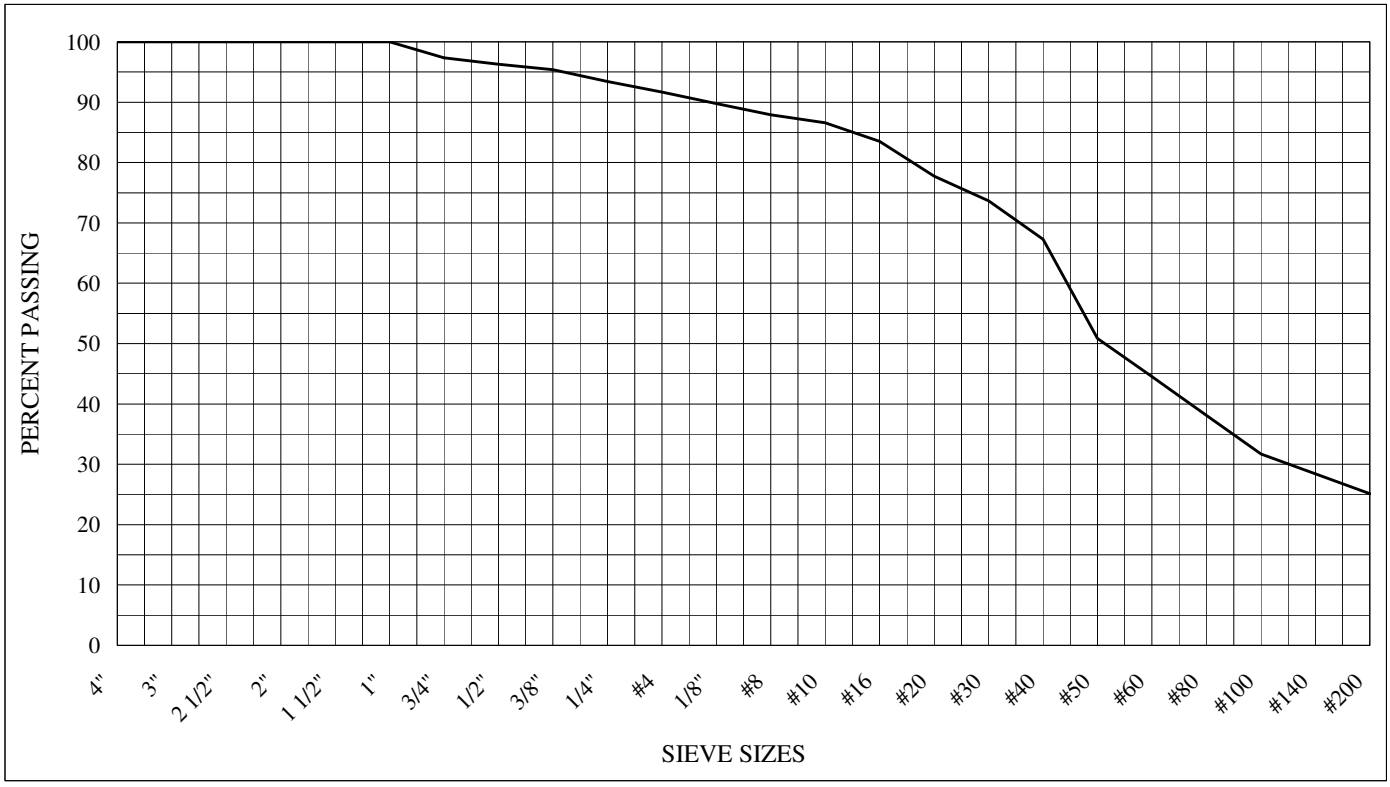
PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : VALENTE / MARIAVILLE PEAT BLEND**
MATERIAL DESCRIPTION: SAND, fine/medium; some Silt/Clay; trace fine Gravel
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD						MEDIUM SIEVE SERIES: US STANDARD						FINE SIEVE SERIES: US STANDARD					
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE			SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE		
4"						1/4"	6.6	93.4				#50	49.2	50.8			
3"						**#4**	8.3	**91.7**	**80**	**-**	**90**	#60					
2 1/2"						1/8"						#80					
2"						#8	12.1	87.9				#100	68.3	31.7			
1 1/2"						#10	13.4	86.6				#140					
1"		**100.0**	**100**	**-**	**100**	#16	16.5	83.5				**#200**	74.9	**25.1**	**10**	**-**	**20**
3/4"	2.6	97.4				#20						SILT					
1/2"	3.7	96.3				#30	26.3	73.7				CLAY					
3/8"	4.6	95.4				#40	32.7	67.3				COLLOID					

COARSE / FINE GRAVEL	FINE TO COURSE SAND	INORGANIC / ORGANIC FINES	ORGANIC CONTENT	pH VALUE
8.3%	**66.5%**	**25.1%**	**5.2%**	**6.5**
spec: 10 - 20%	**spec: 60 - 80%**	**spec: 10 - 20%**	**spec: 5.0 - 10.0%**	**spec: 6.5 - 7.5**



PHOENIX
Environmental Laboratories, Inc.

Thursday, December 19, 2019

Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project ID: BASF RENSSELAER
SDG ID: GCE85521
Sample ID#s: CE85521 - CE85524

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

December 19, 2019

SDG I.D.: GCE85521

Project ID: BASF RENSSELAER

Client Id	Lab Id	Matrix
MP-1	CE85521	SOIL
MP-1A	CE85522	SOIL
MP-1B	CE85523	SOIL
MP-PFOA	CE85524	SOIL

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 19, 2019

FOR: Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/10/19	13:50
Location Code:	LANDREM	Received by:	B	12/11/19	16:52
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE85521
Phoenix ID: CE85521

Project ID: BASF RENSSELAER
Client ID: MP-1

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.56	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Arsenic	2.9	1.1		mg/Kg	1	12/13/19	TH	SW6010D
Barium	88.1	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Beryllium	0.55	0.45		mg/Kg	1	12/13/19	TH	SW6010D
Cadmium	0.83	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Chromium	16.0	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Copper	23.5	1.1		mg/kg	1	12/13/19	TH	SW6010D
Manganese	338	5.6		mg/Kg	10	12/12/19	TH	SW6010D
Nickel	18.2	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Lead	9.29	0.56		mg/Kg	1	12/13/19	TH	SW6010D
Selenium	< 2.2	2.2		mg/Kg	1	12/13/19	TH	SW6010D
Zinc	64.9	1.1		mg/Kg	1	12/13/19	TH	SW6010D
Percent Solid	59			%		12/11/19	VT	SW846-%Solid
Extraction for SVOA SIM	Completed					12/11/19	BB/LA	SW3545A
Soil Extraction for PCB	Completed					12/11/19	MM/E	SW3545A
Soil Extraction for Pesticides	Completed					12/11/19	MM/E	SW3545A
Soil Extraction for SVOA	Completed					12/11/19	BB/LA	SW3545A
Soil Extraction for Herbicide	Completed					12/11/19	J/D	SW8151A
Total Metals Digest	Completed					12/11/19	JJ/AG/BF	SW3050B
Chlorinated Herbicides								
2,4,5-T	ND	0.14		mg/Kg	10	12/12/19	JRB	SW8151A
2,4,5-TP (Silvex)	ND	0.14		mg/Kg	10	12/12/19	JRB	SW8151A
2,4-D	ND	0.28		mg/Kg	10	12/12/19	JRB	SW8151A
2,4-DB	ND	2.8		mg/Kg	10	12/12/19	JRB	SW8151A
Dalapon	ND	0.14		mg/Kg	10	12/12/19	JRB	SW8151A
Dicamba	ND	0.14		mg/Kg	10	12/12/19	JRB	SW8151A
Dichloroprop	ND	0.28		mg/Kg	10	12/12/19	JRB	SW8151A

Project ID: BASF RENSSELAER
Client ID: MP-1

Phoenix I.D.: CE85521

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Dinoseb	ND	0.28		mg/Kg	10	12/12/19	JRB	SW8151A
QA/QC Surrogates								
% DCAA	56			%	10	12/12/19	JRB	30 - 150 %
% DCAA (Confirmation)	53			%	10	12/12/19	JRB	30 - 150 %
Polychlorinated Biphenyls								
PCB-1016	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1221	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1232	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1242	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1248	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1254	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1260	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1262	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
PCB-1268	ND	0.56		mg/Kg	10	12/12/19	SC	SW8082A
QA/QC Surrogates								
% DCBP	88			%	10	12/12/19	SC	30 - 150 %
% DCBP (Confirmation)	90			%	10	12/12/19	SC	30 - 150 %
% TCMX	76			%	10	12/12/19	SC	30 - 150 %
% TCMX (Confirmation)	78			%	10	12/12/19	SC	30 - 150 %
Pesticides - Soil								
4,4' -DDD	ND	0.0034		mg/Kg	2	12/12/19	CG	SW8081B
4,4' -DDE	ND	0.0034		mg/Kg	2	12/12/19	CG	SW8081B
4,4' -DDT	ND	0.0034		mg/Kg	2	12/12/19	CG	SW8081B
a-BHC	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
a-Chlordane	ND	0.0056		mg/Kg	2	12/12/19	CG	SW8081B
Aldrin	ND	0.0056		mg/Kg	2	12/12/19	CG	SW8081B
b-BHC	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Chlordane	ND	0.056		mg/Kg	2	12/12/19	CG	SW8081B
d-BHC	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Dieldrin	ND	0.0056		mg/Kg	2	12/12/19	CG	SW8081B
Endosulfan I	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Endosulfan II	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Endosulfan sulfate	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Endrin	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Endrin aldehyde	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Endrin ketone	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
g-BHC	ND	0.0023		mg/Kg	2	12/12/19	CG	SW8081B
g-Chlordane	ND	0.0056		mg/Kg	2	12/12/19	CG	SW8081B
Heptachlor	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Heptachlor epoxide	ND	0.011		mg/Kg	2	12/12/19	CG	SW8081B
Methoxychlor	ND	0.056		mg/Kg	2	12/12/19	CG	SW8081B
Toxaphene	ND	0.23		mg/Kg	2	12/12/19	CG	SW8081B
QA/QC Surrogates								
% DCBP	74			%	2	12/12/19	CG	30 - 150 %
% DCBP (Confirmation)	67			%	2	12/12/19	CG	30 - 150 %
% TCMX	58			%	2	12/12/19	CG	30 - 150 %
% TCMX (Confirmation)	61			%	2	12/12/19	CG	30 - 150 %

Project ID: BASF RENSSELAER
Client ID: MP-1

Phoenix I.D.: CE85521

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Semivolatiles								
1,2,4,5-Tetrachlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
1,2-Dichlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
1,3-Dichlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
1,4-Dichlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,4-Dichlorophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,4-Dimethylphenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,4-Dinitrophenol	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
2,4-Dinitrotoluene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2,6-Dinitrotoluene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2-Chloronaphthalene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2-Chlorophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2-Methylnaphthalene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
2-Nitroaniline	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
2-Nitrophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
3-Nitroaniline	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
4-Chloroaniline	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
4-Nitroaniline	ND	0.88		mg/Kg	1	12/12/19	WB	SW8270D
4-Nitrophenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Acenaphthene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Acenaphthylene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Acetophenone	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Aniline	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Anthracene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benz(a)anthracene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzidine	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzo(a)pyrene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzo(b)fluoranthene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzo(ghi)perylene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzo(k)fluoranthene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Benzoic acid	ND	1.1		mg/Kg	1	12/12/19	WB	SW8270D
Benzyl butyl phthalate	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Carbazole	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Chrysene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Dibenz(a,h)anthracene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Dibenzofuran	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Diethyl phthalate	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Dimethylphthalate	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Di-n-butylphthalate	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Di-n-octylphthalate	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Fluoranthene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Fluorene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Hexachlorobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Hexachlorobutadiene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Hexachloroethane	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Isophorone	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Naphthalene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Nitrobenzene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
N-Nitrosodimethylamine	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Pentachloronitrobenzene	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Pentachlorophenol	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
Phenanthrene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Phenol	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Pyrene	ND	0.38		mg/Kg	1	12/12/19	WB	SW8270D
Pyridine	ND	0.55		mg/Kg	1	12/12/19	WB	SW8270D
QA/QC Surrogates								
% 2,4,6-Tribromophenol	68			%	1	12/12/19	WB	30 - 130 %
% 2-Fluorobiphenyl	49			%	1	12/12/19	WB	30 - 130 %
% 2-Fluorophenol	49			%	1	12/12/19	WB	30 - 130 %
% Nitrobenzene-d5	59			%	1	12/12/19	WB	30 - 130 %
% Phenol-d5	58			%	1	12/12/19	WB	30 - 130 %
% Terphenyl-d14	48			%	1	12/12/19	WB	30 - 130 %
1,4-Dioxane								
1,4-dioxane	ND	0.11	0.11	mg/Kg	1	12/12/19	WB	SW8270D (SIM)
QA/QC Surrogates								
% 2-Fluorobiphenyl	50			%	1	12/12/19	WB	30 - 130 %
% Nitrobenzene-d5	60			%	1	12/12/19	WB	30 - 130 %
% Terphenyl-d14	50			%	1	12/12/19	WB	30 - 130 %

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference

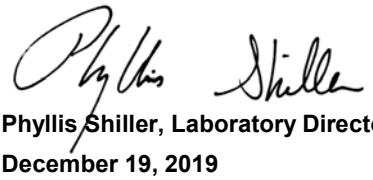
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 19, 2019
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 19, 2019

FOR: Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/10/19	14:00
Location Code:	LANDREM	Received by:	B	12/11/19	16:52
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE85521
Phoenix ID: CE85522

Project ID: BASF RENSSELAER
Client ID: MP-1A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Hexanone	ND	0.029	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.029	mg/Kg	1	12/12/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: MP-1A

Phoenix I.D.: CE85522

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.029	mg/Kg	1	12/12/19	JLI	SW8260C	
Acrylonitrile	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Benzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromochloromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromodichloromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromoform	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromomethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Carbon Disulfide	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Chlorobenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloroform	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Dibromochloromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Dibromomethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Ethylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Isopropylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
m&p-Xylene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.029	mg/Kg	1	12/12/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Methylene chloride	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Naphthalene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
n-Butylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
n-Propylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
o-Xylene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Styrene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Tetrachloroethene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	1
Toluene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Total Xylenes	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichloroethene	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
Vinyl chloride	ND	0.0059	mg/Kg	1	12/12/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	98		%	1	12/12/19	JLI	70 - 130 %	
% Bromofluorobenzene	95		%	1	12/12/19	JLI	70 - 130 %	
% Dibromofluoromethane	99		%	1	12/12/19	JLI	70 - 130 %	

Ver 1

Project ID: BASF RENSSELAER
Client ID: MP-1A

Phoenix I.D.: CE85522

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	99		%	1	12/12/19	JLI	70 - 130 %	
Field Extraction	Completed				12/10/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

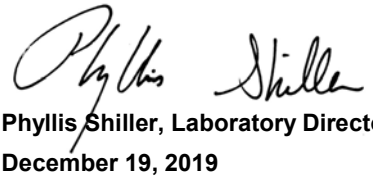
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 19, 2019
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 19, 2019

FOR: Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/10/19	14:15
Location Code:	LANDREM	Received by:	B	12/11/19	16:52
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE85521
Phoenix ID: CE85523

Project ID: BASF RENSSELAER
Client ID: MP-1B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,1-Trichloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1,2-Trichloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloroethene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,1-Dichloropropene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,3-Trichlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,3-Trichloropropane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,4-Trichlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2,4-Trimethylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dibromoethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,2-Dichloropropane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3,5-Trimethylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3-Dichlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,3-Dichloropropane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
1,4-Dichlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
2,2-Dichloropropane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Chlorotoluene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Hexanone	ND	0.03	mg/Kg	1	12/12/19	JLI	SW8260C	
2-Isopropyltoluene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	1
4-Chlorotoluene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
4-Methyl-2-pentanone	ND	0.03	mg/Kg	1	12/12/19	JLI	SW8260C	

Project ID: BASF RENSSELAER
Client ID: MP-1B

Phoenix I.D.: CE85523

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Acetone	ND	0.03	mg/Kg	1	12/12/19	JLI	SW8260C	
Acrylonitrile	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Benzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromochloromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromodichloromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromoform	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Bromomethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Carbon Disulfide	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Carbon tetrachloride	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Chlorobenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloroform	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Chloromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
cis-1,2-Dichloroethene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
cis-1,3-Dichloropropene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Dibromochloromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Dibromomethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Dichlorodifluoromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Ethylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Hexachlorobutadiene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Isopropylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
m&p-Xylene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Methyl Ethyl Ketone	ND	0.03	mg/Kg	1	12/12/19	JLI	SW8260C	
Methyl t-butyl ether (MTBE)	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Methylene chloride	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Naphthalene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
n-Butylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
n-Propylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
o-Xylene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
p-Isopropyltoluene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
sec-Butylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Styrene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
tert-Butylbenzene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Tetrachloroethene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Tetrahydrofuran (THF)	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	1
Toluene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Total Xylenes	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,2-Dichloroethene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,3-Dichloropropene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
trans-1,4-dichloro-2-butene	ND	0.012	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichloroethene	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichlorofluoromethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Trichlorotrifluoroethane	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
Vinyl chloride	ND	0.006	mg/Kg	1	12/12/19	JLI	SW8260C	
QA/QC Surrogates								
% 1,2-dichlorobenzene-d4	98		%	1	12/12/19	JLI	70 - 130 %	
% Bromofluorobenzene	96		%	1	12/12/19	JLI	70 - 130 %	
% Dibromofluoromethane	98		%	1	12/12/19	JLI	70 - 130 %	

Project ID: BASF RENSSELAER
Client ID: MP-1B

Phoenix I.D.: CE85523

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	98		%	1	12/12/19	JLI	70 - 130 %	
Field Extraction	Completed				12/10/19		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

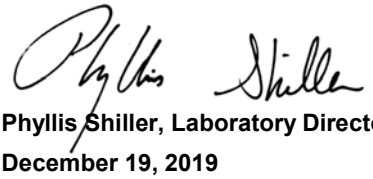
RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
December 19, 2019
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

December 19, 2019

FOR: Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		12/10/19	14:30
Location Code:	LANDREM	Received by:	B	12/11/19	16:52
Rush Request:	72 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCE85521
Phoenix ID: CE85524

Project ID: BASF RENSSELAER
Client ID: MP-PFOA

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
PFOA/PFOS - Water	Completed				12/16/19	*	E537	C

C = This parameter is subcontracted.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

*See attached

PFOA/PFOS - Water (E537) was analyzed by NY certified lab #10854.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
December 19, 2019
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

December 19, 2019

QA/QC Data

SDG I.D.: GCE85521

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 510111 (mg/kg), QC Sample No: CE86660 2X (CE85521)														
Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	90.5	118	26.4	108	86.6	22.0	70 - 130	30	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.														
QA/QC Batch 509853 (mg/kg), QC Sample No: CE85336 (CE85521)														
ICP Metals - Soil														
Arsenic	BRL	0.67	4.91	7.52	42.0	96.4	97.3	0.9	87.6			75 - 125	30	r
Barium	BRL	0.33	118	99.2	17.3	92.4	92.2	0.2	89.7			75 - 125	30	
Beryllium	BRL	0.27	1.36	0.80	NC	96.3	99.7	3.5	94.1			75 - 125	30	
Cadmium	BRL	0.33	0.81	0.65	NC	81.0	84.0	3.6	89.5			75 - 125	30	
Chromium	BRL	0.33	33.0	28.1	16.0	107	107	0.0	103			75 - 125	30	
Copper	BRL	0.67	127	61.4	69.6	108	110	1.8	69.6			75 - 125	30	m,r
Lead	BRL	0.33	179	106	51.2	98.6	99.5	0.9	65.6			75 - 125	30	m,r
Manganese	BRL	0.33	376	369	1.90	103	99.5	3.5	86.7			75 - 125	30	
Nickel	BRL	0.33	25.3	19.9	23.9	98.3	99.7	1.4	89.0			75 - 125	30	
Selenium	BRL	1.3	<1.5	<1.4	NC	78.5	81.0	3.1	91.5			75 - 125	30	
Silver	BRL	0.33	<0.39	<0.35	NC	103	103	0.0	96.5			75 - 125	30	
Zinc	BRL	0.67	766	103	153	96.3	95.5	0.8	NC			75 - 125	30	r

m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

December 19, 2019

QA/QC Data

SDG I.D.: GCE85521

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 509841 (mg/Kg), QC Sample No: CE85350 10X (CE85521)											
Chlorinated Herbicides - Soil											
2,4,5-T	ND	0.083	83	81	2.4	81	80	1.2	40 - 140	30	
2,4,5-TP (Silvex)	ND	0.083	86	85	1.2	85	83	2.4	40 - 140	30	
2,4-D	ND	0.17	90	97	7.5	92	87	5.6	40 - 140	30	
2,4-DB	ND	1.7	87	85	2.3	86	86	0.0	40 - 140	30	
Dalapon	ND	0.083	66	66	0.0	72	71	1.4	40 - 140	30	
Dicamba	ND	0.083	86	88	2.3	84	83	1.2	40 - 140	30	
Dichloroprop	ND	0.083	100	105	4.9	96	95	1.0	40 - 140	30	
Dinoseb	ND	0.083	85	91	6.8	89	84	5.8	40 - 140	30	
% DCAA (Surrogate Rec)	60	%	65	65	0.0	63	64	1.6	30 - 150	30	
% DCAA (Surrogate Rec) (Confirm	58	%	62	57	8.4	59	60	1.7	30 - 150	30	
Comment:											
Additional criteria: LCS acceptance range is 40-140% MS acceptance range 30-150%.											
QA/QC Batch 509796 (mg/Kg), QC Sample No: CE85411 2X (CE85521)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	0.033	106	103	2.9	82	86	4.8	40 - 140	30	
PCB-1221	ND	0.033							40 - 140	30	
PCB-1232	ND	0.033							40 - 140	30	
PCB-1242	ND	0.033							40 - 140	30	
PCB-1248	ND	0.033							40 - 140	30	
PCB-1254	ND	0.033							40 - 140	30	
PCB-1260	ND	0.033	94	93	1.1	73	77	5.3	40 - 140	30	
PCB-1262	ND	0.033							40 - 140	30	
PCB-1268	ND	0.033							40 - 140	30	
% DCBP (Surrogate Rec)	101	%	100	98	2.0	76	81	6.4	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	95	%	114	112	1.8	85	91	6.8	30 - 150	30	
% TCMX (Surrogate Rec)	109	%	104	101	2.9	80	84	4.9	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	92	%	106	104	1.9	81	87	7.1	30 - 150	30	
QA/QC Batch 509843 (mg/Kg), QC Sample No: CE85411 2X (CE85521)											
Pesticides - Soil											
4,4' -DDD	ND	0.0017	85	84	1.2	92	91	1.1	40 - 140	30	
4,4' -DDE	ND	0.0017	82	85	3.6	100	79	23.5	40 - 140	30	
4,4' -DDT	ND	0.0017	69	68	1.5	79	81	2.5	40 - 140	30	
a-BHC	ND	0.001	67	65	3.0	67	69	2.9	40 - 140	30	
a-Chlordane	ND	0.0033	68	67	1.5	78	76	2.6	40 - 140	30	
Aldrin	ND	0.001	64	61	4.8	64	64	0.0	40 - 140	30	
b-BHC	ND	0.001	98	95	3.1	104	107	2.8	40 - 140	30	
Chlordane	ND	0.033	66	65	1.5	73	73	0.0	40 - 140	30	
d-BHC	ND	0.0033	78	74	5.3	70	72	2.8	40 - 140	30	
Dieldrin	ND	0.001	70	69	1.4	75	74	1.3	40 - 140	30	
Endosulfan I	ND	0.0033	58	52	10.9	48	68	34.5	40 - 140	30	r

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Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Endosulfan II	ND	0.0033	74	74	0.0	74	75	1.3	40 - 140	30	
Endosulfan sulfate	ND	0.0033	109	95	13.7	75	107	35.2	40 - 140	30	r
Endrin	ND	0.0033	67	65	3.0	69	70	1.4	40 - 140	30	
Endrin aldehyde	ND	0.0033	92	90	2.2	96	96	0.0	40 - 140	30	
Endrin ketone	ND	0.0033	91	93	2.2	94	97	3.1	40 - 140	30	
g-BHC	ND	0.001	74	72	2.7	73	76	4.0	40 - 140	30	
g-Chlordane	ND	0.0033	66	65	1.5	73	73	0.0	40 - 140	30	
Heptachlor	ND	0.0033	68	66	3.0	71	71	0.0	40 - 140	30	
Heptachlor epoxide	ND	0.0033	67	65	3.0	70	70	0.0	40 - 140	30	
Methoxychlor	ND	0.0033	84	83	1.2	85	87	2.3	40 - 140	30	
Toxaphene	ND	0.13	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	58	%	70	69	1.4	73	73	0.0	30 - 150	30	
% DCBP (Confirmation)	66	%	79	80	1.3	79	82	3.7	30 - 150	30	
% TCMX	60	%	66	66	0.0	68	67	1.5	30 - 150	30	
% TCMX (Confirmation)	55	%	66	66	0.0	70	68	2.9	30 - 150	30	
QA/QC Batch 509789 (mg/Kg), QC Sample No: CE85150 (CE85521)											
Semivolatiles - Soil											
1,2,4,5-Tetrachlorobenzene	ND	0.23	57	65	13.1				30 - 130	30	
1,2,4-Trichlorobenzene	ND	0.23	56	64	13.3				30 - 130	30	
1,2-Dichlorobenzene	ND	0.18	49	58	16.8				30 - 130	30	
1,2-Diphenylhydrazine	ND	0.23	61	62	1.6				30 - 130	30	
1,3-Dichlorobenzene	ND	0.23	48	54	11.8				30 - 130	30	
1,4-Dichlorobenzene	ND	0.23	48	56	15.4				30 - 130	30	
2,4,5-Trichlorophenol	ND	0.23	69	74	7.0				30 - 130	30	
2,4,6-Trichlorophenol	ND	0.13	65	71	8.8				30 - 130	30	
2,4-Dichlorophenol	ND	0.13	63	75	17.4				30 - 130	30	
2,4-Dimethylphenol	ND	0.23	69	80	14.8				30 - 130	30	
2,4-Dinitrophenol	ND	0.23	42	61	36.9				30 - 130	30	r
2,4-Dinitrotoluene	ND	0.13	62	71	13.5				30 - 130	30	
2,6-Dinitrotoluene	ND	0.13	67	75	11.3				30 - 130	30	
2-Chloronaphthalene	ND	0.23	59	62	5.0				30 - 130	30	
2-Chlorophenol	ND	0.23	55	71	25.4				30 - 130	30	
2-Methylnaphthalene	ND	0.23	56	65	14.9				30 - 130	30	
2-Methylphenol (o-cresol)	ND	0.23	61	80	27.0				30 - 130	30	
2-Nitroaniline	ND	0.33	91	101	10.4				30 - 130	30	
2-Nitrophenol	ND	0.23	63	77	20.0				30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	0.23	59	81	31.4				30 - 130	30	r
3,3'-Dichlorobenzidine	ND	0.13	52	62	17.5				30 - 130	30	
3-Nitroaniline	ND	0.33	67	76	12.6				30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	0.23	60	72	18.2				30 - 130	30	
4-Bromophenyl phenyl ether	ND	0.23	60	69	14.0				30 - 130	30	
4-Chloro-3-methylphenol	ND	0.23	68	80	16.2				30 - 130	30	
4-Chloroaniline	ND	0.23	51	61	17.9				30 - 130	30	
4-Chlorophenyl phenyl ether	ND	0.23	62	69	10.7				30 - 130	30	
4-Nitroaniline	ND	0.23	69	75	8.3				30 - 130	30	
4-Nitrophenol	ND	0.23	73	87	17.5				30 - 130	30	
Acenaphthene	ND	0.23	62	65	4.7				30 - 130	30	
Acenaphthylene	ND	0.13	56	59	5.2				30 - 130	30	
Acetophenone	ND	0.23	49	64	26.5				30 - 130	30	
Aniline	ND	0.33	31	50	46.9				30 - 130	30	r
Anthracene	ND	0.23	58	62	6.7				30 - 130	30	
Benz(a)anthracene	ND	0.23	60	66	9.5				30 - 130	30	

QA/QC Data

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Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzidine	ND	0.33	<10	16	NC				30 - 130	30	l
Benzo(a)pyrene	ND	0.13	60	67	11.0				30 - 130	30	
Benzo(b)fluoranthene	ND	0.16	57	67	16.1				30 - 130	30	
Benzo(ghi)perylene	ND	0.23	56	59	5.2				30 - 130	30	
Benzo(k)fluoranthene	ND	0.23	61	65	6.3				30 - 130	30	
Benzoic Acid	ND	0.33	<10	<10	NC				30 - 130	30	l
Benzyl butyl phthalate	ND	0.23	62	68	9.2				30 - 130	30	
Bis(2-chloroethoxy)methane	ND	0.23	57	65	13.1				30 - 130	30	
Bis(2-chloroethyl)ether	ND	0.13	45	56	21.8				30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	0.23	45	57	23.5				30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	0.23	60	67	11.0				30 - 130	30	
Carbazole	ND	0.23	59	64	8.1				30 - 130	30	
Chrysene	ND	0.23	59	62	5.0				30 - 130	30	
Dibenz(a,h)anthracene	ND	0.13	62	67	7.8				30 - 130	30	
Dibenzofuran	ND	0.23	61	63	3.2				30 - 130	30	
Diethyl phthalate	ND	0.23	65	66	1.5				30 - 130	30	
Dimethylphthalate	ND	0.23	62	64	3.2				30 - 130	30	
Di-n-butylphthalate	ND	0.67	61	64	4.8				30 - 130	30	
Di-n-octylphthalate	ND	0.23	65	71	8.8				30 - 130	30	
Fluoranthene	ND	0.23	57	59	3.4				30 - 130	30	
Fluorene	ND	0.23	62	68	9.2				30 - 130	30	
Hexachlorobenzene	ND	0.13	64	67	4.6				30 - 130	30	
Hexachlorobutadiene	ND	0.23	56	62	10.2				30 - 130	30	
Hexachlorocyclopentadiene	ND	0.23	37	51	31.8				30 - 130	30	r
Hexachloroethane	ND	0.13	50	58	14.8				30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	0.23	61	67	9.4				30 - 130	30	
Isophorone	ND	0.13	51	59	14.5				30 - 130	30	
Naphthalene	ND	0.23	55	60	8.7				30 - 130	30	
Nitrobenzene	ND	0.13	55	72	26.8				30 - 130	30	
N-Nitrosodimethylamine	ND	0.23	44	48	8.7				30 - 130	30	
N-Nitrosodi-n-propylamine	ND	0.13	56	76	30.3				30 - 130	30	
N-Nitrosodiphenylamine	ND	0.13	60	64	6.5				30 - 130	30	
Pentachloronitrobenzene	ND	0.23	60	72	18.2				30 - 130	30	
Pentachlorophenol	ND	0.23	64	78	19.7				30 - 130	30	
Phenanthrene	ND	0.13	58	62	6.7				30 - 130	30	
Phenol	ND	0.23	59	82	32.6				30 - 130	30	r
Pyrene	ND	0.23	58	59	1.7				30 - 130	30	
Pyridine	ND	0.23	20	24	18.2				30 - 130	30	l
% 2,4,6-Tribromophenol	37	%	67	75	11.3				30 - 130	30	
% 2-Fluorobiphenyl	55	%	55	57	3.6				30 - 130	30	
% 2-Fluorophenol	50	%	48	61	23.9				30 - 130	30	
% Nitrobenzene-d5	57	%	53	69	26.2				30 - 130	30	
% Phenol-d5	56	%	54	70	25.8				30 - 130	30	
% Terphenyl-d14	52	%	51	53	3.8				30 - 130	30	

Comment:

This batch consists of a Blank, LCS and LCSD.

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 509858 (mg/Kg), QC Sample No: CE85357 (CE85521)

Polynuclear Aromatic HC - Soil

1,4-dioxane	ND	0.067	87	88	1.1	86	86	0.0	30 - 130	30	
% 2-Fluorobiphenyl	49	%	55	54	1.8	51	47	8.2	30 - 130	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Nitrobenzene-d5	71	%	77	71	8.1	68	63	7.6	30 - 130	30
% Terphenyl-d14	59	%	55	59	7.0	72	56	25.0	30 - 130	30

Comment:

Additional 8270 criteria:20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 509989 (mg/Kg), QC Sample No: CE85311 (CE85522, CE85523)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	0.005	99	99	0.0				70 - 130	30
1,1,1-Trichloroethane	ND	0.005	95	94	1.1				70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.003	95	96	1.0				70 - 130	30
1,1,2-Trichloroethane	ND	0.005	92	93	1.1				70 - 130	30
1,1-Dichloroethane	ND	0.005	94	94	0.0				70 - 130	30
1,1-Dichloroethene	ND	0.005	101	100	1.0				70 - 130	30
1,1-Dichloropropene	ND	0.005	101	100	1.0				70 - 130	30
1,2,3-Trichlorobenzene	ND	0.005	100	104	3.9				70 - 130	30
1,2,3-Trichloropropane	ND	0.005	86	87	1.2				70 - 130	30
1,2,4-Trichlorobenzene	ND	0.005	103	105	1.9				70 - 130	30
1,2,4-Trimethylbenzene	ND	0.001	95	95	0.0				70 - 130	30
1,2-Dibromo-3-chloropropane	ND	0.005	95	98	3.1				70 - 130	30
1,2-Dibromoethane	ND	0.005	93	93	0.0				70 - 130	30
1,2-Dichlorobenzene	ND	0.005	92	92	0.0				70 - 130	30
1,2-Dichloroethane	ND	0.005	90	91	1.1				70 - 130	30
1,2-Dichloropropane	ND	0.005	93	94	1.1				70 - 130	30
1,3,5-Trimethylbenzene	ND	0.001	97	98	1.0				70 - 130	30
1,3-Dichlorobenzene	ND	0.005	93	94	1.1				70 - 130	30
1,3-Dichloropropane	ND	0.005	92	92	0.0				70 - 130	30
1,4-Dichlorobenzene	ND	0.005	91	90	1.1				70 - 130	30
2,2-Dichloropropane	ND	0.005	97	97	0.0				70 - 130	30
2-Chlorotoluene	ND	0.005	95	95	0.0				70 - 130	30
2-Hexanone	ND	0.025	87	90	3.4				70 - 130	30
2-Isopropyltoluene	ND	0.005	102	103	1.0				70 - 130	30
4-Chlorotoluene	ND	0.005	93	94	1.1				70 - 130	30
4-Methyl-2-pentanone	ND	0.025	93	94	1.1				70 - 130	30
Acetone	ND	0.01	75	73	2.7				70 - 130	30
Acrylonitrile	ND	0.005	92	94	2.2				70 - 130	30
Benzene	ND	0.001	96	96	0.0				70 - 130	30
Bromobenzene	ND	0.005	93	92	1.1				70 - 130	30
Bromochloromethane	ND	0.005	96	94	2.1				70 - 130	30
Bromodichloromethane	ND	0.005	96	97	1.0				70 - 130	30
Bromoform	ND	0.005	102	102	0.0				70 - 130	30
Bromomethane	ND	0.005	120	111	7.8				70 - 130	30
Carbon Disulfide	ND	0.005	105	105	0.0				70 - 130	30
Carbon tetrachloride	ND	0.005	96	97	1.0				70 - 130	30
Chlorobenzene	ND	0.005	94	94	0.0				70 - 130	30
Chloroethane	ND	0.005	104	106	1.9				70 - 130	30
Chloroform	ND	0.005	92	91	1.1				70 - 130	30
Chloromethane	ND	0.005	100	99	1.0				70 - 130	30
cis-1,2-Dichloroethene	ND	0.005	95	94	1.1				70 - 130	30
cis-1,3-Dichloropropene	ND	0.005	98	98	0.0				70 - 130	30
Dibromochloromethane	ND	0.003	99	99	0.0				70 - 130	30
Dibromomethane	ND	0.005	92	93	1.1				70 - 130	30
Dichlorodifluoromethane	ND	0.005	114	111	2.7				70 - 130	30

QA/QC Data

SDG I.D.: GCE85521

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Ethylbenzene	ND	0.001	97	98	1.0				70 - 130	30
Hexachlorobutadiene	ND	0.005	104	104	0.0				70 - 130	30
Isopropylbenzene	ND	0.001	99	98	1.0				70 - 130	30
m&p-Xylene	ND	0.002	96	97	1.0				70 - 130	30
Methyl ethyl ketone	ND	0.005	93	88	5.5				70 - 130	30
Methyl t-butyl ether (MTBE)	ND	0.001	93	93	0.0				70 - 130	30
Methylene chloride	ND	0.005	87	86	1.2				70 - 130	30
Naphthalene	ND	0.005	111	115	3.5				70 - 130	30
n-Butylbenzene	ND	0.001	104	104	0.0				70 - 130	30
n-Propylbenzene	ND	0.001	98	98	0.0				70 - 130	30
o-Xylene	ND	0.002	98	98	0.0				70 - 130	30
p-Isopropyltoluene	ND	0.001	101	102	1.0				70 - 130	30
sec-Butylbenzene	ND	0.001	106	107	0.9				70 - 130	30
Styrene	ND	0.005	98	98	0.0				70 - 130	30
tert-Butylbenzene	ND	0.001	98	99	1.0				70 - 130	30
Tetrachloroethene	ND	0.005	101	99	2.0				70 - 130	30
Tetrahydrofuran (THF)	ND	0.005	86	84	2.4				70 - 130	30
Toluene	ND	0.001	97	97	0.0				70 - 130	30
trans-1,2-Dichloroethene	ND	0.005	98	99	1.0				70 - 130	30
trans-1,3-Dichloropropene	ND	0.005	96	97	1.0				70 - 130	30
trans-1,4-dichloro-2-butene	ND	0.005	108	107	0.9				70 - 130	30
Trichloroethene	ND	0.005	96	97	1.0				70 - 130	30
Trichlorofluoromethane	ND	0.005	108	108	0.0				70 - 130	30
Trichlorotrifluoroethane	ND	0.005	106	107	0.9				70 - 130	30
Vinyl chloride	ND	0.005	99	99	0.0				70 - 130	30
% 1,2-dichlorobenzene-d4	100	%	99	99	0.0				70 - 130	30
% Bromofluorobenzene	97	%	101	100	1.0				70 - 130	30
% Dibromofluoromethane	98	%	99	99	0.0				70 - 130	30
% Toluene-d8	99	%	100	100	0.0				70 - 130	30

Comment:

The Low Level MS/MSD are not reported for this batch.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
December 19, 2019

Thursday, December 19, 2019

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCE85521 - LANDREM

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

December 19, 2019 SDG I.D.: GCE85521

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

SVOA Narration

CHEM05 12/11/19-2: CE85521

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.096 (0.1), Hexachlorobenzene 0.094 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.097 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM31 12/11/19-1: CE85522, CE85523

The following Initial Calibration compounds did not meet RSD% criteria: Acetone 31% (20%), Chloroethane 21% (20%), Naphthalene 28% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: Acetone 0.071 (0.1), Bromoform 0.091 (0.1), Tetrachloroethene 0.160 (0.2)
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

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NY Temperature Narration

December 19, 2019

SDG I.D.: GCE85521

The samples in this delivery group were received at 1.5°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

PFOA Sample
in Field Blank
water bottle

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐
Temp 5 °C Pg of

CHAIN OF CUSTODY RECORD

e Turnpike, P.O. Box 370, Manchester, CT 06040
@phoenixlabs.com Fax (860) 645-0823
ent Services (860) 645-8726

Contact Options:
☐ Phone:
☐ Fax:
☑ Email: wpi@land-remediation.com

Project: BASF Rensselaer
Report to: Will Lindheimer
Invoice to: "
QUOTE # :
Project P.O:

This section MUST be completed with Bottle Quantities.

12/10/19

Analysis Request

;=Waste Water
W=Wipe

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	SVOC	PCBs	RCRA Metals	1,4 Dioxane	VOC	PFOA
85521	MP-1	S	12/10	1:50	✓	✓				
85522	MP-1A	S	12/10	2:00			✓			
85523	MP-1B	S	12/10	2:15			✓			
85524	MP-PFOA	S	12/10	2:30				✓		

GL Amber 8 oz. w/H3PO4	Soil VOA Vials (✓) methanol (2) H2O	GL Soil container (8) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/Hyo	Bacteria Bottle as is
	✓										
✓											
✓											
					✓						

Relinquished by:	Accepted by:	Date:	Time:
[illegible]	[illegible]	12/10/19	3:10pm
[illegible]	[illegible]		3:10
[illegible]	[illegible]	12/10/19	16:52

Comments, Special Requirements or Regulations:

Data Format:
☐ Phoenix Std Report ☐ EQuIS
☐ Excel ☐ NJ Hazsite EDD
☐ PDF ☐ NY EZ EDD (ASP)
☐ GIS/Key ☐ Other

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☑ 5 Days
☐ 10 Days
☐ Other
* SURCHARGE APPLIES

Data Package:
☐ NJ Reduced Deliv. * ☐ Other
☐ NY Enhanced (ASP B) *

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential Restricted Soil
☐ 375SCO Commercial Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

PA
☐ Clean Fill Limits
☐ PA-GW
☐ Reg Fill Limits
☐ PA Soil Restricted
☐ PA Soil non-restricted

State Samples Collected?

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Acknowledgement

December 11, 2019

FOR: Attn: Mr. William Lindhelmer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Location Code:	LANDREM	SDG ID: GCE85521
Rush Request:	Standard	
P.O.#:		
Price Quote #:		
Project Id:	BASF RENSSELAER	
Temperature:	The samples in this delivery group were received at 1.5°C. (Note acceptance criteria for relevant matrices is above freezing up to 6°C)	

Phoenix Id	Client Id	Matrix	Sub Date	Col Date	Col By
CE85521	MP-1	SOIL	12/11 4:52p	12/10 01:50p	
CE85522	MP-1A	SOIL	12/11 4:52p	12/10 02:00p	
CE85523	MP-1B	SOIL	12/11 4:52p	12/10 02:15p	
CE85524	MP-PFOA	SOIL	12/11 4:52p	12/10 02:30p	

GCE85521 Criteria:
None.

If there are any questions regarding this submittal, please call Phoenix Client Services at extension 200.

Sample Acknowledgement

PHOENIX

Phoenix Environmental Laboratories, Inc
587 East Middle Turnpike
Manchester, CT 06045
Tel (860) 645-1102 Fax (860) 645-0823

SDG: GCE85521
Project: BASF RENSSELAER

Sample Id	Client Id	Matrix	Rush	**Metals (Total)**	TAL Metals [SW6010D/SW7471B]	**Organics (Total)**	1,4-Dioxane [SW8270D (SIM)]	Chlorinated Herbicides [SW8151A]	Pesticides - Soil [SW8081B]	Polychlorinated Biphenyls [SW8082A]	Semivolatiles [SW8270D]	Volatiles [SW8260C]
CE85521	MP-1	SOIL	STD		x		x	x	x	x	x	
CE85522	MP-1A	SOIL	STD									x
CE85523	MP-1B	SOIL	STD									x
CE85524	MP-PFOA	SOIL	STD									

Sample Hold Policy: Please note that the laboratory will retain all samples, received and placed on HOLD for a 30 day period. After the 30 period has expired all samples will be disposed.

Please note that sample storage fees may be incurred for all samples held in storage beyond the 30 day period.
Rush results are typically available after 3pm on the day they are due.
Thank you very much for your business. We appreciate the opportunity to serve you, and look forward to continuing and growing our relationship.

PFOA sample
in Field Blank
water bottle

Cooler: Yes ☒ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

CHAIN OF CUSTODY RECORD

Temp 5 °C Pg of

e Turnpike, P.O. Box 370, Manchester, CT 06040
@phoenixlabs.com Fax (860) 645-0823
ent Services (860) 645-8726

Contact Options:
☐ Phone:
☐ Fax:
☑ Email: WP1@landremediation.com

Project: BASF Rensselaer
Report to: Will Lindheimer
Invoice to: "
QUOTE # :

Project P.O:

This section MUST be completed with Bottle Quantities.

12/10/19

Analysis Request

W=Waste Water
W=Wipe

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	SVOC PCB VOC pest. TAL metals 1,4 dioxane PFOA	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (1) methanol (2) H2O	GL Soil container (3) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
85521	MP-1	S	12/10	1:50	✓ ✓		✓									
85522	MP-1A	S	12/10	2:00	✓		✓									
85523	MP-1B	S	12/10	2:15	✓		✓									
85524	MP-PFOA	S	12/10	2:30	✓						✓					

Relinquished by:	Accepted by:	Date:	Time:
		12/10/19	2:10pm
			3:00
		12/10/19	16:52

Comments, Special Requirements or Regulations:

Data Format:
☐ Phoenix Std Report ☐ EQuIS
☐ Excel ☐ NJ Hazsite EDD
☐ PDF ☐ NY EZ EDD (ASP)
☐ GIS/Key ☐ Other

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☑ 5 Days
☐ 10 Days
☐ Other
* SURCHARGE APPLIES

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

Data Package:
☐ NJ Reduced Deliv. * ☐ Other
☐ NY Enhanced (ASP B) *

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential Restricted Soil
☐ 375SCO Commercal Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

PA
☐ Clean Fill Limits
☐ PA-GW
☐ Reg Fill Limits
☐ PA Soil Restricted
☐ PA Soil non-restricted

State Samples Collected?

Technical Report

prepared for:

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Report Date: 12/18/2019
Client Project ID: CE85524
York Project (SDG) No.: 19L0521

Report Date: 12/18/2019
Client Project ID: CE85524
York Project (SDG) No.: 19L0521

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 13, 2019 with a temperature of 2.9 C. The project was identified as your project: **CE85524**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
19L0521-01	CE85524	Soil	12/10/2019	12/13/2019

General Notes for York Project (SDG) No.: 19L0521

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 12/18/2019

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: CE85524 **York Sample ID:** 19L0521-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
19L0521	CE85524	Soil	December 10, 2019 2:30 pm	12/13/2019

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
335-67-1	Perfluorooctanoic acid (PFOA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
375-95-1	Perfluorononanoic acid (PFNA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
335-76-2	Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
2355-31-9	N-MeFOSAA	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
2991-50-6	N-EtFOSAA	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
754-91-6	Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
375-92-8	Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
335-77-3	Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT

Sample Information

Client Sample ID: CE85524 **York Sample ID:** 19L0521-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
19L0521	CE85524	Soil	December 10, 2019 2:30 pm	12/13/2019

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-22-4	Perfluoro-n-butanoic acid (PFBA)	ND		ug/kg dry	1.30	1	EPA 537m Certifications:	12/16/2019 10:35	12/16/2019 18:18	KT

Surrogate Recoveries	Result	Acceptance Range
Surrogate: M3PFBS	*53.0 %*	*25-150*
Surrogate: M5PFHxA	*54.7 %*	*25-150*
Surrogate: M4PFHpA	*55.2 %*	*25-150*
Surrogate: M3PFHxS	*57.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*55.5 %*	*25-150*
Surrogate: M6PFDA	*33.9 %*	*25-150*
Surrogate: M7PFUdA	*27.6 %*	*25-150*
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*25.0 %*	*25-150*
Surrogate: M2PFTeDA	*23.8 %*	*10-150*
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*62.3 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*41.8 %*	*25-150*
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*60.6 %*	*25-150*
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*27.0 %*	*10-150*
Surrogate: d3-N-MeFOSAA	*31.1 %*	*25-150*
Surrogate: d5-N-EtFOSAA	*36.2 %*	*25-150*
Surrogate: M2-6:2 FTS	*160 %*	PFSu-H *25-150*
Surrogate: M2-8:2 FTS	*148 %*	*25-150*
Surrogate: M9PFNA	*48.7 %*	*25-150*

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	**% Solids**	**57.9**		%	0.100	1	SM 2540G Certifications: CTDOH	12/16/2019 14:39	12/16/2019 14:45	WL

Sample and Data Qualifiers Relating to This Work Order

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data are acceptable.
PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐
Temp °C Pg of

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726 1920521

Contact Options:
☐ Fax: 860-645-0823
☐ Phone: 800-827-5426
☐ Email: HelenG@PhoenixLabs.com

Customer: York Analytical Laboratories
Address: 20 Research Drive
Stratford, CT 06615

Project:
Report to: HelenG@PhoenixLabs.com / Helen Geoghegan
Invoice to: AccountsPayable@PhoenixLabs.com
Quote# :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PFOAS	GL Amber 8 oz w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
CE85524		S	12-10-19	14:30	X						1						

Relinquished by:	Accepted by:	Date:	Time:
		12-13-19	5:15A
		12-13-19	7:32A

Turnaround:
☐ 1 Day
☐ ~~2 Days~~
☒ 3 Days
☐ 5 Days
☐ 10 Days
☐ Standard
☐ Other____

Report Type:
☒ Standard PDF
☐ Full Data Package
☐ NJ Reduced Deliverable
☐ NJ Full Deliverable
☐ NY ASP B

EDD Format:
☐ Excel
☐ GIS/Key
☐ EQuIS
☐ NJ Hazsite EDD
☐ NY EZ EDD (ASP)
☐ Other:_____

State Criteria:
☐ MA MCP CAM Cert.
☐ CT RCP Cert.
☐ _____
☐ _____
☐ _____

What State were samples collected? NY

mments, Special Requirements or Regulations:
3-4 day turnaround

2.9°C CM

ase send notice as soon as possible not exceeding 24 hours of obtaining valid data, of the results of all oking water samples that exceed any EPA or Department-established maximum contaminant level, maximum idual disinfectant level or reportable concentration.

ase notify Phoenix Environmental Laboratories, Inc. immediately and prior to conducting analysis if certification ot held for the analyses requested.

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 10/15/2019	☐ New Submittal ☑ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 20-A PREVIOUS SUBMITTAL NO. AND DATE: 13-C on 10/12/18
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Aquatic Fill Materials		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for stone products to be used as erosion protection stone	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: October 15, 2019

Additional Notes:
Attached is the sieve for the Erosion Protection Stone.
Submittal has been updated to include Specific Gravity Test of the stone.
Erosion Protestion Stone is from Troy Sand and Gravels West Sand Lake Quarry.
Material is a hard shale stone with a specific gravity of 2.715
Magnesium Sulfate testing is not applicable and not performed.

Troy Sand & Gravel

Gradation Test Report

MATERIAL: Erosion Protection Layer

Date:	10/10/18		Lab/Location:	West Sand Lake, NY.	
Source:	West Sand Lake		Sample #:	1	
Plant Type:			Sample Location:		
Facility #:			Sampled By/Cert. #:	Dan	

Moisture Content

Wet Mass(W):	
Original Dry Mass(D):	14528.4
Moisture Loss (W - D):	
% Moisture (100 x (W - D) / D):	

Materials Finer than #200 Sieve by Washing

Dry Mass after wash (Dw):	
Mass of Fines lost by washing (D - Dw):	0.0
% -75 µm Sieve (100 x (D - Dw)/D):	

Mechanical Analysis of Extracted Aggregate

Sieve	Mass per Sieve		% Retained per Sieve		% Passing		Specification Range
	Unwashed	Washed	Unwashed	Washed	Unwashed	Washed	
4"	0.0		0.0		**100.0**		100
3-1/2"	496.7		3.4		**96.6**		90/100
1-1/2"	12414.5		85.4		**14.6**		0/15
3/4"	14325.8		98.6		**1.4**		0/5
Pan	14519.6		99.9		0.06057102		
Loss on Washing (D - Dw)							
Total	14519.6						

Comments:	Land Remediation Erosion Protection Layer

Tested by:	Alaina	Reviewed by:	
Certification #:		Certification #:	
Date:	10/10/2018	Date:	

P. O. BOX 171
WATERVLIET, N. Y. 12189

674-2854

TROY SAND AND GRAVEL CO., INC.

WASHED AND PROCESSED SAND AND GRAVEL

ALPINE
SAND & GRAVEL

LAKE
SAND & GRAVEL

May 22, 2018

LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188

Attention Mr. William Lindheimer

RE: *BASF Rensselaer*

Dear Mr. Lindheimer

As per your request please accept this correspondence as follows:
Materials at Troy Sand & Gravel 36 Grange Road West Sand Lake NY 12196

These materials are virgin quarry product mined from our source of stone products, the materials in this quarry are DOT approved materials.

In the event I can be of further assistance or you have any questions, please do not hesitate to contact me at your convenience at (518) 858-7222.

Thank you.

Very Truly Yours,
Troy Sand and Gravel

Nicholas M DiNova Jr.

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT NUMBER: 1 : PAGE: 1
REPORT DATE: 04/20/17
OUR FILE NUMBER: 1526.000
LAB SAMPLE NUMBER: 18990

ATT'N: MR. WILL LINDHEIMER

PROJECT: **BASF: RENSSELAER, NY.**

DETERMINATION OF BULK SPECIFIC GRAVITY/DENSITY OF STONE

CLIENT ID: **EROSION PROTECTION STONE**

DRY WEIGHT (gm)	SSD (gm)	SUBMERGED (gm)	SPECIFIC GRAVITY
2152.3	**2156.1**	**1363.3**	**2.715**

REPORT DISTRIBUTION
1: FILE
2:
3:
4:

RESPECTFULLY SUBMITTED,
CONSTRUCTION TECHNOLOGY
Tom Joslin
TOM JOSLIN, S.E.T. (NICET)
MANAGER TECHNICAL SERVICES

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 10/12/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13-C PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Aquatic Fill Materials		1	02 30 00		See remarks below regarding placement locations.

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for stone products to be used to fill the north and south pier	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: October 12, 2018

Additional Notes:
Attached is the sieve for the Erosion Protection Stone to be used in the North and South Pier.

Troy Sand & Gravel

Gradation Test Report

MATERIAL: Erosion Protection Layer

Date:	10/10/18		Lab/Location:	West Sand Lake, NY.	
Source:	West Sand Lake		Sample #:	1	
Plant Type:			Sample Location:		
Facility #:			Sampled By/Cert. #:	Dan	

Moisture Content

Wet Mass(W):	
Original Dry Mass(D):	14528.4
Moisture Loss (W - D):	
% Moisture (100 x (W - D) / D):	

Materials Finer than #200 Sieve by Washing

Dry Mass after wash (Dw):	
Mass of Fines lost by washing (D - Dw):	0.0
% -75 µm Sieve (100 x (D - Dw)/D):	

Mechanical Analysis of Extracted Aggregate

Sieve	Mass per Sieve		% Retained per Sieve		% Passing		Specification Range
	Unwashed	Washed	Unwashed	Washed	Unwashed	Washed	
4"	0.0		0.0		**100.0**		100
3-1/2"	496.7		3.4		**96.6**		90/100
1-1/2"	12414.5		85.4		**14.6**		0/15
3/4"	14325.8		98.6		**1.4**		0/5
Pan	14519.6		99.9		0.06057102		
Loss on Washing (D - Dw)							
Total	14519.6						

Comments:	Land Remediation Erosion Protection Layer

Tested by:	Alaina	Reviewed by:	
Certification #:		Certification #:	
Date:	10/10/2018	Date:	

P. O. BOX 171
WATERVLIET, N. Y. 12189

674-2854

TROY SAND AND GRAVEL CO., INC.

WASHED AND PROCESSED SAND AND GRAVEL

ALPINE
SAND & GRAVEL

LAKE
SAND & GRAVEL

May 22, 2018

LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188

Attention Mr. William Lindheimer

RE: *BASF Rensselaer*

Dear Mr. Lindheimer

As per your request please accept this correspondence as follows:
Materials at Troy Sand & Gravel 36 Grange Road West Sand Lake NY 12196

These materials are virgin quarry product mined from our source of stone products, the materials in this quarry are DOT approved materials.

In the event I can be of further assistance or you have any questions, please do not hesitate to contact me at your convenience at (518) 858-7222.

Thank you.

Very Truly Yours,
Troy Sand and Gravel

Nicholas M DiNova Jr.

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 6/6/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13 PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Upland Backfill Materials		1	02 30 00		See remarks below regarding placement locations.

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for stone products to be used during site preperation activities.	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: June 6, 2018

Additional Notes:

Attached is the sieve for the crusher run, No. 2 and No. 3 Stone.
Crusher run will be used as subbase material, TFS grading material, and below roads.
No. 2 Stone will be used above crusher run on roads and parking areas.
No. 3 Stone will be used at construction entrances and staging areas as needed.
Per the NYSDEC DER-10 guidelines, chemical testing is not required on imported clean virgin stone from a permitted quarry if less than 10% by weight of material passes through a size 80 sieve and consists of:
i. gravel, rock or stone, consisting of virgin material from a permitted mine or quarry;
(see sieve for crusher run - less than 10% passes 80 sieve - 2 seperate samples tested)

P. O. BOX 171
WATERVLIET, N. Y. 12189

674-2854

TROY SAND AND GRAVEL CO., INC.

WASHED AND PROCESSED SAND AND GRAVEL

ALPINE
SAND & GRAVEL

LAKE
SAND & GRAVEL

May 22, 2018

LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188

Attention Mr. William Lindheimer

RE: *BASF Rensselaer*

Dear Mr. Lindheimer

As per your request please accept this correspondence as follows:
Materials at Troy Sand & Gravel 36 Grange Road West Sand Lake NY 12196

These materials are virgin quarry product mined from our source of stone products, the materials in this quarry are DOT approved materials.

In the event I can be of further assistance or you have any questions, please do not hesitate to contact me at your convenience at (518) 858-7222.

Thank you.

Very Truly Yours,
Troy Sand and Gravel

Nicholas M DiNova Jr.

Troy Sand & Gravel

Gradation Test Report

MATERIAL: State - #2

Date:	04/02/18	Lab/Location:	West Sand Lake, NY.
Source:	Troy Sand & Gravel	Sample #:	1
Plant Type:		Sample Location:	Stockpile
Facility #:	H0339	Sampled By/Cert. #:	MDGliwski

Moisture Content

Wet Mass(W):	
Original Dry Mass(D):	6694.0
Moisture Loss (W - D):	
% Moisture (100 x (W - D) / D):	

Materials Finer than #200 Sieve by Washing

Dry Mass after wash (Dw):	
Mass of Fines lost by washing (D - Dw):	0.0
% -75 µm Sieve (100 x (D - Dw)/D):	

Mechanical Analysis of Extracted Aggregate

Sieve	Mass per Sieve		% Retained per Sieve		% Passing		Specification Range
	Unwashed	Washed	Unwashed	Washed	Unwashed	Washed	
1"	396.3		5.9		**94.1**		90/100
3/4"	1906.0		28.5		**71.5**		
1/2"	5848.8		87.4		**12.6**		0/15
3/8"	6399.5		95.6		**4.4**		
1/4	6552.0		97.9		**2.1**		
#4	6612.3		98.8		**1.2**		
#200	6657.6		99.5		**0.5**		0/1
Pan	6694.0		100.0		0		
Loss on Washing (D - Dw)					Fineness Modulus (FM) =		
Total	6694.0						

Comments:	

Tested by:	MDGliwski	Reviewed by:	
Certification #:	652M / 17-2E	Certification #:	
Date:	4/3/2018	Date:	

Troy Sand & Gravel

Gradation Test Report

MATERIAL: Cropseyville 3's

Date:	02/05/18	Lab/Location:	West Sand Lake, NY.
Source:	Cropseyville	Sample #:	
Plant Type:		Sample Location:	
Facility #:		Sampled By/Cert. #:	Dan Clemente

Moisture Content

Wet Mass(W):	
Original Dry Mass(D):	22532.1
Moisture Loss (W - D):	
% Moisture (100 x (W - D) / D):	

Materials Finer than #200 Sieve by Washing

Dry Mass after wash (Dw):	
Mass of Fines lost by washing (D - Dw):	0.0
% -75 µm Sieve (100 x (D - Dw)/D):	

Mechanical Analysis of Extracted Aggregate

Sieve	Mass per Sieve		% Retained per Sieve		% Passing		Specification Range
	Unwashed	Washed	Unwashed	Washed	Unwashed	Washed	
2-1/2"	0.0		0.0		**100**		100
2"	0.0		0.0		**100**		90/100
1-1/2"	8482.2		37.6		**62.4**		35/70
1"	19644.3		87.2		**12.8**		0/15
3/4"	20854.9		92.6		**7.4**		
1/2"	21424.4		95.1		**4.9**		
#200	22395.6		99.4		**0.6**		0/.7
Pan	22532.1		100.0		0		
Loss on Washing (D - Dw)							
Total	22532.1						

Comments:	

Tested by:	M.D.Gliwski	Reviewed by:	
Certification #:	652m / 17-2E	Certification #:	
Date:	2/5/2018	Date:	

Troy Sand & Gravel

Gradation Test Report

MATERIAL: Crusher Run

Date:	4/2/2018
Lab Location:	West Sand Lake
Sample Location:	West Sand Lake
Sampled By:	

Note #2...Total sample weight in Grams:	13580.6
Note #4...Weight of Test sample passing #4 sieve in Grams:	903.7
% of sample passing #4 sieve:	47.2

Sieves	Cumulative Weight	% Retained		%Passing	Range
2"	0	0.0		**100.0**	100
1/4"	5745.4	42.3		**57.7**	25/60
#4	7168.9	52.8		**47.2**	
#10	352.4	39.0	18.4	**28.8**	
#40	688.6	76.2	36.0	**11.2**	5/40
#200	812	89.9	42.4	**4.8**	0/10
Pan	903.7	100	47.2	**0.0**	

Comments	
Tested By:	MDGliwski
Certification #	17-2E
Testing Date:	4/2/2018

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 05/31/18
SAMPLE NUMBER: 18102
OUR FILE NUMBER: 1526.000
LAB TECHNICIAN: BRYAN CASAW

ATT'N: MR. WILLIAM LINDHEIMER
PROJECT: **BASF - RENNSELAER: 36 RIVERSIDE, TROY, NEW YORK**

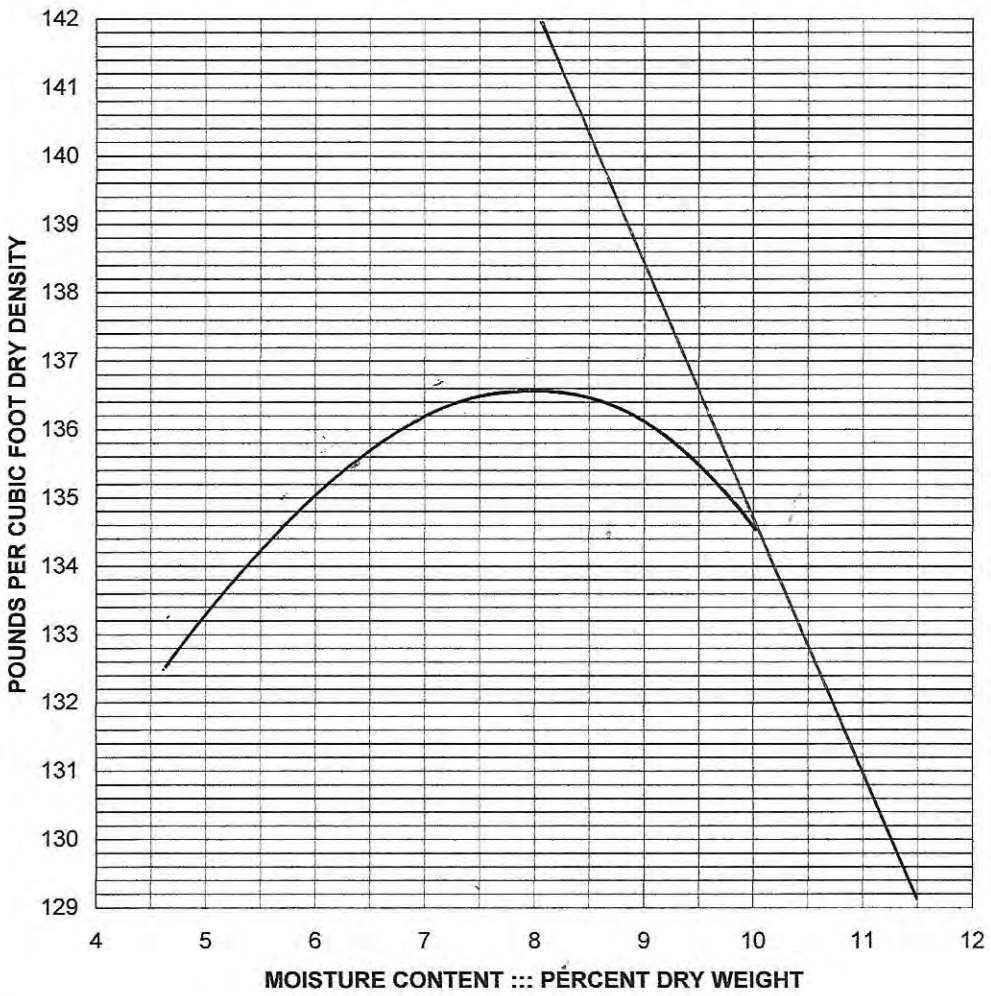
REPORT OF MOISTURE / DENSITY RELATION OF SOILS ::: PROCTOR

MATERIAL SOURCE: **BORROW: TROY SAND & GRAVEL: SAMPLE #1**
MATERIAL DESCRIPTION: CRUSHED STONE sized as GRAVEL, fine; some coarse/medium Sand; trace Silt/Clay
PROCTOR METHOD: ASTM D-1557: MODIFIED EFFORT
GRADATION METHOD: ASTM D-1140 / D-422: WASHED

+3/4" CORRECTION: **138.5** PCF
MAXIMUM DENSITY 136.6 PCF
OPTIMUM MOISTURE **8.1 %**

ZERO AIR VOIDS CURVE: 2.78 SPECIFIC GRAVITY

GRADATION		
SIEVE SIZE	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"		
3"		
2 1/2"		
2"	100.0	
1 1/2"		
1"	98.9	
3/4"	93.6	
1/2"	80.3	
3/8"	67.6	
1/4"	45.6	
#4	29.6	
1/8"		
#8	17.2	
#10		
#16	13.9	
#20		
#30	11.6	
#40	10.6	
#50	9.5	
#60		
#80	7.9	
#100	7.6	
#140		
#200	6.2	



REPORT DISTRIBUTION:	GENERAL NOTES:	Respectfully,
1:		**CONSTRUCTION TECHNOLOGY**
2:		
3:		*Tom Joslin*
4:		TOM JOSLIN, S.E.T., (NICET)
5:		MANAGER TECHNICAL SERVICES

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 05/31/18
SAMPLE NUMBER: 18103
OUR FILE NUMBER: 1526.000
LAB TECHNICIAN: BRYAN CASAW

ATT'N: MR. WILLIAM LINDHEIMER
PROJECT: **BASF - RENNSELAER: 36 RIVERSIDE, TROY, NEW YORK**

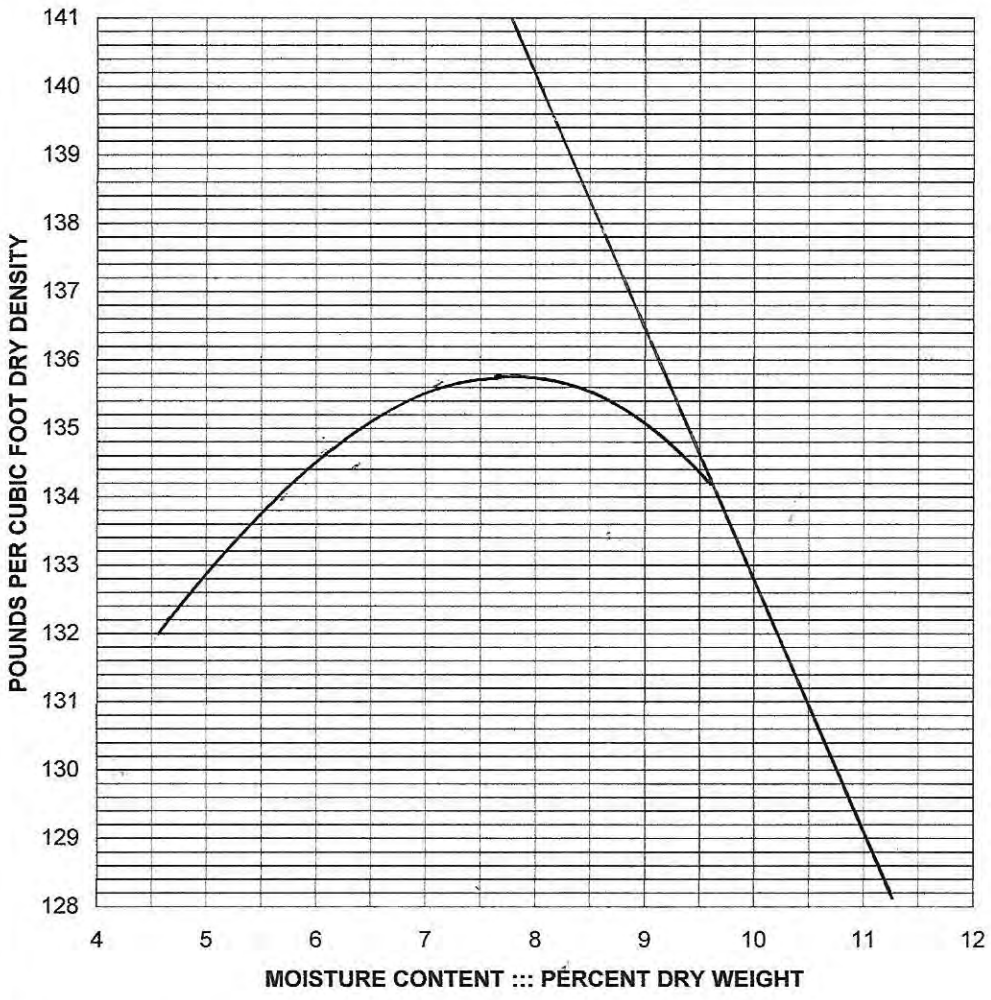
REPORT OF MOISTURE / DENSITY RELATION OF SOILS ::: PROCTOR

MATERIAL SOURCE: **BORROW: TROY SAND & GRAVEL: SAMPLE #2**
MATERIAL DESCRIPTION: CRUSHED STONE sized as GRAVEL, fine; some coarse/medium Sand; trace Silt/Clay
PROCTOR METHOD: ASTM D-1557: MODIFIED EFFORT
GRADATION METHOD: ASTM D-1140 / D-422: WASHED

+3/4" CORRECTION: **139.4** PCF
MAXIMUM DENSITY 135.8 PCF
OPTIMUM MOISTURE **7.8** %

ZERO AIR VOIDS CURVE: 2.74 SPECIFIC GRAVITY

GRADATION		
SIEVE SIZE	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"		
3"		
2 1/2"		
2"	100.0	
1 1/2"		
1"	93.9	
3/4"	87.3	
1/2"	69.7	
3/8"	58.3	
1/4"	38.9	
#4	26.5	
1/8"		
#8	11.6	
#10		
#16	7.7	
#20		
#30	6.2	
#40	5.8	
#50	5.3	
#60		
#80	4.6	
#100	4.5	
#140		
#200	3.7	



REPORT DISTRIBUTION:	GENERAL NOTES:	Respectfully,
1:		**CONSTRUCTION TECHNOLOGY**
2:		
3:		*Tom Joslin*
4:		TOM JOSLIN, S.E.T., (NICET)
5:		MANAGER TECHNICAL SERVICES

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 9/25/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13-B PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Upland Backfill Materials		1	02 30 00		See remarks below regarding placement locations.

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for stone products to be used between the existing sheet pile wall and the new sheet pile bulkhead	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: September 25, 2018

Additional Notes:
Attached is the sieve for No. 1 Stone.
No. 1 Stone will be used to fill the space between the new sheet pile bulkhead and the existing bulkhead.
Stone will be placed above the tierods after the exterior walers is installed.

Troy Sand & Gravel

Gradation Test Report

MATERIAL: State #1's

Date:	04/02/18	Lab/Location:	West Sand Lake, NY.
Source:	Troy Sand & Gravel	Sample #:	1
Plant Type:		Sample Location:	Unknown
Facility #:	H0339	Sampled By/Cert. #:	Unknown

Moisture Content

Wet Mass(W):	
Original Dry Mass(D):	3560.1
Moisture Loss (W - D):	
% Moisture (100 x (W - D) / D):	

Materials Finer than #200 Sieve by Washing

Dry Mass after wash (Dw):	
Mass of Fines lost by washing (D - Dw):	0.0
% -75 µm Sieve (100 x (D - Dw)/D):	

Mechanical Analysis of Extracted Aggregate

Sieve	Mass per Sieve		% Retained per Sieve		% Passing		Specification	
	Unwashed	Washed	Unwashed	Washed	Unwashed	Washed	1's	ASTM #7
3/4"	0.0		0.0		**100.0**			
1/2"	76.4		2.1		**97.9**		90/100	90/100
3/8"	1099.3		30.9		**69.1**			40/70
1/4"	3042.0		85.4		**14.6**		0/15	
#4	3397.6		95.4		**4.6**			0/15
#8	3490.8		98.1		**1.9**			0/5
Pan	3560.1		100.0		0			
Loss on Washing (D - Dw)					Fineness Modulus (FM) =			
Total	3560.1							

Comments:	

Tested by:	MDGliwski	Reviewed by:	
Certification #:	17-2E	Certification #:	
Date:	4/3/2018	Date:	

P. O. BOX 171
WATERVLIET, N. Y. 12189

674-2854

TROY SAND AND GRAVEL CO., INC.

WASHED AND PROCESSED SAND AND GRAVEL

ALPINE
SAND & GRAVEL

LAKE
SAND & GRAVEL

May 22, 2018

LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188

Attention Mr. William Lindheimer

RE: *BASF Rensselaer*

Dear Mr. Lindheimer

As per your request please accept this correspondence as follows:
Materials at Troy Sand & Gravel 36 Grange Road West Sand Lake NY 12196

These materials are virgin quarry product mined from our source of stone products, the materials in this quarry are DOT approved materials.

In the event I can be of further assistance or you have any questions, please do not hesitate to contact me at your convenience at (518) 858-7222.

Thank you.

Very Truly Yours,
Troy Sand and Gravel

Nicholas M DiNova Jr.

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 8/29/2018	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13-A PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Upland Backfill Materials		1	02 30 00		See remarks below regarding placement locations.

Remarks:	**LAND REMEDIATION, INC.**	Signature:
Upland Common Fill	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: August 29 , 2018

Additional Notes:

Attached is the geotechnical testing and chemical testing for the upland common fill.
The upland common fill will be used at locations where there is not suffecient onsite materials for reuse.
Source for Upland Common Fill is: Constantine Trucking, Button Road, Halfmoon, NY 12065 - approved virgin bank run quarry approved by NYSDOT.

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 06/22/18
SAMPLE NUMBER: 18150
OUR FILE NUMBER: 1526.009
LAB TECHNICIAN: BRYAN CASAW

ATT'N: MR. KEITH DECKER
PROJECT: **EXCELSIOR SPRINGS EVENT CENTER: SARATOGA, NY.**

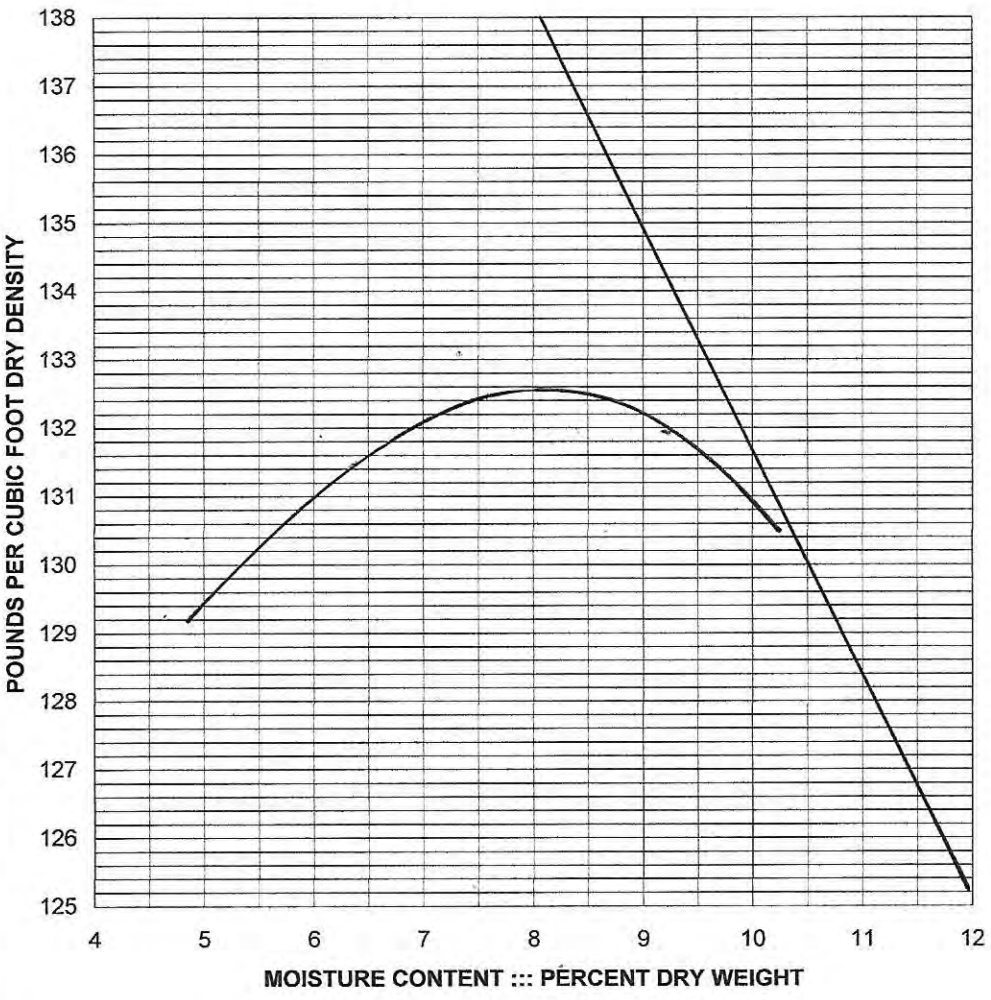
REPORT OF MOISTURE / DENSITY RELATION OF SOILS ::: PROCTOR

MATERIAL SOURCE: **BORROW: CONSTANTINE: HALFMOON PIT**
MATERIAL DESCRIPTION: SAND, fine/medium; some fine Gravel; trace Silt/Clay
PROCTOR METHOD: ASTM D-1557: MODIFIED EFFORT
GRADATION METHOD: ASTM D-1140 / D-422: WASHED

+3/4" CORRECTION: **134.8** PCF
MAXIMUM DENSITY 132.6 PCF
OPTIMUM MOISTURE **8.2** %

ZERO AIR VOIDS CURVE: 2.69 SPECIFIC GRAVITY

GRADATION		
SIEVE SIZE	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"		
3"		
2 1/2"		
2"	100.0	
1 1/2"		
1"	94.2	
3/4"	92.2	
1/2"	86.2	
3/8"	81.4	
1/4"	73.0	
#4	68.7	
1/8"		
#8	60.3	
#10		
#16	53.4	
#20		
#30	44.7	
#40	38.9	
#50	29.6	
#60		
#80		
#100	12.9	
#140		
#200	7.2	



REPORT DISTRIBUTION:	GENERAL NOTES:	Respectfully,
1:		**CONSTRUCTION TECHNOLOGY**
2:		
3:		*Tom Joslin*
4:		TOM JOSLIN, S.E.T., (NICET)
5:		MANAGER TECHNICAL SERVICES

NEW YORK STATE OF OPPORTUNITY | Department of Transportation

ANDREW M. CUOMO
Governor

CATHY CALHOUN
Acting Commissioner

SAM ZHOU, P.E.
Regional Director

September 19, 2017

Constantine Pit

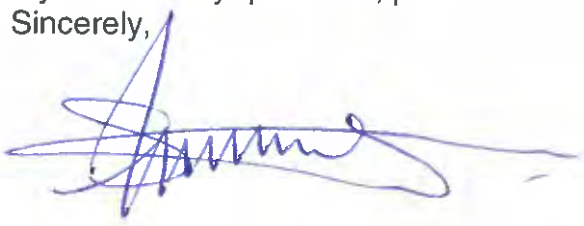
Re: Source Evaluation
The source listed below has been evaluated for quality. The first two samples, 1-17-13 A and 1-17-13 B, from the North side of the pit were found to be unacceptable for use as any 203 items. The subsequent samples, 1-17-13 C and 1-17-13 D from the North East side of the pit, and 1-17-13 E and 1-17-13 F, from the South side of the pit, were found to be of acceptable quality for use as any 203 items.

Although the quality is approved, gradation requirements for each item must be met for the material to be approved for use on NYSDOT projects or federally funded projects.

See attached results.

Constantine Pit
GEB # 10013
Regional # 1-17-13
Saratoga County

If you have any questions, please call me at 518-782-7233.
Sincerely,



Dodou Jammeh, PE
Region 1 Acting Geotechnical Engineer
(518) 782-7233

LOT NO. **61177**

GRANULAR MATERIAL EVALUATION FORM

ORIGINATOR REGION 1 P.S.N. 9001
- PIN

FUTURE AVAILABLE SOURCE EVALUATION -REGION 1

SAMPLED BY D. Saltsman DATE 09/07/2017

FORM TRANSMITTAL

ORIGINATOR - GEB **DATE** 09/07/2017

GEB - ORIGINATOR **DATE** 09/18/2017

10013 **SINGLE SOURCE DATA**

SOURCE IDENTIFICATION
CONSTANTINE PIT

U.S.G.S. QUAD LOCATION 225-4-N/O-28/29

TOWNSHIP HALFMOON

COUNTY SARATOGA

NON-STOCKPILED MATERIAL
SOURCE EVALUATION

ITEM NUMBERS
203.07M
203.21M
203.20M

RECEIVED 09/07/2017 **SAMPLE IDENTIFICATION** GRANULAR MATERIAL

LOCATION		NORTH	NORTH	NORTH EAST	NORTH EAST
GEB DESIGNATION		1-3096G-134	1-3096G-135	1-3096G-136	1-3096G-137
REGIONAL DESIGNATION		1-17-13 A	1-17-13 B	1-17-13 C	1-17-13 D
TEST RESULTS					
SIEVE SIZES	% PASSING BY WEIGHT				
GRADATION					
100.0 mm		100	100	100	100
75.0 mm		100	100	100	100
50.0 mm		100	100	100	100
37.5 mm		- -	- -	- -	- -
25.0 mm		100	100	93	96
19.0 mm		100	100	89	92
12.5 mm		100	100	82	84
6.30 mm		100	100	68	70
2.00 mm		100	100	51	50
0.850 mm		99	98	38	39
0.425 mm		92	92	28	28
0.150 mm		37	35	10	10
0.075 mm		10	11	6	6
QUALITY	**MEAN**				
MGS04 SOUND. %LOSS BY WGT	- -	INM	INM	29	28
PLASTICITY INDEX	- -	NP	NP	NP	NP
pH		8.5	8.4	8.4	8.3

THE ABOVE TEST RESULTS HAVE BEEN REVIEWED AND RELEASED BY THE SOILS ENGINEERING LABORATORY SUPERVISOR OR HIS DESIGNATED REPRESENTATIVE

NON-STOCKPILED MATERIAL EVALUATION

FOR THE YEAR OF 2017 MATERIAL FROM THIS SOURCE HAS A MAXIMUM MAGNESIUM SULFATE SOUNDNESS LOSS OF 64 AND A MAXIMUM PLASTICITY INDEX OF NP. RECOMMENDED MONITORING FREQUENCY 2 SAMPLE(S) EVERY 3 WEEK(S).

NAME Sean Connolly (Designee) **TITLE** Civil Engineer 1 **DATE** 09/18/2017

REGIONAL REMARKS

CENTRAL OFFICE REMARKS NOTE TWO SAMPLES DO NOT MEET GRADATION REQUIREMENTS FOR SUBMITTED ITEM(S).

TEST **RESULTS (FOR 5 AND MORE SAMPLES)**

LOT NO. 61177

LOCATION			SOUTH	SOUTH
GEB DESIGNATION			1-3096G-138	1-3096G-139
REGIONAL DESIGNATION			1-17-13 E	1-17-13 F
SIEVE SIZES	**GRADATION**	% PASSING BY WEIGHT		
	100.0 mm		100	100
	75.0 mm		100	100
	50.0 mm		98	99
	37.5 mm		- -	- -
	25.0 mm		88	89
	19.0 mm		78	86
	12.5 mm		68	80
	6.30 mm		56	71
	2.00 mm		46	58
	0.850 mm		36	47
	0.425 mm		21	32
	0.150 mm		5	8
	0.075 mm		3	4
	QUALITY	**MEAN**		
MGS04 SOUND, %LOSS BY WGT.		- -	24	14
PLASTICITY INDEX		- -	NP	NP
pH			8.4	8.5

THE ABOVE TEST RESULTS HAVE BEEN REVIEWED AND RELEASED BY THE SOILS ENGINEERING LABORATORY SUPERVISOR OR HIS DESIGNATED REPRESENTATIVE

NAME Sean Connolly (Designee) **TITLE** Civil Engineer 1 **DATE** 09/18/2017

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Analytical Testing for Upland Common Fill

June 21, 2018

Keith Decker
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project Location: Contantine Pit
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 18F0554

Enclosed are results of analyses for samples received by the laboratory on June 12, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Aaron L. Benoit
Project Manager

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con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Land Remediation
74 Hudson River Road
Waterford, NY 12188
ATTN: Keith Decker

REPORT DATE: 6/21/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18F0554

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Contantine Pit

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
CF-01	18F0554-01	Soil		SM 2540G	
				SW-846 6010C-D	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				Tri Chrome Calc.	
CF-01 Voc	18F0554-02	Soil		SM 2540G	
				SW-846 8260C	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 8151, samples were derivatized on 06/13/18.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

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SW-846 6010C-D

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Lead
18F0554-01[CF-01], B206010-MS1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Manganese
18F0554-01[CF-01], B206010-MS1

SW-846 7196A

Qualifications:

DL-03

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
18F0554-01[CF-01]

SW-846 8260C

Qualifications:

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

2-Butanone (MEK)
B205587-BSD1

Acetone
B205587-BSD1

PR-15

According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.

Analyte & Samples(s) Qualified:

18F0554-01[CF-01], 18F0554-02[CF-01 Voc]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

2-Butanone (MEK)
18F0554-01[CF-01], 18F0554-02[CF-01 Voc], B205587-BLK1, B205587-BS1, B205587-BSD1

Acetone
18F0554-01[CF-01], 18F0554-02[CF-01 Voc], B205587-BLK1, B205587-BS1, B205587-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

1,4-Dioxane
18F0554-01[CF-01], 18F0554-02[CF-01 Voc], B205587-BLK1, B205587-BS1, B205587-BSD1, S024252-CCV1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Sample Flags: PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.11	0.025	mg/Kg dry	1	R-05	SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Benzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
2-Butanone (MEK)	ND	0.043	0.019	mg/Kg dry	1	R-05	SW-846 8260C	6/13/18	6/13/18 8:07	MFF
n-Butylbenzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
sec-Butylbenzene	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
tert-Butylbenzene	ND	0.0021	0.00096	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Carbon Tetrachloride	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Chlorobenzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Chloroform	ND	0.0043	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,1-Dichloroethane	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,2-Dichloroethane	ND	0.0021	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,1-Dichloroethylene	ND	0.0043	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00096	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,4-Dioxane	ND	0.11	0.061	mg/Kg dry	1	V-05	SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Ethylbenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	0.00096	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Methylene Chloride	ND	0.021	0.0075	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
n-Propylbenzene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Tetrachloroethylene	ND	0.0021	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Toluene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,1,1-Trichloroethane	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Trichloroethylene	ND	0.0021	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
Vinyl Chloride	ND	0.011	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
m+p Xylene	ND	0.0043	0.0018	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF
o-Xylene	ND	0.0021	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:07	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.0	70-130		6/13/18 8:07
Toluene-d8	101	70-130		6/13/18 8:07
4-Bromofluorobenzene	99.6	70-130		6/13/18 8:07

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.17	0.052	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Acenaphthylene	ND	0.17	0.058	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Anthracene	ND	0.17	0.050	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Benzo(a)anthracene	ND	0.17	0.046	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Benzo(a)pyrene	ND	0.17	0.054	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Benzo(b)fluoranthene	ND	0.17	0.049	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Benzo(g,h,i)perylene	ND	0.17	0.077	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Benzo(k)fluoranthene	ND	0.17	0.054	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Chrysene	ND	0.17	0.054	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Dibenz(a,h)anthracene	ND	0.17	0.11	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Fluoranthene	ND	0.17	0.057	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Fluorene	ND	0.17	0.056	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Hexachlorobenzene	ND	0.35	0.061	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Indeno(1,2,3-cd)pyrene	ND	0.17	0.12	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
2-Methylphenol	ND	0.35	0.087	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
3/4-Methylphenol	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Naphthalene	ND	0.17	0.089	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Pentachlorophenol	ND	0.35	0.084	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Phenanthrene	ND	0.17	0.090	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Phenol	ND	0.35	0.059	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT
Pyrene	ND	0.17	0.057	mg/Kg dry	1		SW-846 8270D	6/15/18	6/18/18 21:26	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	55.4	30-130		6/18/18 21:26
Phenol-d6	60.1	30-130		6/18/18 21:26
Nitrobenzene-d5	56.2	30-130		6/18/18 21:26
2-Fluorobiphenyl	51.4	30-130		6/18/18 21:26
2,4,6-Tribromophenol	54.9	30-130		6/18/18 21:26
p-Terphenyl-d14	65.0	30-130		6/18/18 21:26

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Aldrin [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
alpha-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
beta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
delta-BHC [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
gamma-BHC (Lindane) [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Chlordane [1]	ND	0.021	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
4,4'-DDD [1]	ND	0.0010	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
4,4'-DDE [1]	ND	0.0010	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
4,4'-DDT [1]	ND	0.0010	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Dieldrin [1]	ND	0.0021	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endosulfan I [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endosulfan II [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endosulfan sulfate [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endrin [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endrin aldehyde [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Endrin ketone [1]	ND	0.0082	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Heptachlor [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Heptachlor epoxide [1]	ND	0.0052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Hexachlorobenzene [1]	ND	0.0062	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Methoxychlor [1]	ND	0.052	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG
Toxaphene [1]	ND	0.10	mg/Kg dry	1		SW-846 8081B	6/13/18	6/15/18 8:04	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	68.9	30-150		6/15/18 8:04
Decachlorobiphenyl [2]	72.7	30-150		6/15/18 8:04
Tetrachloro-m-xylene [1]	68.7	30-150		6/15/18 8:04
Tetrachloro-m-xylene [2]	70.9	30-150		6/15/18 8:04

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1221 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1232 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1242 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1248 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1254 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1260 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1262 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG
Aroclor-1268 [1]	ND	0.021	mg/Kg dry	1		SW-846 8082A	6/13/18	6/15/18 11:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.7	30-150		6/15/18 11:20
Decachlorobiphenyl [2]	102	30-150		6/15/18 11:20
Tetrachloro-m-xylene [1]	86.4	30-150		6/15/18 11:20
Tetrachloro-m-xylene [2]	84.4	30-150		6/15/18 11:20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4,5-TP (Silvex) [1]	ND	2.6	µg/kg dry	1		SW-846 8151A	6/13/18	6/15/18 1:29	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	93.7	30-150		6/15/18 1:29
2,4-Dichlorophenylacetic acid [2]	121	30-150		6/15/18 1:29

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Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.7	1.7		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Barium	27	1.7		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Beryllium	0.26	0.17		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Cadmium	0.21	0.17		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Chromium	8.5	0.35		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Chromium, Trivalent	8.5			mg/Kg	1		Tri Chrome Calc.	6/19/18	6/19/18 18:03	QNW
Copper	19	0.35		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Lead	8.6	0.52		mg/Kg dry	1	MS-07	SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Manganese	380	0.35		mg/Kg dry	1	MS-19	SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Mercury	ND	0.026		mg/Kg dry	1		SW-846 7471B	6/18/18	6/19/18 11:28	EJB
Nickel	12	0.35		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Silver	ND	0.35		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW
Zinc	42	0.70		mg/Kg dry	1		SW-846 6010C-D	6/19/18	6/19/18 16:21	QNW

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Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 | Sampled: 6/12/2018 09:35

Sample ID: 18F0554-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.47	mg/Kg dry	1		SW-846 9014	6/19/18	6/20/18 11:55	DJM
Hexavalent Chromium	ND	0.83	mg/Kg dry	5	DL-03	SW-846 7196A	6/13/18	6/14/18 11:00	LL
% Solids	96.0		% Wt	1		SM 2540G	6/13/18	6/14/18 7:32	MRL

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Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 Voc | Sampled: 6/12/2018 09:40

Sample ID: 18F0554-02

Sample Matrix: Soil

Sample Flags: PR-15

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	0.024	mg/Kg dry	1	R-05	SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Benzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
2-Butanone (MEK)	ND	0.041	0.018	mg/Kg dry	1	R-05	SW-846 8260C	6/13/18	6/13/18 8:34	MFF
n-Butylbenzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
sec-Butylbenzene	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
tert-Butylbenzene	ND	0.0020	0.00092	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Carbon Tetrachloride	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Chlorobenzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Chloroform	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,1-Dichloroethane	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,2-Dichloroethane	ND	0.0020	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,1-Dichloroethylene	ND	0.0041	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00092	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,4-Dioxane	ND	0.10	0.059	mg/Kg dry	1	V-05	SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Ethylbenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	0.00092	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Methylene Chloride	ND	0.020	0.0073	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
n-Propylbenzene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Tetrachloroethylene	ND	0.0020	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Toluene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,1,1-Trichloroethane	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Trichloroethylene	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
Vinyl Chloride	ND	0.010	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
m+p Xylene	ND	0.0041	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF
o-Xylene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/18	6/13/18 8:34	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.9	70-130		6/13/18 8:34
Toluene-d8	100	70-130		6/13/18 8:34
4-Bromofluorobenzene	101	70-130		6/13/18 8:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Contantine Pit | Sample Description: | Work Order: 18F0554

Date Received: 6/12/2018

Field Sample #: CF-01 Voc | Sampled: 6/12/2018 09:40

Sample ID: 18F0554-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.9		% Wt	1		SM 2540G	6/13/18	6/14/18 7:32	MRL

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
18F0554-01 [CF-01]	B205590	06/13/18
18F0554-02 [CF-01 Voc]	B205590	06/13/18

Prep Method: SW-846 3050B-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B206010	1.49	50.0	06/19/18

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205582	2.50	100	06/13/18

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205991	0.593	50.0	06/18/18

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205678	10.1	10.0	06/13/18

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205670	10.1	10.0	06/13/18

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205568	20.0	5.00	06/13/18

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205587	4.90	10.0	06/13/18
18F0554-02 [CF-01 Voc]	B205587	5.10	10.0	06/13/18

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B205866	30.5	1.00	06/15/18

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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
18F0554-01 [CF-01]	B206193	1.11	50.0	06/19/18

Prep Method: SW-846 3050B-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [g]	Date
18F0554-01 [CF-01]	B206010	1.49	06/19/18

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B205587 - SW-846 5035											
Blank (B205587-BLK1)			Prepared & Analyzed: 06/13/18								
Acetone	ND	0.10	mg/Kg wet							R-05	
Benzene	ND	0.0020	mg/Kg wet								
2-Butanone (MEK)	ND	0.040	mg/Kg wet							R-05	
n-Butylbenzene	ND	0.0020	mg/Kg wet								
sec-Butylbenzene	ND	0.0020	mg/Kg wet								
tert-Butylbenzene	ND	0.0020	mg/Kg wet								
Carbon Tetrachloride	ND	0.0020	mg/Kg wet								
Chlorobenzene	ND	0.0020	mg/Kg wet								
Chloroform	ND	0.0040	mg/Kg wet								
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet								
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet								
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet								
1,1-Dichloroethane	ND	0.0020	mg/Kg wet								
1,2-Dichloroethane	ND	0.0020	mg/Kg wet								
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet								
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet								
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet								
1,4-Dioxane	ND	0.10	mg/Kg wet							V-05	
Ethylbenzene	ND	0.0020	mg/Kg wet								
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet								
Methylene Chloride	ND	0.020	mg/Kg wet								
n-Propylbenzene	ND	0.0020	mg/Kg wet								
Tetrachloroethylene	ND	0.0020	mg/Kg wet								
Toluene	ND	0.0020	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet								
Trichloroethylene	ND	0.0020	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet								
Vinyl Chloride	ND	0.010	mg/Kg wet								
m+p Xylene	ND	0.0040	mg/Kg wet								
o-Xylene	ND	0.0020	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0482*		mg/Kg wet	0.0500		96.5	70-130				
Surrogate: Toluene-d8	*0.0500*		mg/Kg wet	0.0500		100	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0493*		mg/Kg wet	0.0500		98.7	70-130				
LCS (B205587-BS1)			Prepared & Analyzed: 06/13/18								
Acetone	0.281	0.10	mg/Kg wet	0.200		141	70-160			R-05	†
Benzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6	70-130				
2-Butanone (MEK)	0.260	0.040	mg/Kg wet	0.200		130	70-160			R-05	†
n-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130				
sec-Butylbenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130				
tert-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-160				†
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130				
Chlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130				
Chloroform	0.0196	0.0040	mg/Kg wet	0.0200		98.2	70-130				
1,2-Dichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130				
1,3-Dichlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
1,4-Dichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130				
1,1-Dichloroethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130				
1,2-Dichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
1,1-Dichloroethylene	0.0221	0.0040	mg/Kg wet	0.0200		110	70-130				
cis-1,2-Dichloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B205587 - SW-846 5035											
LCS (B205587-BS1)				Prepared & Analyzed: 06/13/18							
trans-1,2-Dichloroethylene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130				
1,4-Dioxane	0.204	0.10	mg/Kg wet	0.200		102	40-160			V-05	†
Ethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0197	0.0040	mg/Kg wet	0.0200		98.3	70-130				
Methylene Chloride	0.0212	0.020	mg/Kg wet	0.0200		106	40-160				†
n-Propylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
Tetrachloroethylene	0.0229	0.0020	mg/Kg wet	0.0200		114	70-130				
Toluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
1,1,1-Trichloroethane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130				
Trichloroethylene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	70-130				
1,2,4-Trimethylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130				
1,3,5-Trimethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Vinyl Chloride	0.0197	0.010	mg/Kg wet	0.0200		98.4	40-130				†
m+p Xylene	0.0392	0.0040	mg/Kg wet	0.0400		97.9	70-130				
o-Xylene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0487*		mg/Kg wet	0.0500		97.4	70-130				
Surrogate: Toluene-d8	*0.0506*		mg/Kg wet	0.0500		101	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0499*		mg/Kg wet	0.0500		99.8	70-130				
LCS Dup (B205587-BSD1)				Prepared & Analyzed: 06/13/18							
Acetone	0.570	0.10	mg/Kg wet	0.200		**285**	* 70-160	**67.8**	* 25	L-07A, R-05	†
Benzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	2.76	25		
2-Butanone (MEK)	0.392	0.040	mg/Kg wet	0.200		**196**	* 70-160	**40.4**	* 25	L-07A, R-05	†
n-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	0.601	25		
sec-Butylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.576	25		
tert-Butylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-160	4.17	25		†
Carbon Tetrachloride	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	2.85	25		
Chlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	4.91	25		
Chloroform	0.0193	0.0040	mg/Kg wet	0.0200		96.5	70-130	1.75	25		
1,2-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	5.83	25		
1,3-Dichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	0.469	25		
1,4-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130	2.76	25		
1,1-Dichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	3.31	25		
1,2-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	5.23	25		
1,1-Dichloroethylene	0.0227	0.0040	mg/Kg wet	0.0200		113	70-130	2.77	25		
cis-1,2-Dichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.591	25		
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		99.2	70-130	2.49	25		
1,4-Dioxane	0.177	0.10	mg/Kg wet	0.200		88.6	40-160	13.9	50	V-05	† ‡
Ethylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.39	25		
Methyl tert-Butyl Ether (MTBE)	0.0183	0.0040	mg/Kg wet	0.0200		91.6	70-130	7.06	25		
Methylene Chloride	0.0218	0.020	mg/Kg wet	0.0200		109	40-160	2.79	25		†
n-Propylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	0.598	25		
Tetrachloroethylene	0.0238	0.0020	mg/Kg wet	0.0200		119	70-130	3.77	25		
Toluene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	2.10	25		
1,1,1-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130	0.323	25		
Trichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	4.15	25		
1,2,4-Trimethylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	1.13	25		
1,3,5-Trimethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	2.05	25		
Vinyl Chloride	0.0194	0.010	mg/Kg wet	0.0200		97.0	40-130	1.43	25		†
m+p Xylene	0.0402	0.0040	mg/Kg wet	0.0400		100	70-130	2.52	25		
o-Xylene	0.0189	0.0020	mg/Kg wet	0.0200		94.4	70-130	0.949	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0492*		mg/Kg wet	0.0500		98.4	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205587 - SW-846 5035										
LCS Dup (B205587-BSD1)				Prepared & Analyzed: 06/13/18						
Surrogate: Toluene-d8	*0.0510*		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	*0.0502*		mg/Kg wet	0.0500		100	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205866 - SW-846 3546										
Blank (B205866-BLK1)				Prepared: 06/15/18 Analyzed: 06/18/18						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Surrogate: 2-Fluorophenol	*4.45*		mg/Kg wet	6.67		66.8	30-130			
Surrogate: Phenol-d6	*4.55*		mg/Kg wet	6.67		68.2	30-130			
Surrogate: Nitrobenzene-d5	*2.06*		mg/Kg wet	3.33		61.7	30-130			
Surrogate: 2-Fluorobiphenyl	*1.94*		mg/Kg wet	3.33		58.3	30-130			
Surrogate: 2,4,6-Tribromophenol	*4.48*		mg/Kg wet	6.67		67.2	30-130			
Surrogate: p-Terphenyl-d14	*2.35*		mg/Kg wet	3.33		70.6	30-130			
LCS (B205866-BS1)				Prepared: 06/15/18 Analyzed: 06/18/18						
Acenaphthene	1.12	0.17	mg/Kg wet	1.67		67.3	40-140			
Acenaphthylene	1.16	0.17	mg/Kg wet	1.67		69.9	40-140			
Anthracene	1.28	0.17	mg/Kg wet	1.67		76.6	40-140			
Benzo(a)anthracene	1.23	0.17	mg/Kg wet	1.67		74.1	40-140			
Benzo(a)pyrene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140			
Benzo(b)fluoranthene	1.22	0.17	mg/Kg wet	1.67		73.3	40-140			
Benzo(g,h,i)perylene	1.30	0.17	mg/Kg wet	1.67		78.2	40-140			
Benzo(k)fluoranthene	1.23	0.17	mg/Kg wet	1.67		73.6	40-140			
Chrysene	1.16	0.17	mg/Kg wet	1.67		69.8	40-140			
Dibenz(a,h)anthracene	1.29	0.17	mg/Kg wet	1.67		77.3	40-140			
Fluoranthene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140			
Fluorene	1.19	0.17	mg/Kg wet	1.67		71.6	40-140			
Hexachlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.4	40-140			
Indeno(1,2,3-cd)pyrene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140			
2-Methylphenol	1.19	0.34	mg/Kg wet	1.67		71.6	30-130			
3/4-Methylphenol	1.27	0.34	mg/Kg wet	1.67		76.2	30-130			
Naphthalene	1.12	0.17	mg/Kg wet	1.67		67.5	40-140			
Pentachlorophenol	0.891	0.34	mg/Kg wet	1.67		53.4	30-130			
Phenanthrene	1.27	0.17	mg/Kg wet	1.67		76.1	40-140			
Phenol	1.16	0.34	mg/Kg wet	1.67		69.4	30-130			
Pyrene	1.30	0.17	mg/Kg wet	1.67		77.8	40-140			
Surrogate: 2-Fluorophenol	*5.06*		mg/Kg wet	6.67		76.0	30-130			
Surrogate: Phenol-d6	*5.18*		mg/Kg wet	6.67		77.7	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205866 - SW-846 3546										
LCS (B205866-BS1)				Prepared: 06/15/18 Analyzed: 06/18/18						
Surrogate: Nitrobenzene-d5	*2.37*		mg/Kg wet	3.33		71.0	30-130			
Surrogate: 2-Fluorobiphenyl	*2.29*		mg/Kg wet	3.33		68.7	30-130			
Surrogate: 2,4,6-Tribromophenol	*5.67*		mg/Kg wet	6.67		85.0	30-130			
Surrogate: p-Terphenyl-d14	*2.90*		mg/Kg wet	3.33		86.9	30-130			
LCS Dup (B205866-BSD1)				Prepared: 06/15/18 Analyzed: 06/18/18						
Acenaphthene	0.994	0.17	mg/Kg wet	1.67		59.7	40-140	12.0	30	
Acenaphthylene	1.04	0.17	mg/Kg wet	1.67		62.2	40-140	11.6	30	
Anthracene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140	10.7	30	
Benzo(a)anthracene	1.11	0.17	mg/Kg wet	1.67		66.6	40-140	10.5	30	
Benzo(a)pyrene	1.15	0.17	mg/Kg wet	1.67		68.9	40-140	9.98	30	
Benzo(b)fluoranthene	1.13	0.17	mg/Kg wet	1.67		67.7	40-140	8.06	30	
Benzo(g,h,i)perylene	1.14	0.17	mg/Kg wet	1.67		68.1	40-140	13.8	30	
Benzo(k)fluoranthene	1.12	0.17	mg/Kg wet	1.67		67.3	40-140	9.06	30	
Chrysene	1.04	0.17	mg/Kg wet	1.67		62.4	40-140	11.2	30	
Dibenz(a,h)anthracene	1.12	0.17	mg/Kg wet	1.67		66.9	40-140	14.4	30	
Fluoranthene	1.11	0.17	mg/Kg wet	1.67		66.9	40-140	11.5	30	
Fluorene	1.08	0.17	mg/Kg wet	1.67		64.9	40-140	9.70	30	
Hexachlorobenzene	1.11	0.34	mg/Kg wet	1.67		66.6	40-140	12.4	30	
Indeno(1,2,3-cd)pyrene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140	14.3	30	
2-Methylphenol	1.05	0.34	mg/Kg wet	1.67		62.7	30-130	13.3	30	
3/4-Methylphenol	1.14	0.34	mg/Kg wet	1.67		68.2	30-130	11.1	30	
Naphthalene	0.936	0.17	mg/Kg wet	1.67		56.2	40-140	18.2	30	
Pentachlorophenol	0.772	0.34	mg/Kg wet	1.67		46.3	30-130	14.3	30	
Phenanthrene	1.14	0.17	mg/Kg wet	1.67		68.3	40-140	10.8	30	
Phenol	1.01	0.34	mg/Kg wet	1.67		60.5	30-130	13.8	30	
Pyrene	1.19	0.17	mg/Kg wet	1.67		71.7	40-140	8.24	30	
Surrogate: 2-Fluorophenol	*4.10*		mg/Kg wet	6.67		61.4	30-130			
Surrogate: Phenol-d6	*4.45*		mg/Kg wet	6.67		66.7	30-130			
Surrogate: Nitrobenzene-d5	*1.91*		mg/Kg wet	3.33		57.4	30-130			
Surrogate: 2-Fluorobiphenyl	*1.91*		mg/Kg wet	3.33		57.4	30-130			
Surrogate: 2,4,6-Tribromophenol	*5.03*		mg/Kg wet	6.67		75.5	30-130			
Surrogate: p-Terphenyl-d14	*2.57*		mg/Kg wet	3.33		77.2	30-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205678 - SW-846 3546										
Blank (B205678-BLK1)				Prepared: 06/13/18 Analyzed: 06/15/18						
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0020	mg/Kg wet							
Aldrin [2C]	ND	0.0020	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0010	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDE	ND	0.0010	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDT	ND	0.0010	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0010	mg/Kg wet							
Dieldrin	ND	0.0020	mg/Kg wet							
Dieldrin [2C]	ND	0.0020	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.153*		mg/Kg wet	0.200		76.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.159*		mg/Kg wet	0.200		79.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.154*		mg/Kg wet	0.200		77.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.156*		mg/Kg wet	0.200		78.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205678 - SW-846 3546										
LCS (B205678-BS1)				Prepared: 06/13/18 Analyzed: 06/15/18						
alpha-Chlordane	0.084	0.0050	mg/Kg wet	0.100		84.4	40-140			
alpha-Chlordane [2C]	0.082	0.0050	mg/Kg wet	0.100		82.4	40-140			
gamma-Chlordane	0.085	0.0050	mg/Kg wet	0.100		84.8	40-140			
gamma-Chlordane [2C]	0.080	0.0050	mg/Kg wet	0.100		80.1	40-140			
Alachlor	0.096	0.020	mg/Kg wet	0.100		95.6	40-140			
Alachlor [2C]	0.093	0.020	mg/Kg wet	0.100		93.3	40-140			
Aldrin	0.086	0.0020	mg/Kg wet	0.100		86.3	40-140			
Aldrin [2C]	0.083	0.0020	mg/Kg wet	0.100		83.3	40-140			
alpha-BHC	0.081	0.0050	mg/Kg wet	0.100		81.2	40-140			
alpha-BHC [2C]	0.080	0.0050	mg/Kg wet	0.100		80.3	40-140			
beta-BHC	0.084	0.0050	mg/Kg wet	0.100		84.4	40-140			
beta-BHC [2C]	0.087	0.0050	mg/Kg wet	0.100		87.3	40-140			
delta-BHC	0.079	0.0050	mg/Kg wet	0.100		79.5	40-140			
delta-BHC [2C]	0.068	0.0050	mg/Kg wet	0.100		67.5	40-140			
gamma-BHC (Lindane)	0.085	0.0020	mg/Kg wet	0.100		85.1	40-140			
gamma-BHC (Lindane) [2C]	0.077	0.0020	mg/Kg wet	0.100		77.5	40-140			
4,4'-DDD	0.091	0.0010	mg/Kg wet	0.100		91.0	40-140			
4,4'-DDD [2C]	0.091	0.0010	mg/Kg wet	0.100		91.0	40-140			
4,4'-DDE	0.087	0.0010	mg/Kg wet	0.100		87.1	40-140			
4,4'-DDE [2C]	0.088	0.0010	mg/Kg wet	0.100		87.8	40-140			
4,4'-DDT	0.092	0.0010	mg/Kg wet	0.100		91.6	40-140			
4,4'-DDT [2C]	0.086	0.0010	mg/Kg wet	0.100		85.6	40-140			
Dieldrin	0.090	0.0020	mg/Kg wet	0.100		90.1	40-140			
Dieldrin [2C]	0.090	0.0020	mg/Kg wet	0.100		90.2	40-140			
Endosulfan I	0.084	0.0050	mg/Kg wet	0.100		83.7	40-140			
Endosulfan I [2C]	0.084	0.0050	mg/Kg wet	0.100		84.1	40-140			
Endosulfan II	0.088	0.0080	mg/Kg wet	0.100		88.2	40-140			
Endosulfan II [2C]	0.089	0.0080	mg/Kg wet	0.100		89.5	40-140			
Endosulfan Sulfate	0.088	0.0080	mg/Kg wet	0.100		88.3	40-140			
Endosulfan Sulfate [2C]	0.089	0.0080	mg/Kg wet	0.100		89.1	40-140			
Endrin	0.086	0.0080	mg/Kg wet	0.100		86.2	40-140			
Endrin [2C]	0.085	0.0080	mg/Kg wet	0.100		84.6	40-140			
Endrin Aldehyde	0.089	0.0080	mg/Kg wet	0.100		89.0	40-140			
Endrin Aldehyde [2C]	0.079	0.0080	mg/Kg wet	0.100		79.2	40-140			
Endrin Ketone	0.090	0.0080	mg/Kg wet	0.100		90.0	40-140			
Endrin Ketone [2C]	0.087	0.0080	mg/Kg wet	0.100		87.4	40-140			
Heptachlor	0.082	0.0050	mg/Kg wet	0.100		81.9	40-140			
Heptachlor [2C]	0.082	0.0050	mg/Kg wet	0.100		81.9	40-140			
Heptachlor Epoxide	0.087	0.0050	mg/Kg wet	0.100		87.1	40-140			
Heptachlor Epoxide [2C]	0.083	0.0050	mg/Kg wet	0.100		82.5	40-140			
Hexachlorobenzene	0.088	0.0060	mg/Kg wet	0.100		88.2	40-140			
Hexachlorobenzene [2C]	0.086	0.0060	mg/Kg wet	0.100		85.9	40-140			
Methoxychlor	0.093	0.050	mg/Kg wet	0.100		93.5	40-140			
Methoxychlor [2C]	0.090	0.050	mg/Kg wet	0.100		90.2	40-140			
Surrogate: Decachlorobiphenyl	*0.159*		mg/Kg wet	0.200		79.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.165*		mg/Kg wet	0.200		82.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.156*		mg/Kg wet	0.200		78.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.162*		mg/Kg wet	0.200		80.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205678 - SW-846 3546										
LCS Dup (B205678-BSD1)				Prepared: 06/13/18 Analyzed: 06/15/18						
alpha-Chlordane	0.082	0.0050	mg/Kg wet	0.100		81.7	40-140	3.25	30	
alpha-Chlordane [2C]	0.079	0.0050	mg/Kg wet	0.100		78.7	40-140	4.58	30	
gamma-Chlordane	0.082	0.0050	mg/Kg wet	0.100		81.6	40-140	3.83	30	
gamma-Chlordane [2C]	0.076	0.0050	mg/Kg wet	0.100		76.0	40-140	5.31	30	
Alachlor	0.096	0.020	mg/Kg wet	0.100		95.7	40-140	0.134	30	
Alachlor [2C]	0.091	0.020	mg/Kg wet	0.100		90.5	40-140	3.06	30	
Aldrin	0.084	0.0020	mg/Kg wet	0.100		83.6	40-140	3.24	30	
Aldrin [2C]	0.079	0.0020	mg/Kg wet	0.100		79.4	40-140	4.82	30	
alpha-BHC	0.079	0.0050	mg/Kg wet	0.100		78.6	40-140	3.26	30	
alpha-BHC [2C]	0.076	0.0050	mg/Kg wet	0.100		76.1	40-140	5.36	30	
beta-BHC	0.081	0.0050	mg/Kg wet	0.100		81.2	40-140	3.86	30	
beta-BHC [2C]	0.082	0.0050	mg/Kg wet	0.100		82.3	40-140	5.94	30	
delta-BHC	0.078	0.0050	mg/Kg wet	0.100		78.2	40-140	1.54	30	
delta-BHC [2C]	0.066	0.0050	mg/Kg wet	0.100		65.7	40-140	2.83	30	
gamma-BHC (Lindane)	0.082	0.0020	mg/Kg wet	0.100		82.3	40-140	3.39	30	
gamma-BHC (Lindane) [2C]	0.072	0.0020	mg/Kg wet	0.100		71.9	40-140	7.44	30	
4,4'-DDD	0.088	0.0010	mg/Kg wet	0.100		87.8	40-140	3.64	30	
4,4'-DDD [2C]	0.087	0.0010	mg/Kg wet	0.100		86.9	40-140	4.52	30	
4,4'-DDE	0.085	0.0010	mg/Kg wet	0.100		84.7	40-140	2.76	30	
4,4'-DDE [2C]	0.084	0.0010	mg/Kg wet	0.100		83.6	40-140	4.88	30	
4,4'-DDT	0.089	0.0010	mg/Kg wet	0.100		89.0	40-140	2.85	30	
4,4'-DDT [2C]	0.082	0.0010	mg/Kg wet	0.100		81.6	40-140	4.68	30	
Dieldrin	0.087	0.0020	mg/Kg wet	0.100		86.8	40-140	3.65	30	
Dieldrin [2C]	0.086	0.0020	mg/Kg wet	0.100		85.6	40-140	5.16	30	
Endosulfan I	0.080	0.0050	mg/Kg wet	0.100		79.6	40-140	5.04	30	
Endosulfan I [2C]	0.080	0.0050	mg/Kg wet	0.100		79.6	40-140	5.50	30	
Endosulfan II	0.085	0.0080	mg/Kg wet	0.100		84.8	40-140	3.95	30	
Endosulfan II [2C]	0.085	0.0080	mg/Kg wet	0.100		84.8	40-140	5.41	30	
Endosulfan Sulfate	0.085	0.0080	mg/Kg wet	0.100		85.5	40-140	3.18	30	
Endosulfan Sulfate [2C]	0.083	0.0080	mg/Kg wet	0.100		83.4	40-140	6.62	30	
Endrin	0.083	0.0080	mg/Kg wet	0.100		83.1	40-140	3.61	30	
Endrin [2C]	0.080	0.0080	mg/Kg wet	0.100		79.8	40-140	5.78	30	
Endrin Aldehyde	0.086	0.0080	mg/Kg wet	0.100		86.3	40-140	3.16	30	
Endrin Aldehyde [2C]	0.075	0.0080	mg/Kg wet	0.100		75.2	40-140	5.13	30	
Endrin Ketone	0.087	0.0080	mg/Kg wet	0.100		87.1	40-140	3.33	30	
Endrin Ketone [2C]	0.084	0.0080	mg/Kg wet	0.100		83.7	40-140	4.41	30	
Heptachlor	0.079	0.0050	mg/Kg wet	0.100		78.9	40-140	3.64	30	
Heptachlor [2C]	0.078	0.0050	mg/Kg wet	0.100		77.7	40-140	5.17	30	
Heptachlor Epoxide	0.084	0.0050	mg/Kg wet	0.100		83.9	40-140	3.77	30	
Heptachlor Epoxide [2C]	0.078	0.0050	mg/Kg wet	0.100		78.3	40-140	5.28	30	
Hexachlorobenzene	0.085	0.0060	mg/Kg wet	0.100		85.3	40-140	3.42	30	
Hexachlorobenzene [2C]	0.081	0.0060	mg/Kg wet	0.100		81.4	40-140	5.37	30	
Methoxychlor	0.090	0.050	mg/Kg wet	0.100		90.2	40-140	3.58	30	
Methoxychlor [2C]	0.085	0.050	mg/Kg wet	0.100		85.4	40-140	5.56	30	
Surrogate: Decachlorobiphenyl	*0.150*		mg/Kg wet	0.200		75.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.160*		mg/Kg wet	0.200		79.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.150*		mg/Kg wet	0.200		74.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.152*		mg/Kg wet	0.200		75.8	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205670 - SW-846 3546										
Blank (B205670-BLK1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.178*		mg/Kg wet	0.200		88.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.181*		mg/Kg wet	0.200		90.3	30-150			
Surrogate: Tetrachloro-m-xylene	*0.194*		mg/Kg wet	0.200		97.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.191*		mg/Kg wet	0.200		95.3	30-150			
LCS (B205670-BS1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Aroclor-1016	0.20	0.020	mg/Kg wet	0.200		99.0	40-140			
Aroclor-1016 [2C]	0.20	0.020	mg/Kg wet	0.200		101	40-140			
Aroclor-1260	0.20	0.020	mg/Kg wet	0.200		98.0	40-140			
Aroclor-1260 [2C]	0.22	0.020	mg/Kg wet	0.200		108	40-140			
Surrogate: Decachlorobiphenyl	*0.175*		mg/Kg wet	0.200		87.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.192*		mg/Kg wet	0.200		96.0	30-150			
Surrogate: Tetrachloro-m-xylene	*0.201*		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.197*		mg/Kg wet	0.200		98.3	30-150			
LCS Dup (B205670-BSD1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Aroclor-1016	0.19	0.020	mg/Kg wet	0.200		93.5	40-140	5.70	30	
Aroclor-1016 [2C]	0.18	0.020	mg/Kg wet	0.200		92.4	40-140	9.07	30	
Aroclor-1260	0.19	0.020	mg/Kg wet	0.200		92.6	40-140	5.64	30	
Aroclor-1260 [2C]	0.20	0.020	mg/Kg wet	0.200		101	40-140	6.83	30	
Surrogate: Decachlorobiphenyl	*0.174*		mg/Kg wet	0.200		87.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.186*		mg/Kg wet	0.200		93.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.181*		mg/Kg wet	0.200		90.7	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205568 - SW-846 8151										
Blank (B205568-BLK1)				Prepared: 06/13/18 Analyzed: 06/14/18						
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	*70.4*		µg/kg wet	95.2		73.9	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*79.8*		µg/kg wet	95.2		83.8	30-150			
LCS (B205568-BS1)				Prepared: 06/13/18 Analyzed: 06/14/18						
2,4,5-TP (Silvex)	10.7	2.5	µg/kg wet	12.5		85.8	40-140			
2,4,5-TP (Silvex) [2C]	11.1	2.5	µg/kg wet	12.5		89.0	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	*82.1*		µg/kg wet	100		82.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*92.0*		µg/kg wet	100		92.0	30-150			
LCS Dup (B205568-BSD1)				Prepared: 06/13/18 Analyzed: 06/14/18						
2,4,5-TP (Silvex)	11.1	2.5	µg/kg wet	12.5		89.0	40-140	3.59	30	
2,4,5-TP (Silvex) [2C]	11.3	2.5	µg/kg wet	12.5		90.5	40-140	1.74	30	
Surrogate: 2,4-Dichlorophenylacetic acid	*86.7*		µg/kg wet	100		86.7	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*99.1*		µg/kg wet	100		99.1	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205991 - SW-846 7471										
Blank (B205991-BLK1)				Prepared: 06/18/18 Analyzed: 06/19/18						
Mercury	ND	0.025	mg/Kg wet							
LCS (B205991-BS1)				Prepared: 06/18/18 Analyzed: 06/19/18						
Mercury	10.8	2.0	mg/Kg wet	9.36		116	73.7-126.3			
LCS Dup (B205991-BSD1)				Prepared: 06/18/18 Analyzed: 06/19/18						
Mercury	10.4	1.9	mg/Kg wet	9.36		111	73.7-126.3	3.64	30	
Batch B206010 - SW-846 3050B										
Blank (B206010-BLK1)				Prepared & Analyzed: 06/19/18						
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Beryllium	ND	0.17	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Copper	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Manganese	ND	0.33	mg/Kg wet							
Nickel	ND	0.33	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
Zinc	ND	0.67	mg/Kg wet							
LCS (B206010-BS1)				Prepared & Analyzed: 06/19/18						
Arsenic	151	5.0	mg/Kg wet	161		93.8	83.2-116.8			
Barium	258	5.0	mg/Kg wet	260		99.1	82.7-117.3			
Beryllium	98.3	0.50	mg/Kg wet	97.6		101	83.4-116.8			
Cadmium	195	0.50	mg/Kg wet	211		92.3	83.4-116.6			
Chromium	133	0.99	mg/Kg wet	136		97.5	82.4-117.6			
Copper	163	0.99	mg/Kg wet	166		98.4	83.7-115.7			
Lead	99.4	1.5	mg/Kg wet	111		89.5	83-117.1			
Manganese	210	0.99	mg/Kg wet	228		91.9	82.5-117.5			
Nickel	89.8	0.99	mg/Kg wet	91.9		97.8	82.9-117.5			
Selenium	172	9.9	mg/Kg wet	191		90.3	79.6-120.9			
Silver	40.5	0.99	mg/Kg wet	43.3		93.4	79.9-119.9			
Zinc	186	2.0	mg/Kg wet	199		93.3	81.4-119.1			
LCS Dup (B206010-BSD1)				Prepared & Analyzed: 06/19/18						
Arsenic	151	4.9	mg/Kg wet	161		93.5	83.2-116.8	0.347	30	
Barium	253	4.9	mg/Kg wet	260		97.3	82.7-117.3	1.83	30	
Beryllium	99.6	0.49	mg/Kg wet	97.6		102	83.4-116.8	1.38	30	
Cadmium	200	0.49	mg/Kg wet	211		95.0	83.4-116.6	2.86	30	
Chromium	132	0.98	mg/Kg wet	136		97.2	82.4-117.6	0.246	30	
Copper	165	0.98	mg/Kg wet	166		99.1	83.7-115.7	0.747	30	
Lead	98.3	1.5	mg/Kg wet	111		88.6	83-117.1	1.07	30	
Manganese	208	0.98	mg/Kg wet	228		91.2	82.5-117.5	0.777	30	
Nickel	91.1	0.98	mg/Kg wet	91.9		99.1	82.9-117.5	1.41	30	
Selenium	172	9.8	mg/Kg wet	191		90.0	79.6-120.9	0.365	30	
Silver	41.1	0.98	mg/Kg wet	43.3		95.0	79.9-119.9	1.70	30	
Zinc	182	2.0	mg/Kg wet	199		91.4	81.4-119.1	2.02	30	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B206010 - SW-846 3050B											
Duplicate (B206010-DUP1)	**Source: 18F0554-01**			Prepared & Analyzed: 06/19/18							
Arsenic	3.39	1.7	mg/Kg dry		3.70				8.81	35	
Barium	25.1	1.7	mg/Kg dry		27.3				8.18	35	
Beryllium	0.268	0.17	mg/Kg dry		0.256				4.64	35	
Cadmium	0.192	0.17	mg/Kg dry		0.210				9.26	35	
Chromium	8.64	0.35	mg/Kg dry		8.49				1.71	35	
Copper	17.8	0.35	mg/Kg dry		18.7				5.39	35	
Lead	6.77	0.52	mg/Kg dry		8.59				23.7	35	
Manganese	291	0.35	mg/Kg dry		382				27.0	35	
Nickel	12.6	0.35	mg/Kg dry		12.4				0.981	35	
Selenium	ND	3.5	mg/Kg dry		ND				NC	35	
Silver	ND	0.35	mg/Kg dry		ND				NC	35	
Zinc	38.8	0.69	mg/Kg dry		41.5				6.84	35	
MRL Check (B206010-MRL1)				Prepared & Analyzed: 06/19/18							
Lead	0.459	0.49	mg/Kg wet	0.489		94.0		80-120			
Matrix Spike (B206010-MS1)	**Source: 18F0554-01**			Prepared & Analyzed: 06/19/18							
Arsenic	19.3	1.7	mg/Kg dry	17.4	3.70	89.9		75-125			
Barium	41.2	1.7	mg/Kg dry	17.4	27.3	80.1		75-125			
Beryllium	16.8	0.17	mg/Kg dry	17.4	0.256	95.1		75-125			
Cadmium	16.5	0.17	mg/Kg dry	17.4	0.210	93.4		75-125			
Chromium	24.3	0.35	mg/Kg dry	17.4	8.49	90.6		75-125			
Copper	52.6	0.35	mg/Kg dry	34.8	18.7	97.2		75-125			
Lead	21.0	0.52	mg/Kg dry	17.4	8.59	**71.0**	*	75-125			MS-07
Manganese	331	0.35	mg/Kg dry	17.4	382	**-293**	*	75-125			MS-19
Nickel	26.2	0.35	mg/Kg dry	17.4	12.4	78.9		75-125			
Selenium	18.5	3.5	mg/Kg dry	17.4	ND	106		75-125			
Silver	16.6	0.35	mg/Kg dry	17.4	ND	95.1		75-125			
Zinc	68.8	0.70	mg/Kg dry	34.8	41.5	78.3		75-125			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B205582 - SW-846 7196A										
Blank (B205582-BLK1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Hexavalent Chromium	ND	0.16	mg/Kg wet							
LCS (B205582-BS1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Hexavalent Chromium	67	3.5	mg/Kg wet	66.3		101	80-120			
LCS Dup (B205582-BSD1)				Prepared: 06/13/18 Analyzed: 06/14/18						
Hexavalent Chromium	70	3.6	mg/Kg wet	69.4		101	80-120	4.46	20	
Batch B206193 - SW-846 9014										
Blank (B206193-BLK1)				Prepared: 06/19/18 Analyzed: 06/20/18						
Cyanide	ND	0.43	mg/Kg wet							
LCS (B206193-BS1)				Prepared: 06/19/18 Analyzed: 06/20/18						
Cyanide	62	2.2	mg/Kg wet	56.9		109	80-120			
LCS Dup (B206193-BSD1)				Prepared: 06/19/18 Analyzed: 06/20/18						
Cyanide	65	2.3	mg/Kg wet	57.9		111	80-120	3.94	20	

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BREAKDOWN REPORT

Lab Sample ID:	S024345-PEM1	Analyzed:	06/15/2018

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.91
Endrin [1]	3.16

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.67
Endrin [2]	2.94

BREAKDOWN REPORT

Lab Sample ID:	S024345-PEM2	Analyzed:	06/15/2018

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.85
Endrin [1]	2.49

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.65
Endrin [2]	2.27

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B205568-BS1 Date(s) Analyzed 06/14/2018 06/14/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-TP (Silvex)	1	16.325	0.000	0.000	10.7	
	2	15.621	0.000	0.000	11.1	0.9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS Dup

Lab Sample ID: B205568-BSD1 Date(s) Analyzed 06/14/2018 06/14/2018

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
2,4,5-TP (Silvex)	1	16.325	0.000	0.000	11.1	
	2	15.621	0.000	0.000	11.3	2.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B205670-BS1 Date(s) Analyzed 06/14/2018 06/14/2018

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.20	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.20	
	2	0.000	0.000	0.000	0.22	9.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B205670-BSD1 Date(s) Analyzed 06/14/2018 06/14/2018

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.18	5.4
Aroclor-1260	1	0.000	0.000	0.000	0.19	
	2	0.000	0.000	0.000	0.20	5.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B205678-BS1 Date(s) Analyzed 06/15/2018 06/15/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.674	6.645	6.705	0.091	
	2	6.709	6.679	6.739	0.091	0.0
4,4'-DDE	1	6.267	6.237	6.297	0.087	
	2	6.307	6.277	6.337	0.088	1.1
4,4'-DDT	1	6.874	6.845	6.905	0.092	
	2	6.932	6.903	6.963	0.086	6.7
Alachlor	1	5.755	5.726	5.786	0.096	
	2	5.574	5.545	5.605	0.093	3.2
Aldrin	1	5.656	5.626	5.686	0.086	
	2	5.608	5.578	5.638	0.083	3.6
alpha-BHC	1	5.043	5.013	5.073	0.081	
	2	5.009	4.980	5.040	0.080	1.2
alpha-Chlordane	1	6.202	6.173	6.233	0.084	
	2	6.176	6.146	6.206	0.082	2.4
beta-BHC	1	5.264	5.234	5.294	0.084	
	2	5.243	5.213	5.273	0.087	3.5
delta-BHC	1	5.360	5.330	5.390	0.079	
	2	5.399	5.370	5.430	0.068	16.2
Dieldrin	1	6.449	6.419	6.479	0.090	
	2	6.389	6.359	6.419	0.090	0.0
Endosulfan I	1	6.287	6.257	6.317	0.084	
	2	6.206	6.176	6.236	0.084	0.0
Endosulfan II	1	6.762	6.732	6.792	0.088	
	2	6.747	6.717	6.777	0.089	1.1
Endosulfan Sulfate	1	7.387	7.358	7.418	0.088	
	2	7.205	7.174	7.234	0.089	1.1
Endrin	1	6.605	6.576	6.636	0.086	
	2	6.593	6.563	6.623	0.085	1.2
Endrin Aldehyde	1	7.065	7.036	7.096	0.089	
	2	6.995	6.966	7.026	0.079	11.9
Endrin Ketone	1	7.593	7.563	7.623	0.090	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B205678-BS1 Date(s) Analyzed 06/15/2018 06/15/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.591	7.561	7.621	0.087	3.4
gamma-BHC (Lindane)	1	5.214	5.184	5.244	0.085	
	2	5.192	5.162	5.222	0.077	9.9
gamma-Chlordane	1	6.114	6.085	6.145	0.085	
	2	6.081	6.051	6.111	0.080	6.1
Heptachlor	1	5.481	5.451	5.511	0.082	
	2	5.427	5.398	5.458	0.082	0.0
Heptachlor Epoxide	1	6.033	6.004	6.064	0.087	
	2	5.959	5.929	5.989	0.083	4.7
Hexachlorobenzene	1	4.953	4.923	4.983	0.088	
	2	4.934	4.904	4.964	0.086	2.3
Methoxychlor	1	7.250	7.220	7.280	0.093	
	2	7.471	7.441	7.501	0.090	4.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B205678-BSD1 Date(s) Analyzed 06/15/2018 06/15/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.674	6.645	6.705	0.088	
	2	6.708	6.679	6.739	0.087	1.1
4,4'-DDE	1	6.266	6.237	6.297	0.085	
	2	6.307	6.277	6.337	0.084	1.2
4,4'-DDT	1	6.874	6.845	6.905	0.089	
	2	6.932	6.903	6.963	0.082	8.2
Alachlor	1	5.755	5.726	5.786	0.096	
	2	5.573	5.545	5.605	0.091	5.4
Aldrin	1	5.655	5.626	5.686	0.084	
	2	5.608	5.578	5.638	0.079	6.1
alpha-BHC	1	5.043	5.013	5.073	0.079	
	2	5.009	4.980	5.040	0.076	3.9
alpha-Chlordane	1	6.201	6.173	6.233	0.082	
	2	6.175	6.146	6.206	0.079	3.7
beta-BHC	1	5.263	5.234	5.294	0.081	
	2	5.242	5.213	5.273	0.082	1.2
delta-BHC	1	5.360	5.330	5.390	0.078	
	2	5.399	5.370	5.430	0.066	16.7
Dieldrin	1	6.448	6.419	6.479	0.087	
	2	6.389	6.359	6.419	0.086	1.2
Endosulfan I	1	6.286	6.257	6.317	0.080	
	2	6.205	6.176	6.236	0.080	0.0
Endosulfan II	1	6.761	6.732	6.792	0.085	
	2	6.747	6.717	6.777	0.085	0.0
Endosulfan Sulfate	1	7.387	7.358	7.418	0.085	
	2	7.205	7.174	7.234	0.083	3.6
Endrin	1	6.604	6.576	6.636	0.083	
	2	6.593	6.563	6.623	0.080	3.7
Endrin Aldehyde	1	7.065	7.036	7.096	0.086	
	2	6.995	6.966	7.026	0.075	13.7
Endrin Ketone	1	7.592	7.563	7.623	0.087	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B205678-BSD1 Date(s) Analyzed 06/15/2018 06/15/2018

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.591	7.561	7.621	0.084	3.5
gamma-BHC (Lindane)	1	5.213	5.184	5.244	0.082	
	2	5.192	5.162	5.222	0.072	13.0
gamma-Chlordane	1	6.114	6.085	6.145	0.082	
	2	6.080	6.051	6.111	0.076	7.6
Heptachlor	1	5.480	5.451	5.511	0.079	
	2	5.427	5.398	5.458	0.078	1.3
Heptachlor Epoxide	1	6.032	6.004	6.064	0.084	
	2	5.959	5.929	5.989	0.078	7.4
Hexachlorobenzene	1	4.952	4.923	4.983	0.085	
	2	4.933	4.904	4.964	0.081	4.8
Methoxychlor	1	7.250	7.220	7.280	0.090	
	2	7.471	7.441	7.501	0.085	5.7

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
PR-15	According to the NY ELAP program, all voa results less than 0.2mg/Kg are estimated and biased low if not collected according to SW-846 5035-L/5035A-L.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C-D in Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 7196A in Soil	
Hexavalent Chromium	NY,CT,NH,NC,ME,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME,VA
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2018

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

18F0554

CHAIN OF CUSTODY RECORD (New York)

39 Spruce Street
East Longmeadow, MA 01028

Page ____ of ____

Company Name:	LAND Remediation
Address:	74 HUDSON RIVER Rd
Phone:	518 266-4105 WATERFORD NY 12188
Project Name:	SARATOGA MGP Site
Project Location:	Constantine P.t
Project Number:	
Project Manager:	Keith Decker
Con-Test Quote Name/Number:	
Invoice Recipient:	Keith Decker
Sampled By:	Keith Decker

Requested Turnaround Time
7-Day [X] 10-Day [ ]
Due Date:

Rush-Approval Required
1-Day [ ] 3-Day [ ]
2-Day [ ] 4-Day [ ]

Data Delivery
Format: PDF [X] EXCEL [ ]
Other:
CLP Like Data Pkg Required: [ ]
Email To: kd@land-remediation.com
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	Total VOCs	Total SVOCs	Total metals	CP	Total PCB	Total Herb / Pests						# of Containers
																			[2] Preservation Code
																			[3] Container Code
1	CF-01	6/12/18 9:35		✓	✓	S	C	✓	✓	✓	✓	✓	✓						2 1 A
2	CF-01 VOC	9:40			✓	S	C	✓											2 1 A

Dissolved Metals Samples
[ ] Field Filtered
[ ] Lab to Filter

Orthophosphate Samples
[ ] Field Filtered
[ ] Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 6/12/18 11:[illegible]
Received by: (signature)	Date/Time: 6-12-18 11:40 AM
Relinquished by: (signature)	Date/Time: 6 12 18 12:45 PM
Received by: (signature)	Date/Time: 6-12-18 12:45
Relinquished by: (signature)	Date/Time: 6-12-18 16:40
Received by: (signature)	Date/Time: 6-12-18 16:40

Program & Regulatory Information
[ ] AWQ STDS [ ] NY TOGS
[ ] NYC Sewer Discharge [ ] NY CP-51
[ ] Part 360 GW (Landfill)
[ ] NY Restricted Use
[ ] NY Unrestricted Use
[ ] NY Part 375
Other: NYS DER 10

Deliverables
[ ] Enhanced Data Package
[ ] NYSDEC EQuIS EDD
[ ] EQuIS (Standard) EDD
[ ] NY Regulatory EDD
[ ] NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

Project Entity
[ ] Government [ ] Municipality [ ] MWRA [ ] WRTA
[ ] Federal [ ] 21 J [ ] School
[ ] City [ ] Brownfield [ ] MBTA

Other
[ ] Chromatogram
[ ] *AIHA-LAP,LLC*

PCB ONLY
[ ] Soxhlet
[ ] Non Soxhlet

Table of Contents

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client Land Remediation

Received By ESD **Date** 6-12-19 **Time** 16:40

How were the samples received? In Cooler T No Cooler ____ On Ice T No Ice ____ Direct from Sampling ____ Ambient ____ Melted Ice ____

Were samples within Temperature? 2-6°C T By Gun # 7 Actual Temp - 2.7 By Blank # ____ Actual Temp - ____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? ____

Are there Rushes? F Who was notified? ____

Are there Short Holds? F Who was notified? ____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? R

Proper Media/Containers Used? T Is splitting samples required? R

Were trip blanks received? F On COC? F

Do all samples have the proper pH? NA Acid ____ Base ____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	2
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	2
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 4/14/2020	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13-B
		PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Upland Topsoil Analytical Testing		1	02 30 00		see below
2	Upland Topsoil Geotechnical Testing		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for upland topsoil material	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: April 15, 2020

Additional Notes:
Proposed upland topsoil from Troy Sand and Gravel
Attached is the analytical testing (1 comp, 2 grabs) for 5,000 CY
PFAS and 1-4 Dioxane sampling was performed as well although not specifically required.
Geotechnical results are also provided for the Upland Topsoil

PHOENIX
Environmental Laboratories, Inc.

Tuesday, April 14, 2020

Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project ID: **BASF**
SDG ID: **GCF58956**
Sample ID#s: CF58956 - CF58960

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

April 14, 2020

SDG I.D.: GCF58956

Project ID: BASF

Client Id	Lab Id	Matrix
TSG-TOPSOIL 1	CF58956	SOIL
TSG-TOPSOIL 1A	CF58957	SOIL
TSG-TOPSOIL 1B	CF58958	SOIL
TSG-PFA	CF58959	SOIL
TSG-1.4D	CF58960	SOIL

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:00
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58956

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.43	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Arsenic	4.51	0.85	mg/Kg	1	04/01/20	CPP	SW6010D	
Barium	220	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Beryllium	0.69	0.34	mg/Kg	1	04/01/20	CPP	SW6010D	
Cadmium	1.04	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Chromium	16.5	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Copper	21.2	0.9	mg/kg	1	04/01/20	CPP	SW6010D	
Mercury	< 0.03	0.03	mg/Kg	2	04/01/20	RS	SW7471B	
Manganese	627	4.3	mg/Kg	10	04/02/20	TH	SW6010D	
Nickel	16.8	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Lead	11.1	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Selenium	< 1.7	1.7	mg/Kg	1	04/01/20	CPP	SW6010D	
Trivalent Chromium	16.5	0.43	mg/kg	1	04/02/20		CALC 6010-7196	
Zinc	54.5	0.9	mg/Kg	1	04/01/20	CPP	SW6010D	
Percent Solid	78		%		03/31/20	VT	SW846-%Solid	
Chromium, Hex. (SW3060 digestion)	< 0.51	0.51	mg/Kg	1	04/02/20	BJA	SW7196A	
pH at 25C - Soil	8.14	1.00	pH Units	1	03/31/20 21:41	AP	SW846 9045	1
Redox Potential	205		mV	1	03/31/20	AP	SM2580B-09	1
Total Cyanide (SW9010C Distill.)	< 0.58	0.58	mg/Kg	1	04/01/20	EG	SW9012B	
Soil Extraction for PCB	Completed				04/01/20	LL	SW3545A	
Soil Extraction for Pesticides	Completed				04/01/20	LL/A	SW3545A	
Soil Extraction for SVOA	Completed				03/31/20	BB/MA	SW3545A	
Mercury Digestion	Completed				04/01/20	RA/RA	SW7471B	
Soil Extraction for Herbicide	Completed				04/01/20	J/D	SW8151A	
Total Metals Digest	Completed				03/31/20	F/AG	SW3050B	
Chlorinated Herbicides								
2,4,5-T	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A	

Ver 1

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-TP (Silvex)	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
2,4-D	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
2,4-DB	ND	2.1	mg/Kg	10	04/02/20	JRB	SW8151A
Dalapon	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
Dicamba	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
Dichloroprop	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
Dinoseb	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
QA/QC Surrogates							
% DCAA	61		%	10	04/02/20	JRB	30 - 150 %
% DCAA (Confirmation)	66		%	10	04/02/20	JRB	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1221	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1232	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1242	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1248	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1254	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1260	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1262	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1268	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
QA/QC Surrogates							
% DCBP	90		%	10	04/01/20	SC	30 - 150 %
% DCBP (Confirmation)	82		%	10	04/01/20	SC	30 - 150 %
% TCMX	84		%	10	04/01/20	SC	30 - 150 %
% TCMX (Confirmation)	82		%	10	04/01/20	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
4,4' -DDE	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
4,4' -DDT	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
a-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
a-Chlordane	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Aldrin	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
b-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Chlordane	ND	0.043	mg/Kg	2	04/02/20	CG	SW8081B
d-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Dieldrin	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan I	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan II	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan sulfate	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin aldehyde	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin ketone	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
g-BHC	ND	0.0017	mg/Kg	2	04/02/20	CG	SW8081B
g-Chlordane	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Heptachlor	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Heptachlor epoxide	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Methoxychlor	ND	0.043	mg/Kg	2	04/02/20	CG	SW8081B
Toxaphene	ND	0.17	mg/Kg	2	04/02/20	CG	SW8081B

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% DCBP	41		%	2	04/02/20	CG	30 - 150 %
% DCBP (Confirmation)	41		%	2	04/02/20	CG	30 - 150 %
% TCMX	35		%	2	04/02/20	CG	30 - 150 %
% TCMX (Confirmation)	35		%	2	04/02/20	CG	30 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
1,3-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,4-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dimethylphenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dinitrophenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dinitrotoluene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,6-Dinitrotoluene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Chloronaphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Chlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Methylnaphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Nitroaniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
2-Nitrophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
3-Nitroaniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Chloroaniline	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Nitroaniline	ND	0.67	mg/Kg	1	03/31/20	WB	SW8270D
4-Nitrophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acenaphthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acenaphthylene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acetophenone	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Aniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benz(a)anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzidine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(a)pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzoic acid	ND	0.84	mg/Kg	1	03/31/20	WB	SW8270D
Benzyl butyl phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D

Project ID: BASF

Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Carbazole	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Chrysene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dibenzofuran	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Diethyl phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dimethylphthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Di-n-butylphthalate	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Di-n-octylphthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Fluorene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorobutadiene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachloroethane	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Isophorone	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Naphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Nitrobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodimethylamine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Pentachloronitrobenzene	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Pentachlorophenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Phenanthrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Phenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Pyridine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	99		%	1	03/31/20	WB	30 - 130 %
% 2-Fluorobiphenyl	61		%	1	03/31/20	WB	30 - 130 %
% 2-Fluorophenol	50		%	1	03/31/20	WB	30 - 130 %
% Nitrobenzene-d5	57		%	1	03/31/20	WB	30 - 130 %
% Phenol-d5	64		%	1	03/31/20	WB	30 - 130 %
% Terphenyl-d14	50		%	1	03/31/20	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:
This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 14, 2020

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:05
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58957

Project ID: BASF
Client ID: TSG-TOPSOIL 1A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,1-Trichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2-Trichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromoethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,4-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2,2-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2-Chlorotoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2-Hexanone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C	
2-Isopropyltoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	1
4-Chlorotoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
4-Methyl-2-pentanone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C	

Project ID: BASF

Client ID: TSG-TOPSOIL 1A

Phoenix I.D.: CF58957

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C
Acrylonitrile	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Benzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromochloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromodichloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromoform	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromomethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Carbon Disulfide	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Carbon tetrachloride	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloroform	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dibromochloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dibromomethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dichlorodifluoromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Ethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Hexachlorobutadiene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Isopropylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
m&p-Xylene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Methyl Ethyl Ketone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Methylene chloride	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Naphthalene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
n-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
n-Propylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
o-Xylene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
p-Isopropyltoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
sec-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Styrene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
tert-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Tetrachloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Tetrahydrofuran (THF)	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Toluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Total Xylenes	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Trichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorofluoromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorotrifluoroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Vinyl chloride	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	92		%	1	04/01/20	HM	70 - 130 %
% Bromofluorobenzene	81		%	1	04/01/20	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	04/01/20	HM	70 - 130 %

Project ID: BASF
Client ID: TSG-TOPSOIL 1A

Phoenix I.D.: CF58957

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	92		%	1	04/01/20	HM	70 - 130 %	
Field Extraction	Completed				03/31/20		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:10
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58958

Project ID: BASF
Client ID: TSG-TOPSOIL 1B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,1-Trichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2-Trichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromoethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,4-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2,2-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2-Chlorotoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2-Hexanone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C	
2-Isopropyltoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	1
4-Chlorotoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
4-Methyl-2-pentanone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C	

Project ID: BASF

Client ID: TSG-TOPSOIL 1B

Phoenix I.D.: CF58958

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	0.038	S 0.027	mg/Kg	1	04/01/20	HM	SW8260C
Acrylonitrile	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Benzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromochloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromodichloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromoform	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromomethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Carbon Disulfide	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Carbon tetrachloride	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloroform	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,2-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dibromochloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dibromomethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dichlorodifluoromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Ethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Hexachlorobutadiene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Isopropylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
m&p-Xylene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Methyl Ethyl Ketone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Methylene chloride	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Naphthalene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
n-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
n-Propylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
o-Xylene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
p-Isopropyltoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
sec-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Styrene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
tert-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Tetrachloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Tetrahydrofuran (THF)	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Toluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Total Xylenes	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,2-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Trichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorofluoromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorotrifluoroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Vinyl chloride	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	92		%	1	04/01/20	HM	70 - 130 %
% Bromofluorobenzene	80		%	1	04/01/20	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	04/01/20	HM	70 - 130 %

Project ID: BASF
Client ID: TSG-TOPSOIL 1B

Phoenix I.D.: CF58958

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	91		%	1	04/01/20	HM	70 - 130 %	
Field Extraction	Completed				03/31/20		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

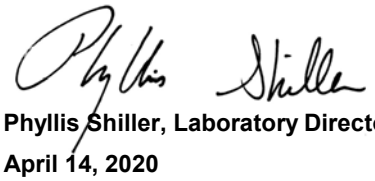
Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	8:45
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58959

Project ID: BASF
Client ID: TSG-PFA

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
PFAS	Completed				04/13/20	*	E537	C

C = This parameter is subcontracted.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

*See attached

PFAS (E537) was analyzed by NY certified lab #10854.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	8:55
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58960

Project ID: BASF
Client ID: TSG-1.4D

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Percent Solid	79			%		03/31/20	VT	SW846-%Solid
Extraction for SVOA SIM	Completed					04/02/20	AT/K/MA	SW3545A
1,4-Dioxane								
1,4-dioxane	ND	0.083	0.083	mg/Kg	1	04/03/20	WB	SW8270D (SIM)
QA/QC Surrogates								
% 2-Fluorobiphenyl	48			%	1	04/03/20	WB	30 - 130 %
% Nitrobenzene-d5	114			%	1	04/03/20	WB	30 - 130 %
% Terphenyl-d14	74			%	1	04/03/20	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 524889 (mg/kg), QC Sample No: CF58894 40X (CF58956)														
Chromium, Hexavalent - Soil														
Chromium, Hexavalent	BRL	0.40	<0.39	<0.41	NC	98.4						85 - 115	30	
Chromium, Hexavalent (Ins)						101			90.2			85 - 115	30	
Chromium, Hexavalent (Sol)						103			54.7			85 - 115	30	m
Comment:														
The QC sample is in a reducing state, acceptance criteria are not applicable for samples in a reducing state. The soluble spike was analyzed twice with similar recoveries.														
QA/QC Batch 524741 (mg/kg), QC Sample No: CF58055 2X (CF58956)														
Mercury - Soil	BRL	0.02	0.05	0.06	NC	109	113	3.6	110	98.0	11.5	70 - 130	30	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.														
QA/QC Batch 524691 (mg/kg), QC Sample No: CF58046 (CF58956)														
ICP Metals - Soil														
Arsenic	BRL	0.67	4.18	4.40	NC	104	93.1	11.1	95.3	97.3	2.1	75 - 125	35	
Barium	BRL	0.33	140	155	10.2	103	96.5	6.5	118	125	5.8	75 - 125	35	
Beryllium	BRL	0.27	0.64	0.67	NC	103	91.9	11.4	101	102	1.0	75 - 125	35	
Cadmium	BRL	0.33	1.05	1.03	NC	106	88.2	18.3	99.5	102	2.5	75 - 125	35	
Chromium	BRL	0.33	23.3	26.0	11.0	100	90.1	10.4	102	104	1.9	75 - 125	35	
Copper	BRL	0.67	200	222	10.4	99.8	89.2	11.2	NC	NC	NC	75 - 125	35	
Lead	BRL	0.33	98.2	125	24.0	101	90.4	11.1	100	95.6	4.5	75 - 125	35	
Manganese	BRL	0.33	185	181	2.20	102	92.7	9.6	103	110	6.6	75 - 125	35	
Nickel	BRL	0.33	21.7	25.5	16.1	101	92.7	8.6	103	102	1.0	75 - 125	35	
Selenium	BRL	1.3	<1.7	<1.7	NC	100	91.4	9.0	94.2	96.3	2.2	75 - 125	35	
Silver	BRL	0.33	2.18	2.87	27.3	99.0	89.6	10.0	102	99.2	2.8	75 - 125	35	
Zinc	BRL	0.67	136	150	9.80	103	93.8	9.3	123	99.9	20.7	75 - 125	35	
Comment:														
Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.														

m = This parameter is outside laboratory MS/MSD specified recovery limits.

Environmental Laboratories, Inc.
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NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 524684 (mg/Kg), QC Sample No: CF58358 50X (CF58956)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.50	0.42	NC	90.7			100			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 524718 (PH), QC Sample No: CF58553 (CF58956)													
pH at 25C - Soil			7.54	7.52	0.30	100						85 - 115	20

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NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 524854 (mg/Kg), QC Sample No: CF59591 10X (CF58956)										
Chlorinated Herbicides - Soil										
2,4,5-T	ND	0.083	76	79	3.9	70	73	4.2	40 - 140	30
2,4,5-TP (Silvex)	ND	0.083	73	76	4.0	67	71	5.8	40 - 140	30
2,4-D	ND	0.17	73	76	4.0	74	79	6.5	40 - 140	30
2,4-DB	ND	1.7	70	73	4.2	65	68	4.5	40 - 140	30
Dalapon	ND	0.083	60	68	12.5	46	51	10.3	40 - 140	30
Dicamba	ND	0.083	73	75	2.7	68	72	5.7	40 - 140	30
Dichloroprop	ND	0.083	86	90	4.5	82	88	7.1	40 - 140	30
Dinoseb	ND	0.083	68	71	4.3	63	68	7.6	40 - 140	30
% DCAA (Surrogate Rec)	59	%	61	62	1.6	56	60	6.9	30 - 150	30
% DCAA (Surrogate Rec) (Confirm	59	%	64	66	3.1	63	67	6.2	30 - 150	30
Comment:										
Additional criteria: LCS acceptance range is 40-140% MS acceptance range 30-150%.										
QA/QC Batch 524636 (mg/Kg), QC Sample No: CF57312 2X (CF58956)										
Polychlorinated Biphenyls - Soil										
PCB-1016	ND	0.033	75	83	10.1	40	40	0.0	40 - 140	30
PCB-1221	ND	0.033							40 - 140	30
PCB-1232	ND	0.033							40 - 140	30
PCB-1242	ND	0.033							40 - 140	30
PCB-1248	ND	0.033							40 - 140	30
PCB-1254	ND	0.033							40 - 140	30
PCB-1260	ND	0.033	87	97	10.9	41	42	2.4	40 - 140	30
PCB-1262	ND	0.033							40 - 140	30
PCB-1268	ND	0.033							40 - 140	30
% DCBP (Surrogate Rec)	77	%	100	111	10.4	47	42	11.2	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	70	%	92	104	12.2	42	47	11.2	30 - 150	30
% TCMX (Surrogate Rec)	64	%	74	84	12.7	41	39	5.0	30 - 150	30
% TCMX (Surrogate Rec) (Confirm	62	%	76	85	11.2	41	39	5.0	30 - 150	30
QA/QC Batch 524778 (mg/Kg), QC Sample No: CF59627 2X (CF58956)										
Pesticides - Soil										
4,4' -DDD	ND	0.0017	79	99	22.5	71	64	10.4	40 - 140	30
4,4' -DDE	ND	0.0017	73	90	20.9	65	53	20.3	40 - 140	30
4,4' -DDT	ND	0.0017	73	89	19.8	63	51	21.1	40 - 140	30
a-BHC	ND	0.001	62	79	24.1	63	50	23.0	40 - 140	30
a-Chlordane	ND	0.0033	74	90	19.5	67	54	21.5	40 - 140	30
Aldrin	ND	0.001	65	81	21.9	61	50	19.8	40 - 140	30
b-BHC	ND	0.001	70	86	20.5	71	59	18.5	40 - 140	30
Chlordane	ND	0.033	75	91	19.3	66	53	21.8	40 - 140	30
d-BHC	ND	0.0033	59	72	19.8	51	41	21.7	40 - 140	30
Dieldrin	ND	0.001	72	90	22.2	63	52	19.1	40 - 140	30
Endosulfan I	ND	0.0033	75	92	20.4	66	52	23.7	40 - 140	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Endosulfan II	ND	0.0033	76	93	20.1	64	52	20.7	40 - 140	30	
Endosulfan sulfate	ND	0.0033	77	93	18.8	62	50	21.4	40 - 140	30	
Endrin	ND	0.0033	76	92	19.0	66	55	18.2	40 - 140	30	
Endrin aldehyde	ND	0.0033	61	78	24.5	50	37	29.9	40 - 140	30	
Endrin ketone	ND	0.0033	72	89	21.1	62	48	25.5	40 - 140	30	
g-BHC	ND	0.001	61	76	21.9	60	48	22.2	40 - 140	30	
g-Chlordane	ND	0.0033	75	91	19.3	66	53	21.8	40 - 140	30	
Heptachlor	ND	0.0033	65	88	30.1	63	49	25.0	40 - 140	30	
Heptachlor epoxide	ND	0.0033	86	105	19.9	66	54	20.0	40 - 140	30	
Methoxychlor	ND	0.0033	75	93	21.4	64	53	18.8	40 - 140	30	
Toxaphene	ND	0.13	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	NR	%	NR	NR	NC	61	50	19.8	30 - 150	30	
% DCBP (Confirmation)	NR	%	NR	NR	NC	52	42	21.3	30 - 150	30	
% TCMX	NR	%	NR	NR	NC	62	49	23.4	30 - 150	30	
% TCMX (Confirmation)	NR	%	NR	NR	NC	60	46	26.4	30 - 150	30	

Comment:

NR- not reported; surrogate was not added

QA/QC Batch 524645 (mg/Kg), QC Sample No: CF59001 (CF58956)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	0.23	62	51	19.5	54	56	3.6	40 - 140	30	
1,2,4-Trichlorobenzene	ND	0.23	57	50	13.1	50	51	2.0	40 - 140	30	
1,2-Dichlorobenzene	ND	0.18	52	44	16.7	41	42	2.4	40 - 140	30	
1,2-Diphenylhydrazine	ND	0.23	74	63	16.1	70	74	5.6	40 - 140	30	
1,3-Dichlorobenzene	ND	0.23	49	42	15.4	32	35	9.0	40 - 140	30	m
1,4-Dichlorobenzene	ND	0.23	51	42	19.4	35	37	5.6	40 - 140	30	m
2,4,5-Trichlorophenol	ND	0.23	83	71	15.6	91	93	2.2	40 - 140	30	
2,4,6-Trichlorophenol	ND	0.13	75	67	11.3	79	79	0.0	30 - 130	30	
2,4-Dichlorophenol	ND	0.13	74	57	26.0	78	78	0.0	30 - 130	30	
2,4-Dimethylphenol	ND	0.23	79	61	25.7	81	80	1.2	30 - 130	30	
2,4-Dinitrophenol	ND	0.23	81	56	36.5	10	<10	NC	30 - 130	30	m,r
2,4-Dinitrotoluene	ND	0.13	75	72	4.1	65	64	1.6	30 - 130	30	
2,6-Dinitrotoluene	ND	0.13	73	68	7.1	68	67	1.5	40 - 140	30	
2-Chloronaphthalene	ND	0.23	63	53	17.2	68	68	0.0	40 - 140	30	
2-Chlorophenol	ND	0.23	69	53	26.2	71	67	5.8	30 - 130	30	
2-Methylnaphthalene	ND	0.23	62	53	15.7	60	63	4.9	40 - 140	30	
2-Methylphenol (o-cresol)	ND	0.23	86	57	40.6	84	83	1.2	40 - 140	30	r
2-Nitroaniline	ND	0.33	87	134	42.5	92	89	3.3	40 - 140	30	r
2-Nitrophenol	ND	0.23	78	54	36.4	56	51	9.3	40 - 140	30	r
3&4-Methylphenol (m&p-cresol)	ND	0.23	85	65	26.7	85	83	2.4	30 - 130	30	
3,3'-Dichlorobenzidine	ND	0.13	78	65	18.2	90	95	5.4	40 - 140	30	
3-Nitroaniline	ND	0.33	81	84	3.6	84	86	2.4	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	0.23	80	68	16.2	32	22	37.0	30 - 130	30	m,r
4-Bromophenyl phenyl ether	ND	0.23	69	64	7.5	73	73	0.0	40 - 140	30	
4-Chloro-3-methylphenol	ND	0.23	80	71	11.9	80	81	1.2	30 - 130	30	
4-Chloroaniline	ND	0.23	72	54	28.6	78	80	2.5	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	0.23	66	57	14.6	66	67	1.5	40 - 140	30	
4-Nitroaniline	ND	0.23	86	68	23.4	77	80	3.8	40 - 140	30	
4-Nitrophenol	ND	0.23	92	86	6.7	82	86	4.8	30 - 130	30	
Acenaphthene	ND	0.23	64	56	13.3	68	70	2.9	30 - 130	30	
Acenaphthylene	ND	0.13	64	55	15.1	69	70	1.4	40 - 140	30	
Acetophenone	ND	0.23	66	48	31.6	65	62	4.7	40 - 140	30	r
Aniline	ND	0.33	64	41	43.8	70	68	2.9	40 - 140	30	r

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Anthracene	ND	0.23	65	66	1.5	73	75	2.7	40 - 140	30	
Benz(a)anthracene	ND	0.23	69	69	0.0	75	79	5.2	40 - 140	30	
Benzidine	ND	0.33	19	<10	NC	76	75	1.3	40 - 140	30	l
Benzo(a)pyrene	ND	0.13	74	71	4.1	78	81	3.8	40 - 140	30	
Benzo(b)fluoranthene	ND	0.16	69	68	1.5	70	74	5.6	40 - 140	30	
Benzo(ghi)perylene	ND	0.23	63	65	3.1	79	84	6.1	40 - 140	30	
Benzo(k)fluoranthene	ND	0.23	70	71	1.4	74	75	1.3	40 - 140	30	
Benzoic Acid	ND	0.33	55	58	5.3	<10	<10	NC	30 - 130	30	m
Benzyl butyl phthalate	ND	0.23	71	68	4.3	82	84	2.4	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	0.23	63	49	25.0	62	62	0.0	40 - 140	30	
Bis(2-chloroethyl)ether	ND	0.13	58	42	32.0	54	52	3.8	40 - 140	30	r
Bis(2-chloroisopropyl)ether	ND	0.23	58	40	36.7	48	49	2.1	40 - 140	30	r
Bis(2-ethylhexyl)phthalate	ND	0.23	68	69	1.5	86	87	1.2	40 - 140	30	
Carbazole	ND	0.23	65	71	8.8	69	72	4.3	40 - 140	30	
Chrysene	ND	0.23	65	68	4.5	73	76	4.0	40 - 140	30	
Dibenz(a,h)anthracene	ND	0.13	70	66	5.9	81	87	7.1	40 - 140	30	
Dibenzofuran	ND	0.23	66	60	9.5	67	69	2.9	40 - 140	30	
Diethyl phthalate	ND	0.23	71	68	4.3	74	75	1.3	40 - 140	30	
Dimethylphthalate	ND	0.23	68	62	9.2	72	72	0.0	40 - 140	30	
Di-n-butylphthalate	ND	0.67	67	68	1.5	72	69	4.3	40 - 140	30	
Di-n-octylphthalate	ND	0.23	71	71	0.0	88	91	3.4	40 - 140	30	
Fluoranthene	ND	0.23	62	67	7.8	60	57	5.1	40 - 140	30	
Fluorene	ND	0.23	68	62	9.2	70	72	2.8	40 - 140	30	
Hexachlorobenzene	ND	0.13	66	68	3.0	81	78	3.8	40 - 140	30	
Hexachlorobutadiene	ND	0.23	57	49	15.1	43	44	2.3	40 - 140	30	
Hexachlorocyclopentadiene	ND	0.23	64	43	39.3	28	23	19.6	40 - 140	30	m,r
Hexachloroethane	ND	0.13	51	41	21.7	28	31	10.2	40 - 140	30	m
Indeno(1,2,3-cd)pyrene	ND	0.23	63	64	1.6	74	76	2.7	40 - 140	30	
Isophorone	ND	0.13	63	48	27.0	63	64	1.6	40 - 140	30	
Naphthalene	ND	0.23	57	48	17.1	57	57	0.0	40 - 140	30	
Nitrobenzene	ND	0.13	73	51	35.5	67	65	3.0	40 - 140	30	r
N-Nitrosodimethylamine	ND	0.23	42	40	4.9	33	33	0.0	40 - 140	30	m
N-Nitrosodi-n-propylamine	ND	0.13	74	50	38.7	73	71	2.8	40 - 140	30	r
N-Nitrosodiphenylamine	ND	0.13	67	67	0.0	70	71	1.4	40 - 140	30	
Pentachloronitrobenzene	ND	0.23	75	71	5.5	70	68	2.9	40 - 140	30	
Pentachlorophenol	ND	0.23	59	78	27.7	64	60	6.5	30 - 130	30	
Phenanthrene	ND	0.13	65	66	1.5	69	71	2.9	40 - 140	30	
Phenol	ND	0.23	84	54	43.5	82	79	3.7	30 - 130	30	r
Pyrene	ND	0.23	63	70	10.5	62	59	5.0	30 - 130	30	
Pyridine	ND	0.23	25	26	3.9	23	22	4.4	40 - 140	30	l,m
% 2,4,6-Tribromophenol	49	%	83	71	15.6	106	107	0.9	30 - 130	30	
% 2-Fluorobiphenyl	63	%	58	47	21.0	62	64	3.2	30 - 130	30	
% 2-Fluorophenol	57	%	63	46	31.2	57	57	0.0	30 - 130	30	r
% Nitrobenzene-d5	65	%	67	45	39.3	62	62	0.0	30 - 130	30	r
% Phenol-d5	66	%	70	49	35.3	67	66	1.5	30 - 130	30	r
% Terphenyl-d14	58	%	51	63	21.1	51	50	2.0	30 - 130	30	

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 524966 (mg/Kg), QC Sample No: CF59593 (CF58960)

Polynuclear Aromatic HC - Soil

1,4-dioxane	ND	0.067	47	48	2.1	47	49	4.2	30 - 130	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
% 2-Fluorobiphenyl	54	%	50	54	7.7	39	47	18.6	30 - 130	30	
% Nitrobenzene-d5	60	%	59	89	40.5	66	89	29.7	30 - 130	30	r
% Terphenyl-d14	73	%	70	63	10.5	66	69	4.4	30 - 130	30	

Comment:

Additional 8270 criteria:20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 524931 (mg/Kg), QC Sample No: CF58901 (CF58957, CF58958)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	0.005	114	114	0.0	116	117	0.9	70 - 130	30	
1,1,1-Trichloroethane	ND	0.005	93	95	2.1	100	101	1.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.003	103	104	1.0	108	109	0.9	70 - 130	30	
1,1,2-Trichloroethane	ND	0.005	98	100	2.0	100	99	1.0	70 - 130	30	
1,1-Dichloroethane	ND	0.005	97	98	1.0	101	102	1.0	70 - 130	30	
1,1-Dichloroethene	ND	0.005	99	102	3.0	106	106	0.0	70 - 130	30	
1,1-Dichloropropene	ND	0.005	93	96	3.2	99	98	1.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	0.005	110	110	0.0	93	89	4.4	70 - 130	30	
1,2,3-Trichloropropane	ND	0.005	95	96	1.0	101	102	1.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	0.005	113	112	0.9	96	93	3.2	70 - 130	30	
1,2,4-Trimethylbenzene	ND	0.001	99	100	1.0	87	95	8.8	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	0.005	124	127	2.4	127	126	0.8	70 - 130	30	
1,2-Dibromoethane	ND	0.005	103	103	0.0	105	104	1.0	70 - 130	30	
1,2-Dichlorobenzene	ND	0.005	102	102	0.0	99	100	1.0	70 - 130	30	
1,2-Dichloroethane	ND	0.005	94	96	2.1	97	98	1.0	70 - 130	30	
1,2-Dichloropropane	ND	0.005	96	98	2.1	99	100	1.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	0.001	99	100	1.0	99	102	3.0	70 - 130	30	
1,3-Dichlorobenzene	ND	0.005	104	104	0.0	101	101	0.0	70 - 130	30	
1,3-Dichloropropane	ND	0.005	99	101	2.0	101	102	1.0	70 - 130	30	
1,4-Dichlorobenzene	ND	0.005	102	102	0.0	100	99	1.0	70 - 130	30	
2,2-Dichloropropane	ND	0.005	97	99	2.0	95	99	4.1	70 - 130	30	
2-Chlorotoluene	ND	0.005	100	101	1.0	102	103	1.0	70 - 130	30	
2-Hexanone	ND	0.025	96	98	2.1	95	90	5.4	70 - 130	30	
2-Isopropyltoluene	ND	0.005	99	100	1.0	102	104	1.9	70 - 130	30	
4-Chlorotoluene	ND	0.005	99	99	0.0	99	99	0.0	70 - 130	30	
4-Methyl-2-pentanone	ND	0.025	97	100	3.0	100	98	2.0	70 - 130	30	
Acetone	ND	0.01	68	69	1.5	58	59	1.7	70 - 130	30	l,m
Acrylonitrile	ND	0.005	99	101	2.0	93	87	6.7	70 - 130	30	
Benzene	ND	0.001	99	100	1.0	104	104	0.0	70 - 130	30	
Bromobenzene	ND	0.005	102	104	1.9	105	106	0.9	70 - 130	30	
Bromochloromethane	ND	0.005	102	103	1.0	105	105	0.0	70 - 130	30	
Bromodichloromethane	ND	0.005	108	109	0.9	109	110	0.9	70 - 130	30	
Bromoform	ND	0.005	133	136	2.2	129	130	0.8	70 - 130	30	l
Bromomethane	ND	0.005	104	104	0.0	114	112	1.8	70 - 130	30	
Carbon Disulfide	ND	0.005	102	105	2.9	99	97	2.0	70 - 130	30	
Carbon tetrachloride	ND	0.005	101	103	2.0	104	127	19.9	70 - 130	30	
Chlorobenzene	ND	0.005	102	103	1.0	104	104	0.0	70 - 130	30	
Chloroethane	ND	0.005	95	97	2.1	99	103	4.0	70 - 130	30	
Chloroform	ND	0.005	93	94	1.1	98	98	0.0	70 - 130	30	
Chloromethane	ND	0.005	87	88	1.1	86	89	3.4	70 - 130	30	
cis-1,2-Dichloroethene	ND	0.005	93	94	1.1	101	97	4.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.005	104	105	1.0	102	103	1.0	70 - 130	30	
Dibromochloromethane	ND	0.003	122	125	2.4	121	124	2.4	70 - 130	30	
Dibromomethane	ND	0.005	98	101	3.0	99	100	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dichlorodifluoromethane	ND	0.005	80	83	3.7	85	84	1.2	70 - 130	30
Ethylbenzene	ND	0.001	102	104	1.9	106	106	0.0	70 - 130	30
Hexachlorobutadiene	ND	0.005	109	110	0.9	97	91	6.4	70 - 130	30
Isopropylbenzene	ND	0.001	98	100	2.0	103	104	1.0	70 - 130	30
m&p-Xylene	ND	0.002	102	104	1.9	103	103	0.0	70 - 130	30
Methyl ethyl ketone	ND	0.005	89	92	3.3	85	86	1.2	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	0.001	89	90	1.1	91	91	0.0	70 - 130	30
Methylene chloride	ND	0.005	89	90	1.1	111	117	5.3	70 - 130	30
Naphthalene	ND	0.005	108	110	1.8	96	93	3.2	70 - 130	30
n-Butylbenzene	ND	0.001	103	104	1.0	97	96	1.0	70 - 130	30
n-Propylbenzene	ND	0.001	99	101	2.0	100	100	0.0	70 - 130	30
o-Xylene	ND	0.002	102	103	1.0	104	106	1.9	70 - 130	30
p-Isopropyltoluene	ND	0.001	102	104	1.9	103	104	1.0	70 - 130	30
sec-Butylbenzene	ND	0.001	105	106	0.9	105	106	0.9	70 - 130	30
Styrene	ND	0.005	103	104	1.0	101	101	0.0	70 - 130	30
tert-Butylbenzene	ND	0.001	97	99	2.0	102	104	1.9	70 - 130	30
Tetrachloroethene	ND	0.005	102	106	3.8	104	103	1.0	70 - 130	30
Tetrahydrofuran (THF)	ND	0.005	90	92	2.2	97	94	3.1	70 - 130	30
Toluene	ND	0.001	100	101	1.0	101	101	0.0	70 - 130	30
trans-1,2-Dichloroethene	ND	0.005	100	99	1.0	105	104	1.0	70 - 130	30
trans-1,3-Dichloropropene	ND	0.005	108	109	0.9	106	106	0.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	0.005	124	126	1.6	120	119	0.8	70 - 130	30
Trichloroethene	ND	0.005	99	102	3.0	103	102	1.0	70 - 130	30
Trichlorofluoromethane	ND	0.005	94	95	1.1	100	100	0.0	70 - 130	30
Trichlorotrifluoroethane	ND	0.005	101	105	3.9	107	106	0.9	70 - 130	30
Vinyl chloride	ND	0.005	98	101	3.0	105	106	0.9	70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0	100	99	1.0	70 - 130	30
% Bromofluorobenzene	94	%	99	99	0.0	97	98	1.0	70 - 130	30
% Dibromofluoromethane	101	%	103	103	0.0	104	102	1.9	70 - 130	30
% Toluene-d8	96	%	98	99	1.0	98	98	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
April 14, 2020

Tuesday, April 14, 2020

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCF58956 - LANDREM

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

April 14, 2020 SDG I.D.: GCF58956

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

SVOA Narration

CHEM05 03/31/20-1: CF58956

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.077 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM03 04/01/20-1: CF58957, CF58958

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 27% (20%), Dibromochloromethane 24% (20%), trans-1,4-dichloro-2-butene 25% (20%), Acetone 27% (20%), Bromoform 36% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: Tetrachloroethene 0.177 (0.2), Bromoform 0.088 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

April 14, 2020

SDG I.D.: GCF58956

The samples in this delivery group were received at 2.9°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.4 C Pg of

PHOENIX
Environmental Laboratories, Inc.

NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Phone:
☐ Fax:
☑ Email: wpiO land-remediation.com

Customer: LAND Remediation
Address: 74 Hudson River Rd
Waterford NY 12188

Project: BASF
Report to: Will Linaheimer
Invoice to: 11
QUOTE # :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 3/31/20

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PFA	1,4 dioxane	VOCs	SVOCs, metals, PCBs	Herbicide, pesticide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (2) methanol (4) H2O	GL Soil container (4) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 1250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
58956	TSG-Topsoil 1	S	3/31	9:00				✓	✓			✓									
58957	TSG-Topsoil 1a	S	3/31	9:05			✓				✓										
58958	TSG-Topsoil 1b	S	3/31	9:10			✓				✓										
58959	TSG-PFA	S	3/31	8:45	✓										✓						
58960	TSG-1,4D	S	3/31	8:55		✓							✓								

Relinquished by:	Accepted by:	Date	Time:
[signature]	[signature]	3/31/20	1415
[signature]	[signature]	3/31/20	16:56

Comments, Special Requirements or Regulations:

Data Format:
☐ Phoenix Std Report ☐ EQuIS
☐ Excel ☐ NJ Hazsite EDD
☐ PDF ☐ NY EZ EDD (ASP)
☐ GIS/Key ☐ Other

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☑ 5 Days
☐ 10 Days
☐ Other
* SURCHARGE APPLIES

Data Package:
☐ NJ Reduced Deliv. * ☐ Other
☐ NY Enhanced (ASP B) *

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential Restricted Soil
☐ 375SCO Commercial Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

PA
☐ Clean Fill Limits
☐ PA-GW
☐ Reg Fill Limits
☐ PA Soil Restricted
☐ PA Soil non-restricted

State Samples Collected? NY

6CF 58956

Lori Bailey

From: Will Lindheimer <wpl@land-remediation.com>
Sent: Tuesday, March 31, 2020 04:38 PM
To: Lori Bailey
Subject: RE: METALS

DER-10 analysis.

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
www.land-remediation.com

From: Lori Bailey <lori@phoenixlabs.com>
Sent: Tuesday, March 31, 2020 4:18 PM
To: Will Lindheimer <wpl@land-remediation.com>
Subject: METALS
Importance: High

Good afternoon Will,

Can you please let me know what metals you would like for us to run on the BASF sample we received today?

Thank you,

Lori Bailey
Client Services Representative
Phoenix Environmental Laboratories
587 East Middle Turnpike
Manchester, CT 06040
Ph: 1-860-645-1102
Fx: 1-860-645-0823

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, forwarding, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by e-mail or telephone, and delete the original message immediately. Thank you.

Technical Report

prepared for:

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Report Date: 04/13/2020
Client Project ID: CF58959 03/31/20
York Project (SDG) No.: 20D0083

Report Date: 04/13/2020
Client Project ID: CF58959 03/31/20
York Project (SDG) No.: 20D0083

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 02, 2020 and listed below. The project was identified as your project: **CF58959 03/31/20**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

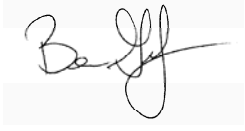
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0083-01	CF58959	Soil	03/31/2020	04/02/2020

General Notes for York Project (SDG) No.: 20D0083

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 04/13/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: CF58959 **York Sample ID:** 20D0083-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0083	CF58959 03/31/20	Soil	March 31, 2020 8:45 am	04/02/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	2.13	2.58	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.131**	J	ug/kg dry	0.0850	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0587	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0400	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.124**	J	ug/kg dry	0.0995	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.107**	J	ug/kg dry	0.0565	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0771	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0660	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.150	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0967	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0561	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0963	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.135	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.134	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.118	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0602	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0636	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0660	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0851	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0330	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.386**	J	ug/kg dry	0.236	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT

Sample Information

Client Sample ID: **CF58959** **York Sample ID:** **20D0083-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0083	CF58959 03/31/20	Soil	March 31, 2020 8:45 am	04/02/2020

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**			**Acceptance Range**						
	Surrogate: M3PFBS	*74.0 %*			*25-150*						
	Surrogate: M5PFHxA	*65.5 %*			*25-150*						
	Surrogate: M4PFHpA	*66.8 %*			*25-150*						
	Surrogate: M3PFHxS	*78.5 %*			*25-150*						
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*62.7 %*			*25-150*						
	Surrogate: M6PFDA	*59.5 %*			*25-150*						
	Surrogate: M7PFUdA	*62.8 %*			*25-150*						
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*50.6 %*			*25-150*						
	Surrogate: M2PFTeDA	*51.9 %*			*10-150*						
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*75.4 %*			*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*72.6 %*			*25-150*						
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*77.0 %*			*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*34.0 %*			*10-150*						
	Surrogate: d3-N-MeFOSAA	*100 %*			*25-150*						
	Surrogate: d5-N-EtFOSAA	*98.5 %*			*25-150*						
	Surrogate: M2-6:2 FTS	*298 %*	PFSu-H		*25-150*						
	Surrogate: M2-8:2 FTS	*433 %*	PFSu-H		*25-150*						
	Surrogate: M9PFNA	*65.1 %*			*25-150*						

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.1**		%	0.100	1	SM 2540G	04/08/2020 14:44	04/08/2020 14:45	TMP
							Certifications: CTDOH			

Analytical Batch Summary

Batch ID: BD00317 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0083-01	CF58959	04/07/20
BD00317-BLK1	Blank	04/07/20
BD00317-BS1	LCS	04/07/20

Batch ID: BD00362 **Preparation Method:** % Solids Prep **Prepared By:** TMP

YORK Sample ID	Client Sample ID	Preparation Date
20D0083-01	CF58959	04/08/20
BD00362-DUP1	Duplicate	04/08/20

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00317 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BD00317-BLK1)									Prepared: 04/07/2020 Analyzed: 04/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	1.99	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.498	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.498	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.498	"								
Perfluorooctanoic acid (PFOA)	ND	0.498	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.498	"								
Perfluorononanoic acid (PFNA)	ND	0.498	"								
Perfluorodecanoic acid (PFDA)	ND	0.498	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.498	"								
Perfluorododecanoic acid (PFDoA)	ND	0.498	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.498	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.498	"								
N-MeFOSAA	ND	0.498	"								
N-EtFOSAA	ND	0.498	"								
Perfluoropentanoic acid (PFPeA)	ND	0.498	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.498	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.498	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.498	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	0.498	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	0.498	"								
Perfluoro-n-butanoic acid (PFBA)	0.183	0.498	"								
Surrogate: M3PFBS	*3.00*		"	*4.63*		*64.8*	*25-150*				
Surrogate: M5PFHxA	*3.20*		"	*4.98*		*64.2*	*25-150*				
Surrogate: M4PFHpA	*2.92*		"	*4.98*		*58.6*	*25-150*				
Surrogate: M3PFHxS	*3.06*		"	*4.71*		*64.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.26*		"	*4.98*		*65.5*	*25-150*				
Surrogate: M6PFDA	*2.95*		"	*4.98*		*59.3*	*25-150*				
Surrogate: M7PFUdA	*2.40*		"	*4.98*		*48.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.25*		"	*4.98*		*45.2*	*25-150*				
Surrogate: M2PFTeDA	*2.13*		"	*4.98*		*42.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*3.13*		"	*4.98*		*62.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.80*		"	*4.77*		*58.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.14*		"	*4.98*		*63.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.58*		"	*4.98*		*51.8*	*10-150*				
Surrogate: d3-N-MeFOSAA	*2.49*		"	*4.98*		*50.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*2.65*		"	*4.98*		*53.1*	*25-150*				
Surrogate: M2-6:2 FTS	*12.6*		"	*4.73*		*267*	*25-150*				
Surrogate: M2-8:2 FTS	*3.27*		"	*4.77*		*68.4*	*25-150*				
Surrogate: M9PFNA	*3.77*		"	*4.98*		*75.7*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00317 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BD00317-BS1)								Prepared: 04/07/2020 Analyzed: 04/09/2020			
Perfluorobutanesulfonic acid (PFBS)	4.22	1.99	ug/kg wet	4.41		95.7	50-130				
Perfluorohexanoic acid (PFHxA)	5.26	0.499	"	4.99		105	50-130				
Perfluoroheptanoic acid (PFHpA)	5.48	0.499	"	4.99		110	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.58	0.499	"	3.69		97.0	50-130				
Perfluorooctanoic acid (PFOA)	5.18	0.499	"	4.99		104	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.49	0.499	"	3.64		95.8	50-130				
Perfluorononanoic acid (PFNA)	4.67	0.499	"	4.79		97.5	50-130				
Perfluorodecanoic acid (PFDA)	4.29	0.499	"	4.99		86.0	50-130				
Perfluoroundecanoic acid (PFUnA)	4.02	0.499	"	4.99		80.7	50-130				
Perfluorododecanoic acid (PFDoA)	4.90	0.499	"	4.99		98.4	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.59	0.499	"	4.99		92.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.66	0.499	"	4.99		93.4	50-130				
N-MeFOSAA	4.57	0.499	"	4.99		91.6	50-130				
N-EtFOSAA	4.52	0.499	"	4.99		90.7	50-130				
Perfluoropentanoic acid (PFPeA)	4.59	0.499	"	4.99		92.1	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.57	0.499	"	4.99		91.7	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.16	0.499	"	4.96		104	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	3.71	0.499	"	4.81		77.0	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	4.55	0.499	"	4.74		96.0	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	4.47	0.499	"	4.79		93.4	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.82	0.499	"	4.99		96.7	50-130				
Surrogate: M3PFBS	*2.45*		*"*	*4.63*		*52.9*	*25-150*				
Surrogate: M5PFHxA	*2.31*		*"*	*4.99*		*46.3*	*25-150*				
Surrogate: M4PFHpA	*2.06*		*"*	*4.99*		*41.4*	*25-150*				
Surrogate: M3PFHxS	*2.35*		*"*	*4.72*		*49.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*2.48*		*"*	*4.99*		*49.8*	*25-150*				
Surrogate: M6PFDA	*2.65*		*"*	*4.99*		*53.2*	*25-150*				
Surrogate: M7PFUdA	*2.15*		*"*	*4.99*		*43.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*1.80*		*"*	*4.99*		*36.1*	*25-150*				
Surrogate: M2PFTeDA	*1.98*		*"*	*4.99*		*39.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*2.62*		*"*	*4.99*		*52.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.21*		*"*	*4.77*		*46.3*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*2.62*		*"*	*4.99*		*52.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.00*		*"*	*4.99*		*40.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*2.00*		*"*	*4.99*		*40.2*	*25-150*				
Surrogate: d5-N-EtFOSAA	*2.05*		*"*	*4.99*		*41.2*	*25-150*				
Surrogate: M2-6:2 FTS	*10.5*		*"*	*4.73*		*223*	*25-150*				
Surrogate: M2-8:2 FTS	*2.49*		*"*	*4.78*		*52.2*	*25-150*				
Surrogate: M9PFNA	*2.53*		*"*	*4.99*		*50.7*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00362 - % Solids Prep											
Duplicate (BD00362-DUP1)	*Source sample: 20D0083-01 (CF58959)								Prepared & Analyzed: 04/08/2020		
% Solids	79.2	0.100	%		77.1				2.64	20	


YORK

Sample and Data Qualifiers Relating to This Work Order

PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

2D0083

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐

Temp °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Fax: 860-645-0823
☐ Phone: 800-827-5426
☐ Email: HelenG@PhoenixLabs.com

Customer: York Analytical Laboratories
Address: 20 Research Drive
Stratford, CT 06615

Project:
Report to: HelenG@PhoenixLabs.com / Helen Geoghegan
Invoice to: AccountsPayable@PhoenixLabs.com
Quote# :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request: PFAS	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ]	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
CF58959		S	3.31.20	08.45	X							1					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	4-2-20	1416
	KBlucker	4/2/20	1416

Turnaround:
☐ 1 Day
☐ 2 Days
☐ 3 Days
☐ 5 Days
☐ 10 Days
☒ Standard
☐ Other_____

Report Type:
☒ Standard PDF
☐ Full Data Package
☐ NJ Reduced Deliverable
☐ NJ Full Deliverable
☐ NY ASP B

EDD Format:
☐ Excel
☐ GIS/Key
☐ EQuIS
☐ NJ Hazsite EDD
☐ NY EZ EDD (ASP)
☐ Other:_____

State Criteria:
☐ MA MCP CAM Cert.
☐ CT RCP Cert.
☐ _____
☐ _____
☐ _____

Comments, Special Requirements or Regulations:

4.20

Please send notice as soon as possible not exceeding 24 hours of obtaining valid data, of the results of all drinking water samples that exceed any EPA or Department-established maximum contaminant level, maximum residual disinfectant level or reportable concentration.

Please notify Phoenix Environmental Laboratories, Inc. immediately and prior to conducting analysis if certification is not held for the analyses requested.

What State were samples collected?
NY

CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D.& T.S., INC.
4 William Street, Ballston Lake, New York 12019
Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **LAND REMEDIATION**
74 HUDSON RIVER ROAD
WATERFORD, NEW YORK 12188

REPORT DATE: 03/31/20
SAMPLE NUMBER: 19244
OUR FILE NO: 1526.000

Robert Behan

ATT'N: MR. WILL LINDHEIMER
REVIEWED BY: ROBERT BEHAN, NICET

PROJECT: **BASF: RENSSELAER, NY.**

ASTM C136 / C117 / D422: SIZE DISTRIBUTION OF SOIL & AGGREGATES: SIEVE ANALYSIS

MATERIAL SOURCE: **CLIENT ID: : TROY SAND AND GRAVEL: TOPSOIL**
MATERIAL DESCRIPTION: SAND, fine/medium; some Silt/Clay; trace fine Gravel
MATERIAL PROJECT USE: PER CLIENT
EVALUATION SPECIFICATION: PER CLIENT

COARSE SIEVE SERIES: US STANDARD				MEDIUM SIEVE SERIES: US STANDARD				FINE SIEVE SERIES: US STANDARD			
SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE	SIEVE SIZE	PERCENT RETAINED	PERCENT PASSING	SPECIFICATION ALLOWANCE
4"				1/4"	1.7	98.3		#50	34.1	65.9	
3"				#4	3.1	96.9		#60			
2 1/2"				1/8"				#80			
2"				#8	6.3	93.7		#100	57.0	43.0	
1 1/2"				#10	7.1	92.9		#140			
1"				#16	8.9	91.1		#200	71.0	29.0	
3/4"				#20				SILT			
1/2"		100.0		#30	16.0	84.0		CLAY			
3/8"	0.6	99.4		#40	21.5	78.5		COLLOID			

ASTM D-2974	ASTM D-4972
ORGANIC CONTENT	**pH VALUE**
6.6%	**5.9**



LAND Remediation, Inc. an environmental services company	**TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATE, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE**	DATE: 9/28/2020	☑ New Submittal ☐ Re-Submittal

SECTION I: REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (THIS SECTION WILL BE INITIATED BY THE CONTRACTOR)

TO: **AECOM**	FROM: **LAND REMEDIATION, Inc.**	SUBMITTAL NO.: 13-C
		PREVIOUS SUBMITTAL NO. AND DATE:
Specification Section No.: 02 30 00	Project Title: **BASF Corp. Rensselaer, NY**	

Item No.	Description of Item Submitted	Manufacturer or Contractor Catalog. Drawing or Brochure	No. of Copies	Spec. Paragraph No.	Drawing Sheet No.	Comments
1	Upland Topsoil Geptechnical Testing		1	02 30 00		see below
2	Upland Topsoil Analytical Testing		1	02 30 00		see below

Remarks:	**LAND REMEDIATION, INC.**	Signature:
attached is the submittal for upland topsoil material	I hereby certify that I have carefully examined the enclosed submittal(s) and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal(s) with other submissions and the work of other trades and contractors, and to the best of my knowledge and belief, the enclosed submittal(s) is/are in full compliance with the Contract Documents, except as follows. ☐ None ☐ As Equal	Title: Project Director Date: September 28th , 2020

Additional Notes:

Proposed topsoil from Troy Sand and Gravel - NRD Bank Enhancements
Attached is the analytical testing (1 comp, 2 grabs) for 5,000 CY
PFAS and 1-4 Dioxane sampling was performed as well although not specifically required.
Geotechnical results are also provided for the Topsoil

ATLANTIC TESTING LABORATORIES

Albany
22 Corporate Drive
Clifton Park, NY 12065
518-383-9144 (T)
518-383-9166 (F)

WBE certified company

September 23, 2020

Troy Sand & Gravel Company, Inc.
34 Grange Road
PO Box 171
Watervliet, NY 12189
Attn: Brendan Clemente

Re: Soil Laboratory Testing
2009 Blanket LSA
Clifton Park, New York
ATL Report No.: AT003SL-845-09-20

Dear Brendan,

On September 17, 2020, our representative obtained one sample of top soil material from Clifton Park and delivered it to our Albany, New York facility for testing. A pH of Soils in accordance with ASTM D 4972, and Moisture, Ash, and Organic Matter of Peat and Other Organic Soils in accordance with ASTM D 2974 were performed on this sample. The results follow:

pH of SOILS
ASTM D 4972

ATL Sample No.	pH	Project Specification	Test Method	Sieved Fraction	Soaking Procedure
AT003S-846-1	7.5	---	A	#10	Distilled Water

PERCENT ORGANICS, ASH CONTENT, AND MOISTURE CONTENT
ASTM D 2974

ATL Sample No.	Organics (%)	Project Specification	Furnace Temperature (ºC)	Ash (%)	Project Specification	Moisture (%)	Test Method A	Oven Drying Temperature (ºC)
AT003S-846-1	12.8	---	440	87.2	---	44.6	Oven-Dried	110

Please contact our office should you have any questions or if we may be of further service.

Sincerely,
ATLANTIC TESTING LABORATORIES, Limited



Robert E. Field
Laboratory Manager
bfield@atlantictesting.com

REF/REF

cc: Brendan Clemente, Troy Sand & Gravel Company, Inc., 34 Grange Road, PO Box 171, Watervliet NY 12189
Carl Clemente, Troy Sand & Gravel Company, Inc., 34 Grange Road, PO Box 171, Watervliet NY 12189

THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

Jude Clemente, Troy Sand & Gravel Company, Inc., 34 Grange Road, PO Box 171, Watervliet NY 12189
Nick Dinova, Troy Sand & Gravel Company, Inc., 34 Grange Road, PO Box 171, Watervliet NY 12189

THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

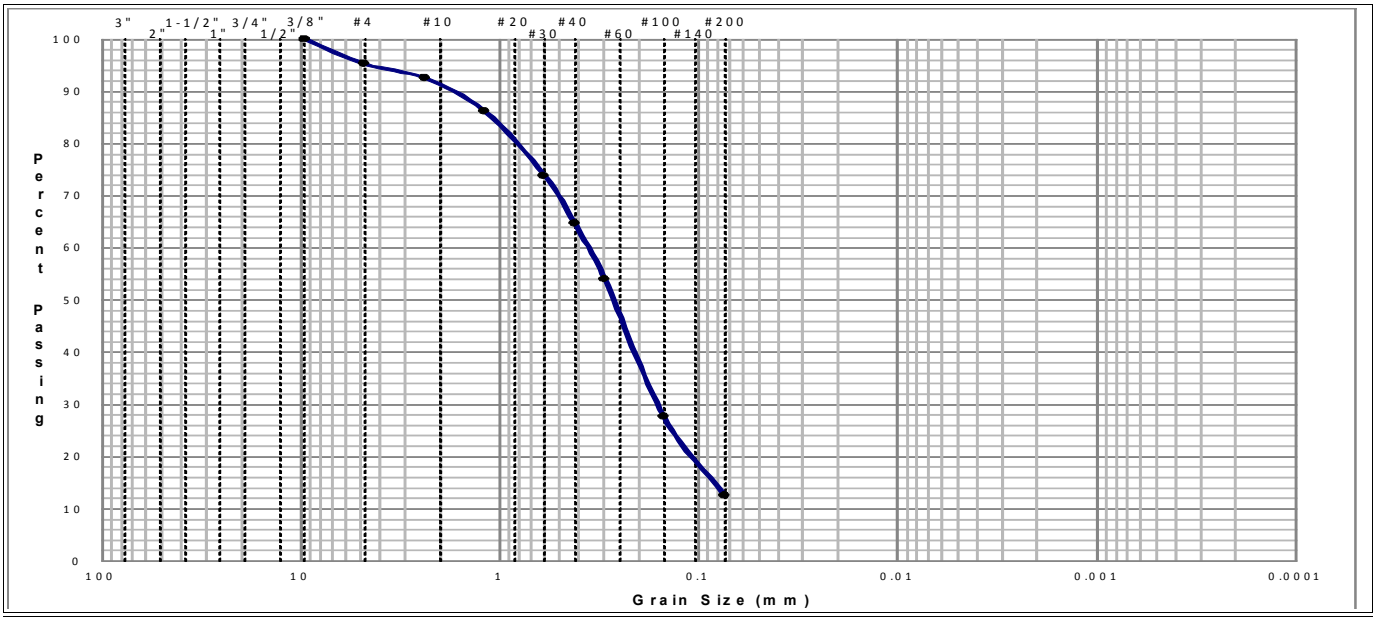
ATLANTIC TESTING LABORATORIES

PARTICLE SIZE ANALYSIS REPORT No.: AT003SL-846-09-20

Client: Troy Sand & Gravel Company, Inc.
Project: 2009 Blanket LSA
Clifton Park, New York

Location: Clifton Park

Sample Date: September 17, 2020
Sampled By: CLIENT
Service Order No.: 32304
Sample No.: AT003S-846



	% Gravel			% Sand		
% +3"	Coarse	Medium	Fine	Coarse	Medium	Fine
--	--	--	--	--	--	--

SIEVE SIZE	PERCENT FINER	SPEC.* LOW	SPEC.* HIGH	OUT OF SPEC. (X)
3/8 in	100			
No. 4	95			
No. 8	93			
No. 16	86			
No. 30	74			
No. 40	65			
No. 50	54			
No. 100	28			
No. 200	13			

* (no specification provided)

% Fines: 13

Soil Description

Dark Brown Top Soil

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D_{85} = 1.1111 D_{60} = 0.3605 D_{50} = 0.2673
D_{30} = 0.1592 D_{15} = 0.0827 D_{10} = ---
C_u = --- C_c = --- F.M.= 1.7

Classification

USCS= AASHTO=

Remarks

Sample deliverd by the client on 9/17/2020.
ASTM C-136/C-117

Reviewed by: _____ Date: Sep 23, 2020

Laboratory Manager
bfield@atlantictesting.com

THE RESULTS RELATE ONLY TO THE ITEMS INSPECTED OR TESTED; THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE PRIOR WRITTEN APPROVAL OF ATLANTIC TESTING LABORATORIES.

PHOENIX
Environmental Laboratories, Inc.

Tuesday, April 14, 2020

Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Project ID: **BASF**
SDG ID: **GCF58956**
Sample ID#s: CF58956 - CF58960

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Sample Id Cross Reference

April 14, 2020

SDG I.D.: GCF58956

Project ID: BASF

Client Id	Lab Id	Matrix
TSG-TOPSOIL 1	CF58956	SOIL
TSG-TOPSOIL 1A	CF58957	SOIL
TSG-TOPSOIL 1B	CF58958	SOIL
TSG-PFA	CF58959	SOIL
TSG-1.4D	CF58960	SOIL

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:00
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58956

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 0.43	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Arsenic	4.51	0.85	mg/Kg	1	04/01/20	CPP	SW6010D	
Barium	220	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Beryllium	0.69	0.34	mg/Kg	1	04/01/20	CPP	SW6010D	
Cadmium	1.04	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Chromium	16.5	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Copper	21.2	0.9	mg/kg	1	04/01/20	CPP	SW6010D	
Mercury	< 0.03	0.03	mg/Kg	2	04/01/20	RS	SW7471B	
Manganese	627	4.3	mg/Kg	10	04/02/20	TH	SW6010D	
Nickel	16.8	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Lead	11.1	0.43	mg/Kg	1	04/01/20	CPP	SW6010D	
Selenium	< 1.7	1.7	mg/Kg	1	04/01/20	CPP	SW6010D	
Trivalent Chromium	16.5	0.43	mg/kg	1	04/02/20		CALC 6010-7196	
Zinc	54.5	0.9	mg/Kg	1	04/01/20	CPP	SW6010D	
Percent Solid	78		%		03/31/20	VT	SW846-%Solid	
Chromium, Hex. (SW3060 digestion)	< 0.51	0.51	mg/Kg	1	04/02/20	BJA	SW7196A	
pH at 25C - Soil	8.14	1.00	pH Units	1	03/31/20 21:41	AP	SW846 9045	1
Redox Potential	205		mV	1	03/31/20	AP	SM2580B-09	1
Total Cyanide (SW9010C Distill.)	< 0.58	0.58	mg/Kg	1	04/01/20	EG	SW9012B	
Soil Extraction for PCB	Completed				04/01/20	LL	SW3545A	
Soil Extraction for Pesticides	Completed				04/01/20	LL/A	SW3545A	
Soil Extraction for SVOA	Completed				03/31/20	BB/MA	SW3545A	
Mercury Digestion	Completed				04/01/20	RA/RA	SW7471B	
Soil Extraction for Herbicide	Completed				04/01/20	J/D	SW8151A	
Total Metals Digest	Completed				03/31/20	F/AG	SW3050B	
Chlorinated Herbicides								
2,4,5-T	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A	

Ver 1

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2,4,5-TP (Silvex)	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
2,4-D	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
2,4-DB	ND	2.1	mg/Kg	10	04/02/20	JRB	SW8151A
Dalapon	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
Dicamba	ND	0.11	mg/Kg	10	04/02/20	JRB	SW8151A
Dichloroprop	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
Dinoseb	ND	0.21	mg/Kg	10	04/02/20	JRB	SW8151A
QA/QC Surrogates							
% DCAA	61		%	10	04/02/20	JRB	30 - 150 %
% DCAA (Confirmation)	66		%	10	04/02/20	JRB	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1221	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1232	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1242	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1248	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1254	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1260	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1262	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
PCB-1268	ND	0.42	mg/Kg	10	04/01/20	SC	SW8082A
QA/QC Surrogates							
% DCBP	90		%	10	04/01/20	SC	30 - 150 %
% DCBP (Confirmation)	82		%	10	04/01/20	SC	30 - 150 %
% TCMX	84		%	10	04/01/20	SC	30 - 150 %
% TCMX (Confirmation)	82		%	10	04/01/20	SC	30 - 150 %
Pesticides - Soil							
4,4' -DDD	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
4,4' -DDE	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
4,4' -DDT	ND	0.0026	mg/Kg	2	04/02/20	CG	SW8081B
a-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
a-Chlordane	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Aldrin	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
b-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Chlordane	ND	0.043	mg/Kg	2	04/02/20	CG	SW8081B
d-BHC	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Dieldrin	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan I	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan II	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endosulfan sulfate	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin aldehyde	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Endrin ketone	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
g-BHC	ND	0.0017	mg/Kg	2	04/02/20	CG	SW8081B
g-Chlordane	ND	0.0043	mg/Kg	2	04/02/20	CG	SW8081B
Heptachlor	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Heptachlor epoxide	ND	0.0085	mg/Kg	2	04/02/20	CG	SW8081B
Methoxychlor	ND	0.043	mg/Kg	2	04/02/20	CG	SW8081B
Toxaphene	ND	0.17	mg/Kg	2	04/02/20	CG	SW8081B

Project ID: BASF
Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
QA/QC Surrogates							
% DCBP	41		%	2	04/02/20	CG	30 - 150 %
% DCBP (Confirmation)	41		%	2	04/02/20	CG	30 - 150 %
% TCMX	35		%	2	04/02/20	CG	30 - 150 %
% TCMX (Confirmation)	35		%	2	04/02/20	CG	30 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
1,3-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
1,4-Dichlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dichlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dimethylphenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dinitrophenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
2,4-Dinitrotoluene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2,6-Dinitrotoluene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Chloronaphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Chlorophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Methylnaphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
2-Nitroaniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
2-Nitrophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
3-Nitroaniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Chloroaniline	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
4-Nitroaniline	ND	0.67	mg/Kg	1	03/31/20	WB	SW8270D
4-Nitrophenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acenaphthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acenaphthylene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Acetophenone	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Aniline	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benz(a)anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzidine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(a)pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Benzoic acid	ND	0.84	mg/Kg	1	03/31/20	WB	SW8270D
Benzyl butyl phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D

Project ID: BASF

Client ID: TSG-TOPSOIL 1

Phoenix I.D.: CF58956

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Carbazole	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Chrysene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dibenzofuran	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Diethyl phthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Dimethylphthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Di-n-butylphthalate	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Di-n-octylphthalate	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Fluoranthene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Fluorene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorobutadiene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Hexachloroethane	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Isophorone	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Naphthalene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Nitrobenzene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodimethylamine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Pentachloronitrobenzene	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Pentachlorophenol	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
Phenanthrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Phenol	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Pyrene	ND	0.29	mg/Kg	1	03/31/20	WB	SW8270D
Pyridine	ND	0.42	mg/Kg	1	03/31/20	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	99		%	1	03/31/20	WB	30 - 130 %
% 2-Fluorobiphenyl	61		%	1	03/31/20	WB	30 - 130 %
% 2-Fluorophenol	50		%	1	03/31/20	WB	30 - 130 %
% Nitrobenzene-d5	57		%	1	03/31/20	WB	30 - 130 %
% Phenol-d5	64		%	1	03/31/20	WB	30 - 130 %
% Terphenyl-d14	50		%	1	03/31/20	WB	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:
This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 14, 2020

Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:05
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58957

Project ID: BASF
Client ID: TSG-TOPSOIL 1A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,1-Trichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2-Trichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromoethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
1,4-Dichlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2,2-Dichloropropane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2-Chlorotoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
2-Hexanone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C	
2-Isopropyltoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	1
4-Chlorotoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C	
4-Methyl-2-pentanone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C	

Project ID: BASF

Client ID: TSG-TOPSOIL 1A

Phoenix I.D.: CF58957

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C
Acrylonitrile	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Benzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromochloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromodichloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromoform	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Bromomethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Carbon Disulfide	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Carbon tetrachloride	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chlorobenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloroform	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Chloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dibromochloromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dibromomethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Dichlorodifluoromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Ethylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Hexachlorobutadiene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Isopropylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
m&p-Xylene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Methyl Ethyl Ketone	ND	0.038	mg/Kg	1	04/01/20	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Methylene chloride	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Naphthalene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
n-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
n-Propylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
o-Xylene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
p-Isopropyltoluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
sec-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Styrene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
tert-Butylbenzene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Tetrachloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Tetrahydrofuran (THF)	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Toluene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Total Xylenes	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,2-Dichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	0.015	mg/Kg	1	04/01/20	HM	SW8260C
Trichloroethene	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorofluoromethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorotrifluoroethane	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
Vinyl chloride	ND	0.0076	mg/Kg	1	04/01/20	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	92		%	1	04/01/20	HM	70 - 130 %
% Bromofluorobenzene	81		%	1	04/01/20	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	04/01/20	HM	70 - 130 %

Project ID: BASF
Client ID: TSG-TOPSOIL 1A

Phoenix I.D.: CF58957

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	92		%	1	04/01/20	HM	70 - 130 %	
Field Extraction	Completed				03/31/20		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	9:10
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58958

Project ID: BASF
Client ID: TSG-TOPSOIL 1B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,1-Trichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2,2-Tetrachloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1,2-Trichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,1-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,3-Trichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2,4-Trimethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromo-3-chloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dibromoethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,2-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3,5-Trimethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,3-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
1,4-Dichlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2,2-Dichloropropane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2-Chlorotoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
2-Hexanone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C	
2-Isopropyltoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	1
4-Chlorotoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C	
4-Methyl-2-pentanone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C	

Project ID: BASF

Client ID: TSG-TOPSOIL 1B

Phoenix I.D.: CF58958

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	0.038	S 0.027	mg/Kg	1	04/01/20	HM	SW8260C
Acrylonitrile	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Benzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromochloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromodichloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromoform	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Bromomethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Carbon Disulfide	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Carbon tetrachloride	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chlorobenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloroform	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Chloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,2-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
cis-1,3-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dibromochloromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dibromomethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Dichlorodifluoromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Ethylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Hexachlorobutadiene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Isopropylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
m&p-Xylene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Methyl Ethyl Ketone	ND	0.027	mg/Kg	1	04/01/20	HM	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Methylene chloride	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Naphthalene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
n-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
n-Propylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
o-Xylene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
p-Isopropyltoluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
sec-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Styrene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
tert-Butylbenzene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Tetrachloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Tetrahydrofuran (THF)	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Toluene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Total Xylenes	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,2-Dichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,3-Dichloropropene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
trans-1,4-dichloro-2-butene	ND	0.011	mg/Kg	1	04/01/20	HM	SW8260C
Trichloroethene	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorofluoromethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Trichlorotrifluoroethane	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
Vinyl chloride	ND	0.0055	mg/Kg	1	04/01/20	HM	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	92		%	1	04/01/20	HM	70 - 130 %
% Bromofluorobenzene	80		%	1	04/01/20	HM	70 - 130 %
% Dibromofluoromethane	101		%	1	04/01/20	HM	70 - 130 %

Project ID: BASF
Client ID: TSG-TOPSOIL 1B

Phoenix I.D.: CF58958

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
% Toluene-d8	91		%	1	04/01/20	HM	70 - 130 %	
Field Extraction	Completed				03/31/20		SW5035A	1

1 = This parameter is not certified by the primary accrediting authority (NY NELAC) for this matrix. NY NELAC does not offer certification for all parameters at this time.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

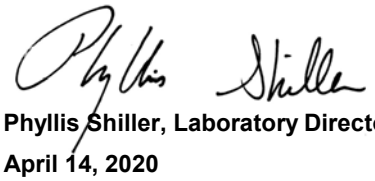
Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

S - Laboratory solvent, contamination is possible.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	8:45
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58959

Project ID: BASF
Client ID: TSG-PFA

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
PFAS	Completed				04/13/20	*	E537	C

C = This parameter is subcontracted.

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

*See attached

PFAS (E537) was analyzed by NY certified lab #10854.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2020

FOR: Attn: Mr. Will Lindheimer
Land Remediation
74 Hudson River Road
Waterford, NY 12188

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		03/31/20	8:55
Location Code:	LANDREM	Received by:	LB	03/31/20	16:56
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCF58956
Phoenix ID: CF58960

Project ID: BASF
Client ID: TSG-1.4D

Parameter	Result	RL/ PQL	LOD/ MDL	Units	Dilution	Date/Time	By	Reference
Percent Solid	79			%		03/31/20	VT	SW846-%Solid
Extraction for SVOA SIM	Completed					04/02/20	AT/K/MA	SW3545A
1,4-Dioxane								
1,4-dioxane	ND	0.083	0.083	mg/Kg	1	04/03/20	WB	SW8270D (SIM)
QA/QC Surrogates								
% 2-Fluorobiphenyl	48			%	1	04/03/20	WB	30 - 130 %
% Nitrobenzene-d5	114			%	1	04/03/20	WB	30 - 130 %
% Terphenyl-d14	74			%	1	04/03/20	WB	30 - 130 %

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low LOD=Limit of Detection MDL=Method Detection Limit1
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 14, 2020
Reviewed and Released by: Rashmi Makol, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 524889 (mg/kg), QC Sample No: CF58894 40X (CF58956)														
Chromium, Hexavalent - Soil														
Chromium, Hexavalent	BRL	0.40	<0.39	<0.41	NC	98.4						85 - 115	30	
Chromium, Hexavalent (Ins)						101			90.2			85 - 115	30	
Chromium, Hexavalent (Sol)						103			54.7			85 - 115	30	m
Comment:														
The QC sample is in a reducing state, acceptance criteria are not applicable for samples in a reducing state. The soluble spike was analyzed twice with similar recoveries.														
QA/QC Batch 524741 (mg/kg), QC Sample No: CF58055 2X (CF58956)														
Mercury - Soil	BRL	0.02	0.05	0.06	NC	109	113	3.6	110	98.0	11.5	70 - 130	30	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 70-130%. MS acceptance range is 75-125%.														
QA/QC Batch 524691 (mg/kg), QC Sample No: CF58046 (CF58956)														
ICP Metals - Soil														
Arsenic	BRL	0.67	4.18	4.40	NC	104	93.1	11.1	95.3	97.3	2.1	75 - 125	35	
Barium	BRL	0.33	140	155	10.2	103	96.5	6.5	118	125	5.8	75 - 125	35	
Beryllium	BRL	0.27	0.64	0.67	NC	103	91.9	11.4	101	102	1.0	75 - 125	35	
Cadmium	BRL	0.33	1.05	1.03	NC	106	88.2	18.3	99.5	102	2.5	75 - 125	35	
Chromium	BRL	0.33	23.3	26.0	11.0	100	90.1	10.4	102	104	1.9	75 - 125	35	
Copper	BRL	0.67	200	222	10.4	99.8	89.2	11.2	NC	NC	NC	75 - 125	35	
Lead	BRL	0.33	98.2	125	24.0	101	90.4	11.1	100	95.6	4.5	75 - 125	35	
Manganese	BRL	0.33	185	181	2.20	102	92.7	9.6	103	110	6.6	75 - 125	35	
Nickel	BRL	0.33	21.7	25.5	16.1	101	92.7	8.6	103	102	1.0	75 - 125	35	
Selenium	BRL	1.3	<1.7	<1.7	NC	100	91.4	9.0	94.2	96.3	2.2	75 - 125	35	
Silver	BRL	0.33	2.18	2.87	27.3	99.0	89.6	10.0	102	99.2	2.8	75 - 125	35	
Zinc	BRL	0.67	136	150	9.80	103	93.8	9.3	123	99.9	20.7	75 - 125	35	
Comment:														
Additional Criteria: LCS acceptance range is 80-120% MS acceptance range 75-125%.														

m = This parameter is outside laboratory MS/MSD specified recovery limits.

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NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 524684 (mg/Kg), QC Sample No: CF58358 50X (CF58956)													
Total Cyanide (SW9010C Distill.)	BRL	0.50	<0.50	0.42	NC	90.7			100			80 - 120	30
Comment:													
Additional: LCS acceptance range is 80-120% for soils MS acceptance range 75-125% for soils													
QA/QC Batch 524718 (PH), QC Sample No: CF58553 (CF58956)													
pH at 25C - Soil			7.54	7.52	0.30	100						85 - 115	20

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NY # 11301

QA/QC Report

April 14, 2020

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 524854 (mg/Kg), QC Sample No: CF59591 10X (CF58956)										
Chlorinated Herbicides - Soil										
2,4,5-T	ND	0.083	76	79	3.9	70	73	4.2	40 - 140	30
2,4,5-TP (Silvex)	ND	0.083	73	76	4.0	67	71	5.8	40 - 140	30
2,4-D	ND	0.17	73	76	4.0	74	79	6.5	40 - 140	30
2,4-DB	ND	1.7	70	73	4.2	65	68	4.5	40 - 140	30
Dalapon	ND	0.083	60	68	12.5	46	51	10.3	40 - 140	30
Dicamba	ND	0.083	73	75	2.7	68	72	5.7	40 - 140	30
Dichloroprop	ND	0.083	86	90	4.5	82	88	7.1	40 - 140	30
Dinoseb	ND	0.083	68	71	4.3	63	68	7.6	40 - 140	30
% DCAA (Surrogate Rec)	59	%	61	62	1.6	56	60	6.9	30 - 150	30
% DCAA (Surrogate Rec) (Confirm	59	%	64	66	3.1	63	67	6.2	30 - 150	30
Comment:										
Additional criteria: LCS acceptance range is 40-140% MS acceptance range 30-150%.										
QA/QC Batch 524636 (mg/Kg), QC Sample No: CF57312 2X (CF58956)										
Polychlorinated Biphenyls - Soil										
PCB-1016	ND	0.033	75	83	10.1	40	40	0.0	40 - 140	30
PCB-1221	ND	0.033							40 - 140	30
PCB-1232	ND	0.033							40 - 140	30
PCB-1242	ND	0.033							40 - 140	30
PCB-1248	ND	0.033							40 - 140	30
PCB-1254	ND	0.033							40 - 140	30
PCB-1260	ND	0.033	87	97	10.9	41	42	2.4	40 - 140	30
PCB-1262	ND	0.033							40 - 140	30
PCB-1268	ND	0.033							40 - 140	30
% DCBP (Surrogate Rec)	77	%	100	111	10.4	47	42	11.2	30 - 150	30
% DCBP (Surrogate Rec) (Confirm	70	%	92	104	12.2	42	47	11.2	30 - 150	30
% TCMX (Surrogate Rec)	64	%	74	84	12.7	41	39	5.0	30 - 150	30
% TCMX (Surrogate Rec) (Confirm	62	%	76	85	11.2	41	39	5.0	30 - 150	30
QA/QC Batch 524778 (mg/Kg), QC Sample No: CF59627 2X (CF58956)										
Pesticides - Soil										
4,4' -DDD	ND	0.0017	79	99	22.5	71	64	10.4	40 - 140	30
4,4' -DDE	ND	0.0017	73	90	20.9	65	53	20.3	40 - 140	30
4,4' -DDT	ND	0.0017	73	89	19.8	63	51	21.1	40 - 140	30
a-BHC	ND	0.001	62	79	24.1	63	50	23.0	40 - 140	30
a-Chlordane	ND	0.0033	74	90	19.5	67	54	21.5	40 - 140	30
Aldrin	ND	0.001	65	81	21.9	61	50	19.8	40 - 140	30
b-BHC	ND	0.001	70	86	20.5	71	59	18.5	40 - 140	30
Chlordane	ND	0.033	75	91	19.3	66	53	21.8	40 - 140	30
d-BHC	ND	0.0033	59	72	19.8	51	41	21.7	40 - 140	30
Dieldrin	ND	0.001	72	90	22.2	63	52	19.1	40 - 140	30
Endosulfan I	ND	0.0033	75	92	20.4	66	52	23.7	40 - 140	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Endosulfan II	ND	0.0033	76	93	20.1	64	52	20.7	40 - 140	30	
Endosulfan sulfate	ND	0.0033	77	93	18.8	62	50	21.4	40 - 140	30	
Endrin	ND	0.0033	76	92	19.0	66	55	18.2	40 - 140	30	
Endrin aldehyde	ND	0.0033	61	78	24.5	50	37	29.9	40 - 140	30	
Endrin ketone	ND	0.0033	72	89	21.1	62	48	25.5	40 - 140	30	
g-BHC	ND	0.001	61	76	21.9	60	48	22.2	40 - 140	30	
g-Chlordane	ND	0.0033	75	91	19.3	66	53	21.8	40 - 140	30	
Heptachlor	ND	0.0033	65	88	30.1	63	49	25.0	40 - 140	30	
Heptachlor epoxide	ND	0.0033	86	105	19.9	66	54	20.0	40 - 140	30	
Methoxychlor	ND	0.0033	75	93	21.4	64	53	18.8	40 - 140	30	
Toxaphene	ND	0.13	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	NR	%	NR	NR	NC	61	50	19.8	30 - 150	30	
% DCBP (Confirmation)	NR	%	NR	NR	NC	52	42	21.3	30 - 150	30	
% TCMX	NR	%	NR	NR	NC	62	49	23.4	30 - 150	30	
% TCMX (Confirmation)	NR	%	NR	NR	NC	60	46	26.4	30 - 150	30	

Comment:

NR- not reported; surrogate was not added

QA/QC Batch 524645 (mg/Kg), QC Sample No: CF59001 (CF58956)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	0.23	62	51	19.5	54	56	3.6	40 - 140	30	
1,2,4-Trichlorobenzene	ND	0.23	57	50	13.1	50	51	2.0	40 - 140	30	
1,2-Dichlorobenzene	ND	0.18	52	44	16.7	41	42	2.4	40 - 140	30	
1,2-Diphenylhydrazine	ND	0.23	74	63	16.1	70	74	5.6	40 - 140	30	
1,3-Dichlorobenzene	ND	0.23	49	42	15.4	32	35	9.0	40 - 140	30	m
1,4-Dichlorobenzene	ND	0.23	51	42	19.4	35	37	5.6	40 - 140	30	m
2,4,5-Trichlorophenol	ND	0.23	83	71	15.6	91	93	2.2	40 - 140	30	
2,4,6-Trichlorophenol	ND	0.13	75	67	11.3	79	79	0.0	30 - 130	30	
2,4-Dichlorophenol	ND	0.13	74	57	26.0	78	78	0.0	30 - 130	30	
2,4-Dimethylphenol	ND	0.23	79	61	25.7	81	80	1.2	30 - 130	30	
2,4-Dinitrophenol	ND	0.23	81	56	36.5	10	<10	NC	30 - 130	30	m,r
2,4-Dinitrotoluene	ND	0.13	75	72	4.1	65	64	1.6	30 - 130	30	
2,6-Dinitrotoluene	ND	0.13	73	68	7.1	68	67	1.5	40 - 140	30	
2-Chloronaphthalene	ND	0.23	63	53	17.2	68	68	0.0	40 - 140	30	
2-Chlorophenol	ND	0.23	69	53	26.2	71	67	5.8	30 - 130	30	
2-Methylnaphthalene	ND	0.23	62	53	15.7	60	63	4.9	40 - 140	30	
2-Methylphenol (o-cresol)	ND	0.23	86	57	40.6	84	83	1.2	40 - 140	30	r
2-Nitroaniline	ND	0.33	87	134	42.5	92	89	3.3	40 - 140	30	r
2-Nitrophenol	ND	0.23	78	54	36.4	56	51	9.3	40 - 140	30	r
3&4-Methylphenol (m&p-cresol)	ND	0.23	85	65	26.7	85	83	2.4	30 - 130	30	
3,3'-Dichlorobenzidine	ND	0.13	78	65	18.2	90	95	5.4	40 - 140	30	
3-Nitroaniline	ND	0.33	81	84	3.6	84	86	2.4	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	0.23	80	68	16.2	32	22	37.0	30 - 130	30	m,r
4-Bromophenyl phenyl ether	ND	0.23	69	64	7.5	73	73	0.0	40 - 140	30	
4-Chloro-3-methylphenol	ND	0.23	80	71	11.9	80	81	1.2	30 - 130	30	
4-Chloroaniline	ND	0.23	72	54	28.6	78	80	2.5	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	0.23	66	57	14.6	66	67	1.5	40 - 140	30	
4-Nitroaniline	ND	0.23	86	68	23.4	77	80	3.8	40 - 140	30	
4-Nitrophenol	ND	0.23	92	86	6.7	82	86	4.8	30 - 130	30	
Acenaphthene	ND	0.23	64	56	13.3	68	70	2.9	30 - 130	30	
Acenaphthylene	ND	0.13	64	55	15.1	69	70	1.4	40 - 140	30	
Acetophenone	ND	0.23	66	48	31.6	65	62	4.7	40 - 140	30	r
Aniline	ND	0.33	64	41	43.8	70	68	2.9	40 - 140	30	r

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Anthracene	ND	0.23	65	66	1.5	73	75	2.7	40 - 140	30	
Benz(a)anthracene	ND	0.23	69	69	0.0	75	79	5.2	40 - 140	30	
Benzidine	ND	0.33	19	<10	NC	76	75	1.3	40 - 140	30	l
Benzo(a)pyrene	ND	0.13	74	71	4.1	78	81	3.8	40 - 140	30	
Benzo(b)fluoranthene	ND	0.16	69	68	1.5	70	74	5.6	40 - 140	30	
Benzo(ghi)perylene	ND	0.23	63	65	3.1	79	84	6.1	40 - 140	30	
Benzo(k)fluoranthene	ND	0.23	70	71	1.4	74	75	1.3	40 - 140	30	
Benzoic Acid	ND	0.33	55	58	5.3	<10	<10	NC	30 - 130	30	m
Benzyl butyl phthalate	ND	0.23	71	68	4.3	82	84	2.4	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	0.23	63	49	25.0	62	62	0.0	40 - 140	30	
Bis(2-chloroethyl)ether	ND	0.13	58	42	32.0	54	52	3.8	40 - 140	30	r
Bis(2-chloroisopropyl)ether	ND	0.23	58	40	36.7	48	49	2.1	40 - 140	30	r
Bis(2-ethylhexyl)phthalate	ND	0.23	68	69	1.5	86	87	1.2	40 - 140	30	
Carbazole	ND	0.23	65	71	8.8	69	72	4.3	40 - 140	30	
Chrysene	ND	0.23	65	68	4.5	73	76	4.0	40 - 140	30	
Dibenz(a,h)anthracene	ND	0.13	70	66	5.9	81	87	7.1	40 - 140	30	
Dibenzofuran	ND	0.23	66	60	9.5	67	69	2.9	40 - 140	30	
Diethyl phthalate	ND	0.23	71	68	4.3	74	75	1.3	40 - 140	30	
Dimethylphthalate	ND	0.23	68	62	9.2	72	72	0.0	40 - 140	30	
Di-n-butylphthalate	ND	0.67	67	68	1.5	72	69	4.3	40 - 140	30	
Di-n-octylphthalate	ND	0.23	71	71	0.0	88	91	3.4	40 - 140	30	
Fluoranthene	ND	0.23	62	67	7.8	60	57	5.1	40 - 140	30	
Fluorene	ND	0.23	68	62	9.2	70	72	2.8	40 - 140	30	
Hexachlorobenzene	ND	0.13	66	68	3.0	81	78	3.8	40 - 140	30	
Hexachlorobutadiene	ND	0.23	57	49	15.1	43	44	2.3	40 - 140	30	
Hexachlorocyclopentadiene	ND	0.23	64	43	39.3	28	23	19.6	40 - 140	30	m,r
Hexachloroethane	ND	0.13	51	41	21.7	28	31	10.2	40 - 140	30	m
Indeno(1,2,3-cd)pyrene	ND	0.23	63	64	1.6	74	76	2.7	40 - 140	30	
Isophorone	ND	0.13	63	48	27.0	63	64	1.6	40 - 140	30	
Naphthalene	ND	0.23	57	48	17.1	57	57	0.0	40 - 140	30	
Nitrobenzene	ND	0.13	73	51	35.5	67	65	3.0	40 - 140	30	r
N-Nitrosodimethylamine	ND	0.23	42	40	4.9	33	33	0.0	40 - 140	30	m
N-Nitrosodi-n-propylamine	ND	0.13	74	50	38.7	73	71	2.8	40 - 140	30	r
N-Nitrosodiphenylamine	ND	0.13	67	67	0.0	70	71	1.4	40 - 140	30	
Pentachloronitrobenzene	ND	0.23	75	71	5.5	70	68	2.9	40 - 140	30	
Pentachlorophenol	ND	0.23	59	78	27.7	64	60	6.5	30 - 130	30	
Phenanthrene	ND	0.13	65	66	1.5	69	71	2.9	40 - 140	30	
Phenol	ND	0.23	84	54	43.5	82	79	3.7	30 - 130	30	r
Pyrene	ND	0.23	63	70	10.5	62	59	5.0	30 - 130	30	
Pyridine	ND	0.23	25	26	3.9	23	22	4.4	40 - 140	30	l,m
% 2,4,6-Tribromophenol	49	%	83	71	15.6	106	107	0.9	30 - 130	30	
% 2-Fluorobiphenyl	63	%	58	47	21.0	62	64	3.2	30 - 130	30	
% 2-Fluorophenol	57	%	63	46	31.2	57	57	0.0	30 - 130	30	r
% Nitrobenzene-d5	65	%	67	45	39.3	62	62	0.0	30 - 130	30	r
% Phenol-d5	66	%	70	49	35.3	67	66	1.5	30 - 130	30	r
% Terphenyl-d14	58	%	51	63	21.1	51	50	2.0	30 - 130	30	

Comment:

Additional 8270 criteria: 20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 524966 (mg/Kg), QC Sample No: CF59593 (CF58960)

Polynuclear Aromatic HC - Soil

1,4-dioxane	ND	0.067	47	48	2.1	47	49	4.2	30 - 130	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
% 2-Fluorobiphenyl	54	%	50	54	7.7	39	47	18.6	30 - 130	30	
% Nitrobenzene-d5	60	%	59	89	40.5	66	89	29.7	30 - 130	30	r
% Terphenyl-d14	73	%	70	63	10.5	66	69	4.4	30 - 130	30	

Comment:

Additional 8270 criteria:20% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 15-110%, for soils 30-130%)

QA/QC Batch 524931 (mg/Kg), QC Sample No: CF58901 (CF58957, CF58958)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	0.005	114	114	0.0	116	117	0.9	70 - 130	30	
1,1,1-Trichloroethane	ND	0.005	93	95	2.1	100	101	1.0	70 - 130	30	
1,1,2,2-Tetrachloroethane	ND	0.003	103	104	1.0	108	109	0.9	70 - 130	30	
1,1,2-Trichloroethane	ND	0.005	98	100	2.0	100	99	1.0	70 - 130	30	
1,1-Dichloroethane	ND	0.005	97	98	1.0	101	102	1.0	70 - 130	30	
1,1-Dichloroethene	ND	0.005	99	102	3.0	106	106	0.0	70 - 130	30	
1,1-Dichloropropene	ND	0.005	93	96	3.2	99	98	1.0	70 - 130	30	
1,2,3-Trichlorobenzene	ND	0.005	110	110	0.0	93	89	4.4	70 - 130	30	
1,2,3-Trichloropropane	ND	0.005	95	96	1.0	101	102	1.0	70 - 130	30	
1,2,4-Trichlorobenzene	ND	0.005	113	112	0.9	96	93	3.2	70 - 130	30	
1,2,4-Trimethylbenzene	ND	0.001	99	100	1.0	87	95	8.8	70 - 130	30	
1,2-Dibromo-3-chloropropane	ND	0.005	124	127	2.4	127	126	0.8	70 - 130	30	
1,2-Dibromoethane	ND	0.005	103	103	0.0	105	104	1.0	70 - 130	30	
1,2-Dichlorobenzene	ND	0.005	102	102	0.0	99	100	1.0	70 - 130	30	
1,2-Dichloroethane	ND	0.005	94	96	2.1	97	98	1.0	70 - 130	30	
1,2-Dichloropropane	ND	0.005	96	98	2.1	99	100	1.0	70 - 130	30	
1,3,5-Trimethylbenzene	ND	0.001	99	100	1.0	99	102	3.0	70 - 130	30	
1,3-Dichlorobenzene	ND	0.005	104	104	0.0	101	101	0.0	70 - 130	30	
1,3-Dichloropropane	ND	0.005	99	101	2.0	101	102	1.0	70 - 130	30	
1,4-Dichlorobenzene	ND	0.005	102	102	0.0	100	99	1.0	70 - 130	30	
2,2-Dichloropropane	ND	0.005	97	99	2.0	95	99	4.1	70 - 130	30	
2-Chlorotoluene	ND	0.005	100	101	1.0	102	103	1.0	70 - 130	30	
2-Hexanone	ND	0.025	96	98	2.1	95	90	5.4	70 - 130	30	
2-Isopropyltoluene	ND	0.005	99	100	1.0	102	104	1.9	70 - 130	30	
4-Chlorotoluene	ND	0.005	99	99	0.0	99	99	0.0	70 - 130	30	
4-Methyl-2-pentanone	ND	0.025	97	100	3.0	100	98	2.0	70 - 130	30	
Acetone	ND	0.01	68	69	1.5	58	59	1.7	70 - 130	30	l,m
Acrylonitrile	ND	0.005	99	101	2.0	93	87	6.7	70 - 130	30	
Benzene	ND	0.001	99	100	1.0	104	104	0.0	70 - 130	30	
Bromobenzene	ND	0.005	102	104	1.9	105	106	0.9	70 - 130	30	
Bromochloromethane	ND	0.005	102	103	1.0	105	105	0.0	70 - 130	30	
Bromodichloromethane	ND	0.005	108	109	0.9	109	110	0.9	70 - 130	30	
Bromoform	ND	0.005	133	136	2.2	129	130	0.8	70 - 130	30	l
Bromomethane	ND	0.005	104	104	0.0	114	112	1.8	70 - 130	30	
Carbon Disulfide	ND	0.005	102	105	2.9	99	97	2.0	70 - 130	30	
Carbon tetrachloride	ND	0.005	101	103	2.0	104	127	19.9	70 - 130	30	
Chlorobenzene	ND	0.005	102	103	1.0	104	104	0.0	70 - 130	30	
Chloroethane	ND	0.005	95	97	2.1	99	103	4.0	70 - 130	30	
Chloroform	ND	0.005	93	94	1.1	98	98	0.0	70 - 130	30	
Chloromethane	ND	0.005	87	88	1.1	86	89	3.4	70 - 130	30	
cis-1,2-Dichloroethene	ND	0.005	93	94	1.1	101	97	4.0	70 - 130	30	
cis-1,3-Dichloropropene	ND	0.005	104	105	1.0	102	103	1.0	70 - 130	30	
Dibromochloromethane	ND	0.003	122	125	2.4	121	124	2.4	70 - 130	30	
Dibromomethane	ND	0.005	98	101	3.0	99	100	1.0	70 - 130	30	

QA/QC Data

SDG I.D.: GCF58956

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Dichlorodifluoromethane	ND	0.005	80	83	3.7	85	84	1.2	70 - 130	30
Ethylbenzene	ND	0.001	102	104	1.9	106	106	0.0	70 - 130	30
Hexachlorobutadiene	ND	0.005	109	110	0.9	97	91	6.4	70 - 130	30
Isopropylbenzene	ND	0.001	98	100	2.0	103	104	1.0	70 - 130	30
m&p-Xylene	ND	0.002	102	104	1.9	103	103	0.0	70 - 130	30
Methyl ethyl ketone	ND	0.005	89	92	3.3	85	86	1.2	70 - 130	30
Methyl t-butyl ether (MTBE)	ND	0.001	89	90	1.1	91	91	0.0	70 - 130	30
Methylene chloride	ND	0.005	89	90	1.1	111	117	5.3	70 - 130	30
Naphthalene	ND	0.005	108	110	1.8	96	93	3.2	70 - 130	30
n-Butylbenzene	ND	0.001	103	104	1.0	97	96	1.0	70 - 130	30
n-Propylbenzene	ND	0.001	99	101	2.0	100	100	0.0	70 - 130	30
o-Xylene	ND	0.002	102	103	1.0	104	106	1.9	70 - 130	30
p-Isopropyltoluene	ND	0.001	102	104	1.9	103	104	1.0	70 - 130	30
sec-Butylbenzene	ND	0.001	105	106	0.9	105	106	0.9	70 - 130	30
Styrene	ND	0.005	103	104	1.0	101	101	0.0	70 - 130	30
tert-Butylbenzene	ND	0.001	97	99	2.0	102	104	1.9	70 - 130	30
Tetrachloroethene	ND	0.005	102	106	3.8	104	103	1.0	70 - 130	30
Tetrahydrofuran (THF)	ND	0.005	90	92	2.2	97	94	3.1	70 - 130	30
Toluene	ND	0.001	100	101	1.0	101	101	0.0	70 - 130	30
trans-1,2-Dichloroethene	ND	0.005	100	99	1.0	105	104	1.0	70 - 130	30
trans-1,3-Dichloropropene	ND	0.005	108	109	0.9	106	106	0.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	0.005	124	126	1.6	120	119	0.8	70 - 130	30
Trichloroethene	ND	0.005	99	102	3.0	103	102	1.0	70 - 130	30
Trichlorofluoromethane	ND	0.005	94	95	1.1	100	100	0.0	70 - 130	30
Trichlorotrifluoroethane	ND	0.005	101	105	3.9	107	106	0.9	70 - 130	30
Vinyl chloride	ND	0.005	98	101	3.0	105	106	0.9	70 - 130	30
% 1,2-dichlorobenzene-d4	101	%	100	101	1.0	100	99	1.0	70 - 130	30
% Bromofluorobenzene	94	%	99	99	0.0	97	98	1.0	70 - 130	30
% Dibromofluoromethane	101	%	103	103	0.0	104	102	1.9	70 - 130	30
% Toluene-d8	96	%	98	99	1.0	98	98	0.0	70 - 130	30

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%, 25-160% for Chloroethane-HL and Trichlorofluoromethane-HL.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
April 14, 2020

Tuesday, April 14, 2020

Criteria: None

State: NY

Sample Criteria Exceedances Report

GCF58956 - LANDREM

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

April 14, 2020 SDG I.D.: GCF58956

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

SVOA Narration

CHEM05 03/31/20-1: CF58956

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.061 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.077 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM03 04/01/20-1: CF58957, CF58958

The following Initial Calibration compounds did not meet RSD% criteria: 1,2-Dibromo-3-chloropropane 27% (20%), Dibromochloromethane 24% (20%), trans-1,4-dichloro-2-butene 25% (20%), Acetone 27% (20%), Bromoform 36% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: Tetrachloroethene 0.177 (0.2), Bromoform 0.088 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

NY Temperature Narration

April 14, 2020

SDG I.D.: GCF58956

The samples in this delivery group were received at 2.9°C.
(Note acceptance criteria for relevant matrices is above freezing up to 6°C)

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐
Temp 2.4 C Pg of

PHOENIX
Environmental Laboratories, Inc.

NY/NJ/PA CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Phone:
☐ Fax:
☑ Email: wpiO land-remediation.com

Customer: LAND Remediation
Address: 74 Hudson River Rd
Waterford NY 12188

Project: BASF
Report to: Will Linaheimer
Invoice to: 11
QUOTE # :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: [signature] Date: 3/31/20

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe
OIL=Oil **B**=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	PFA	1,4 dioxane	VOCs	SVOCs, metals, PCBs	Herbicide, pesticide	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (2) methanol (4) H2O	GL Soil container (4) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 1250ml [ ] 500ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
58956	TSG-Topsoil 1	S	3/31	9:00				✓	✓			✓									
58957	TSG-Topsoil 1a	S	3/31	9:05			✓				✓										
58958	TSG-Topsoil 1b	S	3/31	9:10			✓				✓										
58959	TSG-PFA	S	3/31	8:45	✓										✓						
58960	TSG-1,4D	S	3/31	8:55		✓							✓								

Relinquished by:	Accepted by:	Date	Time:
[signature]	[signature]	3/31/20	1415
[signature]	[signature]	3/31/20	16:56

Comments, Special Requirements or Regulations:

Data Format:
☐ Phoenix Std Report ☐ EQuIS
☐ Excel ☐ NJ Hazsite EDD
☐ PDF ☐ NY EZ EDD (ASP)
☐ GIS/Key ☐ Other

Turnaround:
☐ 1 Day*
☐ 2 Days*
☐ 3 Days*
☑ 5 Days
☐ 10 Days
☐ Other
* SURCHARGE APPLIES

Data Package:
☐ NJ Reduced Deliv. * ☐ Other
☐ NY Enhanced (ASP B) *

NJ
☐ Res. Criteria
☐ Non-Res. Criteria
☐ Impact to GW Soil Cleanup Criteria
☐ Impact to GW soil screen Criteria
☐ GW Criteria

NY
☐ TOGS GW
☐ CP-51 SOIL
☐ 375SCO Unrestricted Soil
☐ 375SCO Residential Soil
☐ 375SCO Residential Restricted Soil
☐ 375SCO Commercial Soil
☐ 375SCO Industrial Soil
☐ Subpart 5 DW

PA
☐ Clean Fill Limits
☐ PA-GW
☐ Reg Fill Limits
☐ PA Soil Restricted
☐ PA Soil non-restricted

State Samples Collected? NY

6CF 58956

Lori Bailey

From: Will Lindheimer <wpl@land-remediation.com>
Sent: Tuesday, March 31, 2020 04:38 PM
To: Lori Bailey
Subject: RE: METALS

DER-10 analysis.

William Lindheimer
LAND Remediation, Inc.
74 Hudson River Road
Waterford, NY 12188
Cell: 518-937-0473
Phone: 518-766-4105 (X12)
Fax: 518-233-0141
www.land-remediation.com

From: Lori Bailey <lori@phoenixlabs.com>
Sent: Tuesday, March 31, 2020 4:18 PM
To: Will Lindheimer <wpl@land-remediation.com>
Subject: METALS
Importance: High

Good afternoon Will,

Can you please let me know what metals you would like for us to run on the BASF sample we received today?

Thank you,

Lori Bailey
Client Services Representative
Phoenix Environmental Laboratories
587 East Middle Turnpike
Manchester, CT 06040
Ph: 1-860-645-1102
Fx: 1-860-645-0823

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, forwarding, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by e-mail or telephone, and delete the original message immediately. Thank you.

Technical Report

prepared for:

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Report Date: 04/13/2020
Client Project ID: CF58959 03/31/20
York Project (SDG) No.: 20D0083

Report Date: 04/13/2020
Client Project ID: CF58959 03/31/20
York Project (SDG) No.: 20D0083

Phoenix Environmental Laboratories, Inc.
P.O. Box 370, 587 East Middle Turnpike
Manchester CT, 06040
Attention: Helen Geoghegan

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on April 02, 2020 and listed below. The project was identified as your project: **CF58959 03/31/20**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

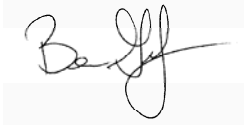
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
20D0083-01	CF58959	Soil	03/31/2020	04/02/2020

General Notes for York Project (SDG) No.: 20D0083

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Date: 04/13/2020

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: CF58959 **York Sample ID:** 20D0083-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0083	CF58959 03/31/20	Soil	March 31, 2020 8:45 am	04/02/2020

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	ND		ug/kg dry	2.13	2.58	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
307-24-4	*** Perfluorohexanoic acid (PFHxA)**	**0.131**	J	ug/kg dry	0.0850	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-85-9	* Perfluoroheptanoic acid (PFHpA)	ND		ug/kg dry	0.0587	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		ug/kg dry	0.0400	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-67-1	*** Perfluorooctanoic acid (PFOA)**	**0.124**	J	ug/kg dry	0.0995	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
1763-23-1	*** Perfluorooctanesulfonic acid (PFOS)**	**0.107**	J	ug/kg dry	0.0565	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-95-1	* Perfluorononanoic acid (PFNA)	ND		ug/kg dry	0.0771	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-76-2	* Perfluorodecanoic acid (PFDA)	ND		ug/kg dry	0.0660	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		ug/kg dry	0.150	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		ug/kg dry	0.0967	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		ug/kg dry	0.0561	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		ug/kg dry	0.0963	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2355-31-9	* N-MeFOSAA	ND		ug/kg dry	0.135	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2991-50-6	* N-EtFOSAA	ND		ug/kg dry	0.134	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
2706-90-3	* Perfluoropentanoic acid (PFPeA)	ND		ug/kg dry	0.118	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		ug/kg dry	0.0602	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		ug/kg dry	0.0636	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		ug/kg dry	0.0660	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		ug/kg dry	0.0851	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		ug/kg dry	0.0330	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT
375-22-4	*** Perfluoro-n-butanoic acid (PFBA)**	**0.386**	J	ug/kg dry	0.236	0.645	1	EPA 537m Certifications:	04/07/2020 18:50	04/13/2020 13:13	KT

Sample Information

Client Sample ID: **CF58959** **York Sample ID:** **20D0083-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
20D0083	CF58959 03/31/20	Soil	March 31, 2020 8:45 am	04/02/2020

PFAS, NYSDEC Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: SPE PFAS Extraction-Soil-EPA 537m

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
	Surrogate Recoveries	**Result**			**Acceptance Range**						
	Surrogate: M3PFBS	*74.0 %*			*25-150*						
	Surrogate: M5PFHxA	*65.5 %*			*25-150*						
	Surrogate: M4PFHpA	*66.8 %*			*25-150*						
	Surrogate: M3PFHxS	*78.5 %*			*25-150*						
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*62.7 %*			*25-150*						
	Surrogate: M6PFDA	*59.5 %*			*25-150*						
	Surrogate: M7PFUdA	*62.8 %*			*25-150*						
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*50.6 %*			*25-150*						
	Surrogate: M2PFTeDA	*51.9 %*			*10-150*						
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*75.4 %*			*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*72.6 %*			*25-150*						
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*77.0 %*			*25-150*						
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*34.0 %*			*10-150*						
	Surrogate: d3-N-MeFOSAA	*100 %*			*25-150*						
	Surrogate: d5-N-EtFOSAA	*98.5 %*			*25-150*						
	Surrogate: M2-6:2 FTS	*298 %*	PFSu-H		*25-150*						
	Surrogate: M2-8:2 FTS	*433 %*	PFSu-H		*25-150*						
	Surrogate: M9PFNA	*65.1 %*			*25-150*						

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**77.1**		%	0.100	1	SM 2540G	04/08/2020 14:44	04/08/2020 14:45	TMP
							Certifications: CTDOH			

Analytical Batch Summary

Batch ID: BD00317 **Preparation Method:** SPE PFAS Extraction-Soil-EPA 537m **Prepared By:** KT

YORK Sample ID	Client Sample ID	Preparation Date
20D0083-01	CF58959	04/07/20
BD00317-BLK1	Blank	04/07/20
BD00317-BS1	LCS	04/07/20

Batch ID: BD00362 **Preparation Method:** % Solids Prep **Prepared By:** TMP

YORK Sample ID	Client Sample ID	Preparation Date
20D0083-01	CF58959	04/08/20
BD00362-DUP1	Duplicate	04/08/20

PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00317 - SPE PFAS Extraction-Soil-EPA 537m											
Blank (BD00317-BLK1)									Prepared: 04/07/2020 Analyzed: 04/09/2020		
Perfluorobutanesulfonic acid (PFBS)	ND	1.99	ug/kg wet								
Perfluorohexanoic acid (PFHxA)	ND	0.498	"								
Perfluoroheptanoic acid (PFHpA)	ND	0.498	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	0.498	"								
Perfluorooctanoic acid (PFOA)	ND	0.498	"								
Perfluorooctanesulfonic acid (PFOS)	ND	0.498	"								
Perfluorononanoic acid (PFNA)	ND	0.498	"								
Perfluorodecanoic acid (PFDA)	ND	0.498	"								
Perfluoroundecanoic acid (PFUnA)	ND	0.498	"								
Perfluorododecanoic acid (PFDoA)	ND	0.498	"								
Perfluorotridecanoic acid (PFTrDA)	ND	0.498	"								
Perfluorotetradecanoic acid (PFTA)	ND	0.498	"								
N-MeFOSAA	ND	0.498	"								
N-EtFOSAA	ND	0.498	"								
Perfluoropentanoic acid (PFPeA)	ND	0.498	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	0.498	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	0.498	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	0.498	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	0.498	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	0.498	"								
Perfluoro-n-butanoic acid (PFBA)	0.183	0.498	"								
Surrogate: M3PFBS	*3.00*		"	*4.63*		*64.8*	*25-150*				
Surrogate: M5PFHxA	*3.20*		"	*4.98*		*64.2*	*25-150*				
Surrogate: M4PFHpA	*2.92*		"	*4.98*		*58.6*	*25-150*				
Surrogate: M3PFHxS	*3.06*		"	*4.71*		*64.9*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*3.26*		"	*4.98*		*65.5*	*25-150*				
Surrogate: M6PFDA	*2.95*		"	*4.98*		*59.3*	*25-150*				
Surrogate: M7PFUdA	*2.40*		"	*4.98*		*48.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*2.25*		"	*4.98*		*45.2*	*25-150*				
Surrogate: M2PFTeDA	*2.13*		"	*4.98*		*42.7*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*3.13*		"	*4.98*		*62.8*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.80*		"	*4.77*		*58.7*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*3.14*		"	*4.98*		*63.0*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.58*		"	*4.98*		*51.8*	*10-150*				
Surrogate: d3-N-MeFOSAA	*2.49*		"	*4.98*		*50.1*	*25-150*				
Surrogate: d5-N-EtFOSAA	*2.65*		"	*4.98*		*53.1*	*25-150*				
Surrogate: M2-6:2 FTS	*12.6*		"	*4.73*		*267*	*25-150*				
Surrogate: M2-8:2 FTS	*3.27*		"	*4.77*		*68.4*	*25-150*				
Surrogate: M9PFNA	*3.77*		"	*4.98*		*75.7*	*25-150*				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00317 - SPE PFAS Extraction-Soil-EPA 537m											
LCS (BD00317-BS1)								Prepared: 04/07/2020 Analyzed: 04/09/2020			
Perfluorobutanesulfonic acid (PFBS)	4.22	1.99	ug/kg wet	4.41		95.7	50-130				
Perfluorohexanoic acid (PFHxA)	5.26	0.499	"	4.99		105	50-130				
Perfluoroheptanoic acid (PFHpA)	5.48	0.499	"	4.99		110	50-130				
Perfluorohexanesulfonic acid (PFHxS)	3.58	0.499	"	3.69		97.0	50-130				
Perfluorooctanoic acid (PFOA)	5.18	0.499	"	4.99		104	50-130				
Perfluorooctanesulfonic acid (PFOS)	3.49	0.499	"	3.64		95.8	50-130				
Perfluorononanoic acid (PFNA)	4.67	0.499	"	4.79		97.5	50-130				
Perfluorodecanoic acid (PFDA)	4.29	0.499	"	4.99		86.0	50-130				
Perfluoroundecanoic acid (PFUnA)	4.02	0.499	"	4.99		80.7	50-130				
Perfluorododecanoic acid (PFDoA)	4.90	0.499	"	4.99		98.4	50-130				
Perfluorotridecanoic acid (PFTrDA)	4.59	0.499	"	4.99		92.0	50-130				
Perfluorotetradecanoic acid (PFTA)	4.66	0.499	"	4.99		93.4	50-130				
N-MeFOSAA	4.57	0.499	"	4.99		91.6	50-130				
N-EtFOSAA	4.52	0.499	"	4.99		90.7	50-130				
Perfluoropentanoic acid (PFPeA)	4.59	0.499	"	4.99		92.1	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	4.57	0.499	"	4.99		91.7	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	5.16	0.499	"	4.96		104	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	3.71	0.499	"	4.81		77.0	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	4.55	0.499	"	4.74		96.0	50-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	4.47	0.499	"	4.79		93.4	50-130				
Perfluoro-n-butanoic acid (PFBA)	4.82	0.499	"	4.99		96.7	50-130				
Surrogate: M3PFBS	*2.45*		*"*	*4.63*		*52.9*	*25-150*				
Surrogate: M5PFHxA	*2.31*		*"*	*4.99*		*46.3*	*25-150*				
Surrogate: M4PFHpA	*2.06*		*"*	*4.99*		*41.4*	*25-150*				
Surrogate: M3PFHxS	*2.35*		*"*	*4.72*		*49.7*	*25-150*				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	*2.48*		*"*	*4.99*		*49.8*	*25-150*				
Surrogate: M6PFDA	*2.65*		*"*	*4.99*		*53.2*	*25-150*				
Surrogate: M7PFUdA	*2.15*		*"*	*4.99*		*43.2*	*25-150*				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	*1.80*		*"*	*4.99*		*36.1*	*25-150*				
Surrogate: M2PFTeDA	*1.98*		*"*	*4.99*		*39.6*	*10-150*				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	*2.62*		*"*	*4.99*		*52.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	*2.21*		*"*	*4.77*		*46.3*	*25-150*				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	*2.62*		*"*	*4.99*		*52.6*	*25-150*				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	*2.00*		*"*	*4.99*		*40.0*	*10-150*				
Surrogate: d3-N-MeFOSAA	*2.00*		*"*	*4.99*		*40.2*	*25-150*				
Surrogate: d5-N-EtFOSAA	*2.05*		*"*	*4.99*		*41.2*	*25-150*				
Surrogate: M2-6:2 FTS	*10.5*		*"*	*4.73*		*223*	*25-150*				
Surrogate: M2-8:2 FTS	*2.49*		*"*	*4.78*		*52.2*	*25-150*				
Surrogate: M9PFNA	*2.53*		*"*	*4.99*		*50.7*	*25-150*				

Miscellaneous Physical Parameters - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
Batch BD00362 - % Solids Prep											
Duplicate (BD00362-DUP1)	*Source sample: 20D0083-01 (CF58959)								Prepared & Analyzed: 04/08/2020		
% Solids	79.2	0.100	%		77.1				2.64	20	


YORK

Sample and Data Qualifiers Relating to This Work Order

PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

2D0083

Cooler: Yes ☐ No ☐
Coolant: IPK ☐ ICE ☐ No ☐

Temp °C Pg of

CHAIN OF CUSTODY RECORD

PHOENIX Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Contact Options:
☐ Fax: 860-645-0823
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☐ Email: HelenG@PhoenixLabs.com

Customer: York Analytical Laboratories
Address: 20 Research Drive
Stratford, CT 06615

Project:
Report to: HelenG@PhoenixLabs.com / Helen Geoghegan
Invoice to: AccountsPayable@PhoenixLabs.com
Quote# :

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe
OIL=Oil B=Bulk L=Liquid

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Analysis Request: PFAS	GL Amber 8 oz. w/H3PO4	Soil VOA Vials [ ] methanol [ ] H2O	GL Soil container ( ) oz	GL Soil container ( ) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ]	PL H2SO4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL NaOH 250ml	PL HNO3 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
CF58959		S	3.31.20	08.45	X							1					

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	4-2-20	1416
	KBlucker	4/2/20	1416

Turnaround:
☐ 1 Day
☐ 2 Days
☐ 3 Days
☐ 5 Days
☐ 10 Days
☒ Standard
☐ Other_____

Report Type:
☒ Standard PDF
☐ Full Data Package
☐ NJ Reduced Deliverable
☐ NJ Full Deliverable
☐ NY ASP B

EDD Format:
☐ Excel
☐ GIS/Key
☐ EQuIS
☐ NJ Hazsite EDD
☐ NY EZ EDD (ASP)
☐ Other:_____

State Criteria:
☐ MA MCP CAM Cert.
☐ CT RCP Cert.
☐ _____
☐ _____
☐ _____

Comments, Special Requirements or Regulations:

4.20

Please send notice as soon as possible not exceeding 24 hours of obtaining valid data, of the results of all drinking water samples that exceed any EPA or Department-established maximum contaminant level, maximum residual disinfectant level or reportable concentration.

Please notify Phoenix Environmental Laboratories, Inc. immediately and prior to conducting analysis if certification is not held for the analyses requested.

What State were samples collected?
NY

Appendix G – CAMP Data

Weekly Ambient Air Monitoring Report # 1
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operible Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday June 15, 2018, the primary construction activities included moving soil, cleaning brushes, and pre-trenching to install the sheet pile.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-02)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-03).

One VOC monitoring station was installed at the north perimeter of the working area during working hours for the week ending Friday June 15, 2018.

CAMP monitoring was completed between approximately 7:00 a.m. and 6:00 p.m. on Wednesday and Thursday, June 13-14, 2018, and between approximately 7:00 a.m. and 3:00 p.m. on Friday, June 15, 2018.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

In general the wind direction during this monitoring period was towards the north, northeast on Wednesday and Thursday, June 13-14, 2018 and to the south on Friday, June 15, 2018. The overall PM-10 and VOCs levels were well below action levels, during the monitoring period.

06/13/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-02 (ug/m3)	Time	AMS-03 (ug/m3)
6/13/2018	7:54:54	34	7:54:13	36	7:55:01	40
6/13/2018	8:09:54	24	8:09:13	23	8:10:01	28
6/13/2018	8:24:54	61	8:24:13	70	8:25:01	85
6/13/2018	8:39:54	27	8:39:13	34	8:40:01	34
6/13/2018	8:54:54	25	8:54:13	22	8:55:01	28
6/13/2018	9:09:54	29	9:09:13	21	9:10:01	29
6/13/2018	9:24:54	42	9:24:13	24	9:25:01	28
6/13/2018	9:39:54	31	9:39:13	26	9:40:01	29
6/13/2018	9:54:54	22	9:54:13	21	9:55:01	29
6/13/2018	10:09:54	21	10:09:13	22	10:10:01	25
6/13/2018	10:24:54	22	10:24:13	22	10:25:01	26
6/13/2018	10:39:54	22	10:39:13	23	10:40:01	26
6/13/2018	10:54:54	21	10:54:13	22	10:55:01	24
6/13/2018	11:09:54	21	11:09:13	23	11:10:01	25
6/13/2018	11:24:54	22	11:24:13	23	11:25:01	26
6/13/2018	11:39:54	23	11:39:13	23	11:40:01	24
6/13/2018	11:54:54	21	11:54:13	23	11:55:01	25
6/13/2018	12:09:54	30	12:09:13	28	12:10:01	31
6/13/2018	12:24:54	34	12:24:13	30	12:25:01	32
6/13/2018	12:39:54	24	12:39:13	26	12:40:01	25
6/13/2018	12:54:54	38	12:54:13	42	12:55:01	33
6/13/2018	13:09:54	38	13:09:13	60	13:10:01	33
6/13/2018	13:24:54	59	13:24:13	87	13:25:01	47
6/13/2018	13:39:54	35	13:39:13	68	13:40:01	38
6/13/2018	13:54:54	41	13:54:13	55	13:55:01	37
6/13/2018	14:09:54	49	14:09:13	55	14:10:01	37
6/13/2018	14:24:54	65	14:24:13	57	14:25:01	50
6/13/2018	14:39:54	30	14:39:13	44	14:40:01	28
6/13/2018	14:54:54	30	14:54:13	39	14:55:01	20
6/13/2018	15:09:54	31	15:09:13	44	15:10:01	26
6/13/2018	15:24:54	29	15:24:13	34	15:25:01	23
6/13/2018	15:39:54	35	15:39:13	35	15:40:01	22
6/13/2018	15:54:54	39	15:54:13	32	15:55:01	22
6/13/2018	16:09:54	26	16:09:13	33	16:10:01	18
6/13/2018	16:24:54	26	16:24:13	33	16:25:01	20
6/13/2018	16:39:54	28	16:39:13	33	16:40:01	16
6/13/2018	16:54:54	26	16:54:13	34	16:55:01	17
6/13/2018	17:09:54	22	17:09:13	34	17:10:01	17
6/13/2018	17:24:54	26	17:24:13	32	17:25:01	25

06/14/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01-Up (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-03 (ug/m3)
6/14/2018	6:54:47	19	6:53:58	25	6:53:18	42
6/14/2018	7:09:47	11	7:08:58	10	7:08:18	8
6/14/2018	7:24:47	8	7:23:58	11	7:23:18	7
6/14/2018	7:39:47	8	7:38:58	8	7:38:18	7
6/14/2018	7:54:47	8	7:53:58	13	7:53:18	8
6/14/2018	8:09:47	8	8:08:58	8	8:08:18	8
6/14/2018	8:24:47	8	8:23:58	10	8:23:18	9
6/14/2018	8:39:47	8	8:38:58	9	8:38:18	8
6/14/2018	8:54:47	8	8:53:58	4	8:53:18	8
6/14/2018	9:09:47	9	9:08:58	4	9:08:18	8
6/14/2018	9:24:47	8	9:23:58	7	9:23:18	9
6/14/2018	9:39:47	8	9:38:58	7	9:38:18	9
6/14/2018	9:54:47	10	9:53:58	15	9:53:18	15
6/14/2018	10:09:47	11	10:08:58	6	10:08:18	16
6/14/2018	10:24:47	11	10:23:58	7	10:23:18	15
6/14/2018	10:39:47	10	10:38:58	3	10:38:18	11
6/14/2018	10:54:47	10	10:53:58	4	10:53:18	11
6/14/2018	11:09:47	10	11:08:58	3	11:08:18	12
6/14/2018	11:24:47	11	11:23:58	7	11:23:18	13
6/14/2018	11:39:47	11	11:38:58	5	11:38:18	14
6/14/2018	11:54:47	11	11:53:58	4	11:53:18	13
6/14/2018	12:09:47	11	12:08:58	6	12:08:18	15
6/14/2018	12:24:47	10	12:23:58	3	12:23:18	12
6/14/2018	12:39:47	10	12:38:58	5	12:38:18	13
6/14/2018	12:54:47	11	12:53:58	5	12:53:18	14
6/14/2018	13:09:47	10	13:08:58	3	13:08:18	13
6/14/2018	13:24:47	12	13:23:58	5	13:23:18	13
6/14/2018	13:39:47	11	13:38:58	4	13:38:18	14
6/14/2018	13:54:47	11	13:53:58	10	13:53:18	14
6/14/2018	14:09:47	11	14:08:58	6	14:08:18	14
6/14/2018	14:24:47	12	14:23:58	5	14:23:18	14
6/14/2018	14:39:47	12	14:38:58	5	14:38:18	14
6/14/2018	14:54:47	13	14:53:58	8	14:53:18	15
6/14/2018	15:09:47	53	15:08:58	8	15:08:18	15
6/14/2018	15:24:47	29	15:23:58	11	15:23:18	15

Date	Upwind		Downwind		Building	
	Time	AMS-01-Up (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-03 (ug/m3)
6/14/2018	15:39:47	15	15:38:58	7	15:38:18	15
6/14/2018	15:54:47	11	15:53:58	5	15:53:18	14
6/14/2018	16:09:47	12	16:08:58	4	16:08:18	13
6/14/2018			16:23:58	9	16:23:18	16
6/14/2018			16:38:58	9	16:38:18	15

06/15/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-02 (ug/m3)	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)
6/15/2018	7:54:42	5	8:07:12	3	7:57:41	5
6/15/2018	8:09:42	2	8:22:12	4	8:06:41	3
6/15/2018	8:24:42	4	8:37:12	4	8:15:41	4
6/15/2018	8:39:42	4	8:52:12	4	8:24:41	4
6/15/2018	8:54:42	3	9:07:12	6	8:33:41	3
6/15/2018	9:09:42	3	9:22:12	4	8:42:41	4
6/15/2018	9:24:42	4	9:37:12	4	8:51:41	4
6/15/2018	9:39:42	5	9:52:12	6	9:00:41	5
6/15/2018	9:54:42	7	10:07:12	7	9:09:41	7
6/15/2018	10:09:42	7	10:22:12	8	9:18:41	9
6/15/2018	10:24:42	7	10:37:12	5	9:27:41	10
6/15/2018	10:39:42	6	10:52:12	5	9:36:41	6
6/15/2018	10:54:42	6	11:07:12	5	9:45:41	5
6/15/2018	11:09:42	7	11:22:12	5	9:54:41	5
6/15/2018	11:24:42	7	11:37:12	7	10:03:41	6
6/15/2018	11:39:42	8	11:52:12	8	10:12:41	9
6/15/2018	11:54:42	8	12:07:12	6	10:21:41	8
6/15/2018	12:09:42	7	12:22:12	6	10:30:41	7
6/15/2018	12:24:42	7	12:37:12	10	10:39:41	6
6/15/2018	12:39:42	8	12:52:12	7	10:48:41	5
6/15/2018	12:54:42	9	13:07:12	9	10:57:41	4
6/15/2018	13:09:42	8	13:22:12	8	11:06:41	4
6/15/2018	13:24:42	9	13:37:12	7	11:15:41	3
6/15/2018	13:39:42	8	13:52:12	7	11:24:41	3
6/15/2018	13:54:42	9	14:07:12	7	11:33:41	2
6/15/2018	14:09:42	9	14:22:12	9	11:42:41	2
6/15/2018			14:37:12	7		

VOCs Monitoring Data for the week ending 06/15/2018
OU-1 at the BASF Rensselaer Facility

PID-AMS-02								
Date	Time	VOCs (ppm)	Date	Time	VOCs (ppm)	Date	Time	VOCs (ppm)
6/13/2018	8:58	0.0	6/14/2018	7:57	0.0	6/15/2018	8:11	0.1
6/13/2018	9:13	0.0	6/14/2018	8:12	0.0	6/15/2018	8:26	0.0
6/13/2018	9:28	0.4	6/14/2018	8:27	0.0	6/15/2018	8:41	0.0
6/13/2018	9:43	0.0	6/14/2018	8:42	0.0	6/15/2018	8:56	0.0
6/13/2018	9:58	0.0	6/14/2018	8:57	0.0	6/15/2018	9:11	0.0
6/13/2018	10:13	0.0	6/14/2018	9:12	0.0	6/15/2018	9:26	0.0
6/13/2018	10:28	0.0	6/14/2018	9:27	0.0	6/15/2018	9:41	0.0
6/13/2018	10:43	0.0	6/14/2018	9:42	0.0	6/15/2018	9:56	0.0
6/13/2018	10:58	0.0	6/14/2018	9:57	0.0	6/15/2018	10:11	0.0
6/13/2018	11:13	0.0	6/14/2018	10:12	0.0	6/15/2018	10:26	0.0
6/13/2018	11:28	0.0	6/14/2018	10:27	0.0	6/15/2018	10:41	0.0
6/13/2018	11:43	0.0	6/14/2018	10:42	0.0	6/15/2018	10:56	0.0
6/13/2018	11:58	0.0	6/14/2018	10:57	0.0	6/15/2018	11:11	0.0
6/13/2018	12:13	0.0	6/14/2018	11:12	0.0	6/15/2018	11:26	0.0
6/13/2018	12:28	0.0	6/14/2018	11:27	0.0	6/15/2018	11:41	0.0
6/13/2018	12:43	0.0	6/14/2018	11:42	0.0	6/15/2018	11:56	0.0
6/13/2018	12:58	0.1	6/14/2018	11:57	0.0	6/15/2018	12:11	0.0
6/13/2018	13:13	0.1	6/14/2018	12:12	0.0	6/15/2018	12:26	0.3
6/13/2018	13:28	0.1	6/14/2018	12:27	0.0	6/15/2018	12:41	0.0
6/13/2018	13:43	0.1	6/14/2018	12:42	0.0	6/15/2018	12:56	0.0
6/13/2018	13:58	0.1	6/14/2018	12:57	0.0	6/15/2018	13:11	0.0
6/13/2018	14:13	0.1	6/14/2018	13:12	0.0	6/15/2018	13:26	0.0
6/13/2018	14:28	0.1	6/14/2018	13:27	0.0	6/15/2018	13:41	0.0
6/13/2018	14:43	0.1	6/14/2018	13:42	0.0	6/15/2018	13:56	0.0
6/13/2018	14:58	0.2	6/14/2018	13:57	0.0	6/15/2018	14:11	0.0
6/13/2018	15:13	0.1	6/14/2018	14:12	0.0	6/15/2018	14:26	0.0
6/13/2018	15:28	0.1	6/14/2018	14:27	0.0	6/15/2018	14:41	0.0
6/13/2018	15:43	0.1	6/14/2018	14:42	0.0			
6/13/2018	15:58	0.1	6/14/2018	14:57	0.0			
6/13/2018	16:13	0.1	6/14/2018	15:12	0.0			
6/13/2018	16:28	0.1	6/14/2018	15:27	0.0			
6/13/2018	16:43	0.1	6/14/2018	15:42	0.0			
6/13/2018	16:58	0.1	6/14/2018	15:57	0.0			
6/13/2018	17:13	0.1	6/14/2018	16:12	0.0			
6/13/2018	17:28	0.1	6/14/2018	16:27	0.0			
			6/14/2018	16:42	0.0			
			6/14/2018	16:57	0.0			
			6/14/2018	17:12	0.0			
			6/14/2018	17:27	0.2			

Weekly CAMP Monitoring Report # 3
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday July 6, 2018, main activities included installing the metal sheets into the ground, soil removal along the trench line and core drilling. Truckloads of sheeting arrived every day except for Wednesday, carrying either 40ft or 50ft sheets. Wednesday there was no work in observance of the 4th of July. Monday and Tuesday were hot and humid days, with moderate heat advisory precautions being implemented on the worksite. Thursday there was thunder at 1325 accompanied by heavy rainfall. Friday was very humid, with a slightly lower temperature than Monday and Tuesdays conditions with a light rain shower at 845. Monday and Tuesday the wind was coming from the South. Thursday the wind was coming from the Southwest and Friday it shifted to the West. The street sweeper came by on Friday, 7/6 at 1520.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

Early Monday morning the high humidity of the day affected the dust trackers, resulting in the high readings seen up until about 11am when the humidity began to drop. Visible dust was not observed in the work area when the monitor readings were elevated. The entire worksite was sprayed down with water approximately every 90 minutes when needed to ensure that airborne dust levels remained below the action levels.

The CAMP action levels described above were not exceeded during the monitoring period.

07/02/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/2/2018	7:26:33	119	7:29:28	121	7:32:31	95
7/2/2018	7:41:33	98	7:44:28	94	7:47:31	91
7/2/2018	7:56:33	95	7:59:28	86	8:02:31	94
7/2/2018	8:11:33	102	8:14:28	82	8:17:31	100
7/2/2018	8:26:33	92	8:29:28	77	8:32:31	90
7/2/2018	8:41:33	96	8:44:28	81	8:47:31	97
7/2/2018	8:56:33	99	8:59:28	88	9:02:31	98
7/2/2018	9:11:33	94	9:14:28	76	9:17:31	86
7/2/2018	9:26:33	96	9:29:28	74	9:32:31	88
7/2/2018	9:41:33	92	9:44:28	71	9:47:31	85
7/2/2018	9:56:33	92	9:59:28	76	10:02:31	86
7/2/2018	10:11:33	102	10:14:28	78	10:17:31	86
7/2/2018	10:26:33	104	10:29:28	71	10:32:31	81
7/2/2018	10:41:33	93	10:44:28	71	10:47:31	84
7/2/2018	10:56:33	91	10:59:28	70	11:02:31	75
7/2/2018	11:11:33	93	11:14:28	80	11:17:31	77
7/2/2018	11:26:33	84	11:29:28	77	11:32:31	77
7/2/2018	11:41:33	82	11:44:28	59	11:47:31	74
7/2/2018	11:56:33	81	11:59:28	65	12:02:31	63
7/2/2018	12:11:33	89	12:14:28	54	12:17:31	62
7/2/2018	12:26:33	81	12:29:28	57	12:32:31	65
7/2/2018	12:41:33	83	12:44:28	59	12:47:31	69
7/2/2018	12:56:33	70	12:59:28	69	13:02:31	81
7/2/2018	13:11:33	72	13:14:28	52	13:17:31	63
7/2/2018	13:26:33	71	13:29:28	58	13:32:31	64
7/2/2018	13:41:33	72	13:44:28	57	13:47:31	55
7/2/2018	13:56:33	69	13:59:28	52	14:02:31	55
7/2/2018	14:11:33	68	14:14:28	52	14:17:31	54
7/2/2018	14:26:33	69	14:29:28	44	14:32:31	49
7/2/2018	14:41:33	60	14:44:28	39	14:47:31	45
7/2/2018	14:56:33	54	14:59:28	36	15:02:31	47
7/2/2018	15:11:33	56	15:14:28	48	15:17:31	54
7/2/2018	15:26:33	66	15:29:28	50	15:32:31	56
7/2/2018	15:41:33	69	15:44:28	44	15:47:31	51

07/03/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/3/2018	7:25:52	55	7:28:53	45	7:27:11	41
7/3/2018	7:40:52	34	7:43:53	25	7:42:11	26
7/3/2018	7:55:52	33	7:58:53	13	7:57:11	19
7/3/2018	8:10:52	37	8:13:53	11	8:12:11	16
7/3/2018	8:25:52	32	8:28:53	11	8:27:11	20
7/3/2018	8:40:52	26	8:43:53	8	8:42:11	18
7/3/2018	8:55:52	20	8:58:53	9	8:57:11	18
7/3/2018	9:10:52	27	9:13:53	6	9:12:11	18
7/3/2018	9:25:52	24	9:28:53	7	9:27:11	20
7/3/2018	9:40:52	35	9:43:53	8	9:42:11	22
7/3/2018	9:55:52	33	9:58:53	9	9:57:11	23
7/3/2018	10:10:52	36	10:13:53	14	10:12:11	25
7/3/2018	10:25:52	34	10:28:53	15	10:27:11	27
7/3/2018	10:40:52	39	10:43:53	18	10:42:11	29
7/3/2018	10:55:52	40	10:58:53	21	10:57:11	33
7/3/2018	11:10:52	42	11:13:53	21	11:12:11	34
7/3/2018	11:25:52	41	11:28:53	20	11:27:11	34
7/3/2018	11:40:52	45	11:43:53	22	11:42:11	35
7/3/2018	11:55:52	57	11:58:53	23	11:57:11	37
7/3/2018	12:10:52	47	12:13:53	26	12:12:11	39
7/3/2018	12:25:52	51	12:28:53	27	12:27:11	39
7/3/2018	12:40:52	52	12:43:53	22	12:42:11	36
7/3/2018	12:55:52	44	12:58:53	22	12:57:11	36
7/3/2018	13:10:52	49	13:13:53	22	13:12:11	35
7/3/2018	13:25:52	46	13:28:53	20	13:27:11	35
7/3/2018	13:40:52	40	13:43:53	19	13:42:11	33
7/3/2018	13:55:52	41	13:58:53	19	13:57:11	32
7/3/2018	14:10:52	43	14:13:53	18	14:12:11	32
7/3/2018	14:25:52	49	14:28:53	17	14:27:11	31
7/3/2018	14:40:52	38	14:43:53	26		

AECOM

07/05/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/5/2018	7:31:32	139	7:30:32	174	7:29:36	124
7/5/2018	7:46:32	86	7:45:32	90	7:44:36	83
7/5/2018	8:01:32	77	8:00:32	76	7:59:36	73
7/5/2018	8:16:32	76	8:15:32	70	8:14:36	69
7/5/2018	8:31:32	73	8:30:32	64	8:29:36	67
7/5/2018	8:46:32	70	8:45:32	64	8:44:36	64
7/5/2018	9:01:32	74	9:00:32	59	8:59:36	62
7/5/2018	9:16:32	69	9:15:32	62	9:14:36	62
7/5/2018	9:31:32	68	9:30:32	53	9:29:36	57
7/5/2018	9:46:32	65	9:45:32	53	9:44:36	55
7/5/2018	10:01:32	66	10:00:32	49	9:59:36	62
7/5/2018	10:16:32	69	10:15:32	50	10:14:36	62
7/5/2018	10:31:32	66	10:30:32	49	10:29:36	59
7/5/2018	10:46:32	64	10:45:32	51	10:44:36	68
7/5/2018	11:01:32	61	11:00:32	42	10:59:36	55
7/5/2018	11:16:32	56	11:15:32	37	11:14:36	49
7/5/2018	11:31:32	49	11:30:32	33	11:29:36	42
7/5/2018	11:46:32	47	11:45:32	32	11:44:36	43
7/5/2018	12:01:32	45	12:00:32	24	11:59:36	39
7/5/2018	12:16:32	46	12:15:32	27	12:14:36	39
7/5/2018	12:31:32	43	12:30:32	25	12:29:36	38
7/5/2018	12:46:32	45	12:45:32	26	12:44:36	39
7/5/2018	13:01:32	50	13:00:32	28	12:59:36	40
7/5/2018	13:16:32	45	13:15:32	25	13:14:36	39
7/5/2018	13:31:32	44	13:30:32	21	13:29:36	38
7/5/2018	13:46:32	34	13:45:32	14	13:44:36	29
7/5/2018	14:01:32	32	14:00:32	12	13:59:36	29
7/5/2018	14:16:32	34	14:15:32	15	14:14:36	31
7/5/2018	14:31:32	40	14:30:32	19	14:29:36	32
7/5/2018	14:46:32	42	14:45:32	23	14:44:36	36
7/5/2018	15:01:32	38	15:00:32	18	14:59:36	31
7/5/2018	15:16:32	36	15:15:32	16	15:14:36	30
7/5/2018	15:31:32	36	15:30:32	18	15:29:36	31
7/5/2018	15:46:32	40	15:45:32	22	15:44:36	35
7/5/2018	16:01:32	45	16:00:32	24	15:59:36	37
7/5/2018	16:16:32	52				

AECOM

07/06/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/6/2018	7:23:33	90	7:26:22	79	7:24:25	54
7/6/2018	7:38:33	53	7:41:22	58	7:39:25	44
7/6/2018	7:53:33	54	7:56:22	42	7:54:25	33
7/6/2018	8:08:33	40	8:11:22	41	8:09:25	35
7/6/2018	8:23:33	37	8:26:22	49	8:24:25	41
7/6/2018	8:38:33	43	8:41:22	42	8:39:25	40
7/6/2018	8:53:33	35	8:56:22	31	8:54:25	30
7/6/2018	9:08:33	35	9:11:22	30	9:09:25	30
7/6/2018	9:23:33	33	9:26:22	27	9:24:25	28
7/6/2018	9:38:33	32	9:41:22	25	9:39:25	27
7/6/2018	9:53:33	29	9:56:22	19	9:54:25	24
7/6/2018	10:08:33	24	10:11:22	13	10:09:25	20
7/6/2018	10:23:33	21	10:26:22	9	10:24:25	22
7/6/2018	10:38:33	21	10:41:22	9	10:39:25	18
7/6/2018	10:53:33	23	10:56:22	9	10:54:25	19
7/6/2018	11:08:33	24	11:11:22	10	11:09:25	19
7/6/2018	11:23:33	24	11:26:22	10	11:24:25	20
7/6/2018	11:38:33	25	11:41:22	11	11:39:25	20
7/6/2018	11:53:33	28	11:56:22	9	11:54:25	21
7/6/2018	12:08:33	27	12:11:22	9	12:09:25	22
7/6/2018	12:23:33	25	12:26:22	10	12:24:25	21
7/6/2018	12:38:33	26	12:41:22	11	12:39:25	22
7/6/2018	12:53:33	29	12:56:22	10	12:54:25	22
7/6/2018	13:08:33	39	13:11:22	8	13:09:25	21
7/6/2018	13:23:33	25	13:26:22	7	13:24:25	21
7/6/2018	13:38:33	33	13:41:22	8	13:39:25	21
7/6/2018	13:53:33	27	13:56:22	7	13:54:25	21
7/6/2018	14:08:33	31	14:11:22	9	14:09:25	22
7/6/2018	14:23:33	35	14:26:22	8	14:24:25	22
7/6/2018	14:38:33	32	14:41:22	8	14:39:25	22
7/6/2018	14:53:33	33	14:56:22	7	14:54:25	21

Weekly CAMP Monitoring Report # 4
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday July 13, 2018, main activities included installing the metal sheets into the ground, tie rod fabrication and installation, soil removal along the trench line and core drilling. Terraforming of the South end of the worksite in preparation for the tent structure installation began this week. Daily temperatures averaged in the high 80s, with lower humidity than the previous week. Low wind speeds throughout the week, with one thunderstorm on 7/10 at 1700. The street sweeper came by at 0930 on 7/13.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

The CAMP action levels described above were not exceeded during the monitoring period.

AECOM

07/9/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/9/2018	7:25:06	37	7:28:56	36	7:26:56	33
7/9/2018	7:40:06	31	7:43:56	32	7:41:56	26
7/9/2018	7:55:06	34	7:58:56	29	7:56:56	25
7/9/2018	8:10:06	28	8:13:56	24	8:11:56	23
7/9/2018	8:25:06	27	8:28:56	21	8:26:56	23
7/9/2018	8:40:06	31	8:43:56	19	8:41:56	26
7/9/2018	8:55:06	29	8:58:56	19	8:56:56	26
7/9/2018	9:10:06	33	9:13:56	13	9:11:56	25
7/9/2018	9:25:06	28	9:28:56	10	9:26:56	21
7/9/2018	9:40:06	25	9:43:56	9	9:41:56	23
7/9/2018	9:55:06	21	9:58:56	9	9:56:56	20
7/9/2018	10:10:06	21	10:13:56	17	10:11:56	27
7/9/2018	10:25:06	21	10:28:56	9	10:26:56	20
7/9/2018	10:40:06	20	10:43:56	8	10:41:56	18
7/9/2018	10:55:06	22	10:58:56	9	10:56:56	21
7/9/2018	11:10:06	25	11:13:56	9	11:11:56	21
7/9/2018	11:25:06	28	11:28:56	15	11:26:56	28
7/9/2018	11:40:06	28	11:43:56	12	11:41:56	54
7/9/2018	11:55:06	27	11:58:56	10	11:56:56	23
7/9/2018	12:10:06	24	12:13:56	6	12:11:56	20
7/9/2018	12:25:06	23	12:28:56	5	12:26:56	21
7/9/2018	12:40:06	31	12:43:56	24	12:41:56	40
7/9/2018	12:55:06	23	12:58:56	15	12:56:56	19
7/9/2018	13:10:06	36	13:13:56	17	13:11:56	21
7/9/2018	13:25:06	37	13:28:56	44	13:26:56	27
7/9/2018	13:40:06	24	13:43:56	7	13:41:56	21
7/9/2018	13:55:06	27	13:58:56	8	13:56:56	23
7/9/2018	14:10:06	28	14:13:56	11	14:11:56	25
7/9/2018	14:25:06	27	14:28:56	28	14:26:56	24
7/9/2018	14:40:06	32	14:43:56	20	14:41:56	25
7/9/2018	14:55:06	28	14:58:56	6	14:56:56	22
7/9/2018	15:10:06	27	15:13:56	7	15:11:56	22
7/9/2018	15:25:06	29	15:28:56	6	15:26:56	23
7/9/2018	15:40:06	30	15:43:56	6	15:41:56	22
7/9/2018	15:55:06	28	15:58:56	6	15:56:56	22
7/9/2018	16:10:06	24	16:13:56	3	16:11:56	20
7/9/2018	16:25:06	24	16:28:56	2	16:26:56	19
7/9/2018	16:40:06	25	16:43:56	3	16:41:56	21
7/9/2018	16:55:06	23	16:58:56	1	16:56:56	19
			17:13:56	4	17:11:56	23

07/10/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/10/2018	7:34:29	63	7:37:10	52	7:35:23	46
7/10/2018	7:49:29	51	7:52:10	38	7:50:23	33
7/10/2018	8:04:29	37	8:07:10	28	8:05:23	26
7/10/2018	8:19:29	30	8:22:10	22	8:20:23	25
7/10/2018	8:34:29	29	8:37:10	20	8:35:23	23
7/10/2018	8:49:29	34	8:52:10	24	8:50:23	26
7/10/2018	9:04:29	28	9:07:10	21	9:05:23	25
7/10/2018	9:19:29	36	9:22:10	17	9:20:23	25
7/10/2018	9:34:29	26	9:37:10	19	9:35:23	24
7/10/2018	9:49:29	26	9:52:10	18	9:50:23	24
7/10/2018	10:04:29	28	10:07:10	18	10:05:23	25
7/10/2018	10:19:29	30	10:22:10	21	10:20:23	24
7/10/2018	10:34:29	46	10:37:10	21	10:35:23	26
7/10/2018	10:49:29	29	10:52:10	16	10:50:23	24
7/10/2018	11:04:29	31	11:07:10	14	11:05:23	22
7/10/2018	11:19:29	26	11:22:10	14	11:20:23	22
7/10/2018	11:34:29	27	11:37:10	12	11:35:23	22
7/10/2018	11:49:29	27	11:52:10	11	11:50:23	22
7/10/2018	12:04:29	27	12:07:10	11	12:05:23	23
7/10/2018	12:19:29	29	12:22:10	11	12:20:23	23
7/10/2018	12:34:29	28	12:37:10	10	12:35:23	22
7/10/2018	12:49:29	27	12:52:10	14	12:50:23	25
7/10/2018	13:04:29	27	13:07:10	11	13:05:23	24
7/10/2018	13:19:29	33	13:22:10	15	13:20:23	27
7/10/2018	13:34:29	31	13:37:10	17	13:35:23	28
7/10/2018	13:49:29	34	13:52:10	24	13:50:23	27
7/10/2018	14:04:29	36	14:07:10	23	14:05:23	27
7/10/2018	14:19:29	29	14:22:10	14	14:20:23	25
7/10/2018	14:34:29	28	14:37:10	14	14:35:23	23
7/10/2018	14:49:29	28	14:52:10	19	14:50:23	24
7/10/2018	15:04:29	28	15:07:10	22	15:05:23	24
7/10/2018	15:19:29	25	15:22:10	9	15:20:23	21
7/10/2018	15:34:29	26	15:37:10	17	15:35:23	25
7/10/2018	15:49:29	30	15:52:10	17	15:50:23	30
7/10/2018	16:04:29	28	16:07:10	13	16:05:23	24
7/10/2018	16:19:29	29	16:22:10	15	16:20:23	25
7/10/2018	16:34:29	31	16:37:10	21	16:35:23	31

AECOM

07/11/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/11/2018	7:28:33	30	7:33:17	32	7:28:01	29
7/11/2018	7:43:33	29	7:48:17	30	7:43:01	25
7/11/2018	7:58:33	28	8:03:17	28	7:58:01	24
7/11/2018	8:13:33	25	8:18:17	26	8:13:01	22
7/11/2018	8:28:33	24	8:33:17	24	8:28:01	21
7/11/2018	8:43:33	23	8:48:17	28	8:43:01	20
7/11/2018	8:58:33	23	9:03:17	28	8:58:01	20
7/11/2018	9:13:33	23	9:18:17	31	9:13:01	20
7/11/2018	9:28:33	23	9:33:17	24	9:28:01	21
7/11/2018	9:43:33	24	9:48:17	20	9:43:01	21
7/11/2018	9:58:33	26	10:03:17	21	9:58:01	23
7/11/2018	10:13:33	27	10:18:17	28	10:13:01	24
7/11/2018	10:28:33	28	10:33:17	21	10:28:01	24
7/11/2018	10:43:33	28	10:48:17	25	10:43:01	24
7/11/2018	10:58:33	27	11:03:17	33	10:58:01	23
7/11/2018	11:13:33	27	11:18:17	24	11:13:01	22
7/11/2018	11:28:33	25	11:33:17	22	11:28:01	21
7/11/2018	11:43:33	22	11:48:17	24	11:43:01	18
7/11/2018	11:58:33	23	12:03:17	16	11:58:01	19
7/11/2018	12:13:33	23	12:18:17	16	12:13:01	20
7/11/2018	12:28:33	24	12:33:17	18	12:28:01	20
7/11/2018	12:43:33	22	12:48:17	17	12:43:01	19
7/11/2018	12:58:33	21	13:03:17	17	12:58:01	18
7/11/2018	13:13:33	20	13:18:17	12	13:13:01	17
7/11/2018	13:28:33	20	13:33:17	11	13:28:01	17
7/11/2018	13:43:33	21	13:48:17	11	13:43:01	18
7/11/2018	13:58:33	19	14:03:17	8	13:58:01	16
7/11/2018	14:13:33	18	14:18:17	8	14:13:01	16
7/11/2018	14:28:33	18	14:33:17	8	14:28:01	16
7/11/2018	14:43:33	18	14:48:17	12	14:43:01	16
7/11/2018	14:58:33	18	15:03:17	23	14:58:01	16
7/11/2018	15:13:33	18	15:18:17	5	15:13:01	16
7/11/2018	15:28:33	18	15:33:17	22	15:28:01	16
7/11/2018	15:43:33	17	15:48:17	6	15:43:01	15
7/11/2018	15:58:33	17	16:03:17	16	15:58:01	15
7/11/2018	16:13:33	16	16:18:17	9	16:13:01	14
7/11/2018	16:28:33	16	16:33:17	33	16:28:01	13
7/11/2018	16:43:33	15	16:48:17	38	16:43:01	13
7/11/2018	16:58:33	15	17:03:17	12	16:58:01	12
7/11/2018	17:13:33	15	17:18:17	7	17:13:01	13

AECOM

07/12/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/12/2018	7:25:53	16	7:28:47	33	7:23:27	17
7/12/2018	7:40:53	15	7:43:47	24	7:38:27	13
7/12/2018	7:55:53	16	7:58:47	17	7:53:27	14
7/12/2018	8:10:53	16	8:13:47	18	8:08:27	14
7/12/2018	8:25:53	16	8:28:47	15	8:23:27	14
7/12/2018	8:40:53	16	8:43:47	14	8:38:27	13
7/12/2018	8:55:53	17	8:58:47	12	8:53:27	14
7/12/2018	9:10:53	18	9:13:47	6	9:08:27	14
7/12/2018	9:25:53	17	9:28:47	7	9:23:27	14
7/12/2018	9:40:53	17	9:43:47	9	9:38:27	14
7/12/2018	9:55:53	18	9:58:47	10	9:53:27	15
7/12/2018	10:10:53	19	10:13:47	10	10:08:27	15
7/12/2018	10:25:53	19	10:28:47	10	10:23:27	15
7/12/2018	10:40:53	18	10:43:47	8	10:38:27	14
7/12/2018	10:55:53	18	10:58:47	12	10:53:27	14
7/12/2018	11:10:53	21	11:13:47	13	11:08:27	17
7/12/2018	11:25:53	23	11:28:47	15	11:23:27	19
7/12/2018	11:40:53	25	11:43:47	10	11:38:27	21
7/12/2018	11:55:53	24	11:58:47	7	11:53:27	20
7/12/2018	12:10:53	24	12:13:47	7	12:08:27	19
7/12/2018	12:25:53	23	12:28:47	8	12:23:27	19
7/12/2018	12:40:53	23	12:43:47	6	12:38:27	19
7/12/2018	12:55:53	21	12:58:47	3	12:53:27	18
7/12/2018	13:10:53	22	13:13:47	11	13:08:27	18
7/12/2018	13:25:53	21	13:28:47	15	13:23:27	18
7/12/2018	13:40:53	22	13:43:47	10	13:38:27	19
7/12/2018	13:55:53	21	13:58:47	17	13:53:27	18
7/12/2018	14:10:53	21	14:13:47	11	14:08:27	18
7/12/2018	14:25:53	21	14:28:47	15	14:23:27	18
7/12/2018	14:40:53	21	14:43:47	11	14:38:27	17
7/12/2018	14:55:53	21	14:58:47	14	14:53:27	18
7/12/2018	15:10:53	22	15:13:47	28	15:08:27	19
7/12/2018	15:25:53	22	15:28:47	38	15:23:27	18
7/12/2018	15:40:53	23	15:43:47	12	15:38:27	19
7/12/2018	15:55:53	25	15:58:47	6	15:53:27	19
7/12/2018	16:10:53	31	16:13:47	8	16:08:27	21
7/12/2018	16:25:53	31	16:28:47	8	16:23:27	21
7/12/2018	16:40:53	34	16:43:47	11	16:38:27	21
7/12/2018	16:55:53	26	16:58:47	13	16:53:27	22
7/12/2018	17:10:53	26	17:13:47	9	17:08:27	21

AECOM

07/13/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/13/2018	7:40:10	28	7:32:41	49	7:30:56	43
7/13/2018	7:55:10	43	7:47:41	36	7:45:56	33
7/13/2018	8:10:10	31	8:02:41	38	8:00:56	39
7/13/2018	8:25:10	30	8:17:41	32	8:15:56	33
7/13/2018	8:40:10	32	8:32:41	30	8:30:56	31
7/13/2018	8:55:10	37	8:47:41	30	8:45:56	33
7/13/2018	9:10:10	39	9:02:41	31	9:00:56	34
7/13/2018	9:25:10	39	9:17:41	28	9:15:56	33
7/13/2018	9:40:10	39	9:32:41	27	9:30:56	34
7/13/2018	9:55:10	39	9:47:41	27	9:45:56	33
7/13/2018	10:10:10	44	10:02:41	27	10:00:56	35
7/13/2018	10:25:10	38	10:17:41	27	10:15:56	33
7/13/2018	10:40:10	39	10:32:41	26	10:30:56	32
7/13/2018	10:55:10	40	10:47:41	26	10:45:56	33
7/13/2018	11:10:10	40	11:02:41	24	11:00:56	33
7/13/2018	11:25:10	40	11:17:41	25	11:15:56	33
7/13/2018	11:40:10	42	11:32:41	26	11:30:56	35
7/13/2018	11:55:10	42	11:47:41	27	11:45:56	36
7/13/2018	12:10:10	41	12:02:41	27	12:00:56	35
7/13/2018	12:25:10	40	12:17:41	26	12:15:56	34
7/13/2018	12:40:10	42	12:32:41	25	12:30:56	35
7/13/2018	12:55:10	40	12:47:41	20	12:45:56	31
7/13/2018	13:10:10	39	13:02:41	20	13:00:56	30
7/13/2018	13:25:10	35	13:17:41	21	13:15:56	30
7/13/2018	13:40:10	42	13:32:41	21	13:30:56	29
7/13/2018	13:55:10	36	13:47:41	20	13:45:56	29
7/13/2018	14:10:10	43	14:02:41	18	14:00:56	29
7/13/2018	14:25:10	37	14:17:41	18	14:15:56	30
7/13/2018	14:40:10	38	14:32:41	17	14:30:56	29
7/13/2018	14:55:10	36	14:47:41	18	14:45:56	29
7/13/2018	15:10:10	54	15:02:41	19	15:00:56	30
7/13/2018	15:25:10	38	15:17:41	19	15:15:56	31
7/13/2018	15:40:10	40	15:32:41	20	15:30:56	31
7/13/2018	15:55:10	42	15:47:41	21	15:45:56	32
7/13/2018	16:10:10	45	16:02:41	21	16:00:56	32

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading
7/9/2018	0915	0.0
7/9/2018	1100	0.0
7/9/2018	1215	0.0
7/9/2018	1400	0.0
7/9/2018	1545	0.0
7/9/2018	1715	0.0
7/10/2018	0930	0.0
7/10/2018	1140	0.0
7/10/2018	1320	0.0
7/10/2018	1445	0.0
7/10/2018	1615	0.0
7/11/2018	0840	0.0
7/11/2018	1030	0.0
7/11/2018	1135	0.0
7/11/2018	1315	0.0
7/11/2018	1555	0.0
7/12/2018	0915	0.0
7/12/2018	1125	0.0
7/12/2018	1330	0.0
7/12/2018	1500	0.0
7/12/2018	1620	0.0
7/13/2018	0915	0.0
7/13/2018	1100	0.0
7/13/2018	1240	0.0
7/13/2018	1415	0.0
7/13/2018	1610	0.0

Weekly CAMP Monitoring Report # 5
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday July 20th, 2018, main activities included installing the metal sheets into the ground, tie rod fabrication and installation, soil removal along the trench line and core drilling. Terraforming of the South end of the worksite in preparation for the tent structure installation continued. Daily temperatures averaged in the high 80s, with low humidity. Low wind speeds throughout the week, with a thunderstorm on 7/17 at 0948. The street sweeper came by at 1000 on 7/20.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

There were no exceedances to report for this week.

AECOM

07/16/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/16/2018	7:37:59	63	7:31:49	72	7:30:11	54
7/16/2018	7:52:59	55	7:46:49	59	7:45:11	53
7/16/2018	8:07:59	55	8:01:49	53	8:00:11	51
7/16/2018	8:22:59	57	8:16:49	54	8:15:11	53
7/16/2018	8:37:59	57	8:31:49	48	8:30:11	50
7/16/2018	8:52:59	64	8:46:49	77	8:45:11	54
7/16/2018	9:07:59	61	9:01:49	65	9:00:11	56
7/16/2018	9:22:59	59	9:16:49	53	9:15:11	52
7/16/2018	9:37:59	61	9:31:49	51	9:30:11	52
7/16/2018	9:52:59	64	9:46:49	53	9:45:11	54
7/16/2018	10:07:59	65	10:01:49	59	10:00:11	57
7/16/2018	10:22:59	60	10:16:49	49	10:15:11	53
7/16/2018	10:37:59	59	10:31:49	46	10:30:11	52
7/16/2018	10:52:59	59	10:46:49	53	10:45:11	59
7/16/2018	11:07:59	58	11:01:49	47	11:00:11	52
7/16/2018	11:22:59	59	11:16:49	60	11:15:11	54
7/16/2018	11:37:59	57	11:31:49	57	11:30:11	57
7/16/2018	11:52:59	55	11:46:49	44	11:45:11	55
7/16/2018	12:07:59	53	12:01:49	37	12:00:11	46
7/16/2018	12:22:59	41	12:16:49	24	12:15:11	37
7/16/2018	12:37:59	41	12:31:49	23	12:30:11	37
7/16/2018	12:52:59	39	12:46:49	22	12:45:11	36
7/16/2018	13:07:59	38	13:01:49	34	13:00:11	38
7/16/2018	13:22:59	38	13:16:49	25	13:15:11	34
7/16/2018	13:37:59	38	13:31:49	20	13:30:11	33
7/16/2018	13:52:59	41	13:46:49	29	13:45:11	35
7/16/2018	14:07:59	42	14:01:49	29	14:00:11	39
7/16/2018	14:22:59	47	14:16:49	29	14:15:11	40
7/16/2018	14:37:59	48	14:31:49	43	14:30:11	43
7/16/2018	14:52:59	49	14:46:49	41	14:45:11	47
7/16/2018	15:07:59	44	15:01:49	39	15:00:11	45
7/16/2018	15:22:59	43	15:16:49	29	15:15:11	40
7/16/2018	15:37:59	44	15:31:49	33	15:30:11	44
7/16/2018	15:52:59	45	15:46:49	32	15:45:11	40
7/16/2018	16:07:59	44	16:01:49	32	16:00:11	42
7/16/2018	16:22:59	46	16:16:49	33	16:15:11	47
7/16/2018	16:37:59	46	16:31:49	37	16:30:11	49
7/16/2018	16:52:59	51	16:46:49	39	16:45:11	52
7/16/2018	17:07:59	48	17:01:49	43	17:00:11	46

AECOM

07/17/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/17/2018	7:36:35	106	7:30:28	110	7:28:55	93
7/17/2018	7:51:35	86	7:45:28	92	7:43:55	79
7/17/2018	8:06:35	65	8:00:28	83	7:58:55	74
7/17/2018	8:21:35	68	8:15:28	89	8:13:55	73
7/17/2018	8:36:35	69	8:30:28	78	8:28:55	72
7/17/2018	8:51:35	48	8:45:28	61	8:43:55	59
7/17/2018	9:06:35	37	9:00:28	44	8:58:55	44
7/17/2018	9:21:35	34	9:15:28	38	9:13:55	39
7/17/2018	9:36:35	34	9:30:28	41	9:28:55	40
7/17/2018	9:51:35	38	9:45:28	42	9:43:55	42
7/17/2018	10:06:35	34	10:00:28	42	9:58:55	41
7/17/2018	10:21:35	34	10:15:28	41	10:13:55	40
7/17/2018	10:36:35	38	10:30:28	44	10:28:55	41
7/17/2018	10:51:35	33	10:45:28	46	10:43:55	44
7/17/2018	11:06:35	27	11:00:28	36	10:58:55	35
7/17/2018	11:21:35	28	11:15:28	37	11:13:55	37
7/17/2018	11:36:35	19	11:30:28	26	11:28:55	28
7/17/2018	11:51:35	14	11:45:28	22	11:43:55	25
7/17/2018	12:06:35	12	12:00:28	21	11:58:55	23
7/17/2018	12:21:35	14	12:15:28	18	12:13:55	22
7/17/2018	12:36:35	20	12:30:28	20	12:28:55	24
7/17/2018	12:51:35	14	12:45:28	18	12:43:55	22
7/17/2018	13:06:35	13	13:00:28	18	12:58:55	22
7/17/2018	13:21:35	12	13:15:28	18	13:13:55	22
7/17/2018	13:36:35	15	13:30:28	17	13:28:55	22
7/17/2018	13:51:35	13	13:45:28	20	13:43:55	23
7/17/2018	14:06:35	14	14:00:28	23	13:58:55	25
7/17/2018	14:21:35	13	14:15:28	22	14:13:55	25
7/17/2018	14:36:35	18	14:30:28	23	14:28:55	25
7/17/2018	14:51:35	17	14:45:28	22	14:43:55	25
7/17/2018	15:06:35	15	15:00:28	22	14:58:55	25
7/17/2018	15:21:35	13	15:15:28	21	15:13:55	24
7/17/2018	15:36:35	16	15:30:28	22	15:28:55	26
7/17/2018	15:51:35	17	15:45:28	27	15:43:55	41
7/17/2018	16:06:35	17	16:00:28	21	15:58:55	26
7/17/2018	16:21:35	12	16:15:28	21	16:13:55	26
7/17/2018	16:36:35	12	16:30:28	16	16:28:55	23
7/17/2018	16:51:35	14	16:45:28	17	16:43:55	29
7/17/2018	17:06:35	14	17:00:28	17	16:58:55	27
7/17/2018	17:21:35	14	17:15:28	15	17:13:55	24

AECOM

07/18/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/18/2018	7:26:03	25	7:30:46	25	7:23:16	21
7/18/2018	7:41:03	22	7:45:46	24	7:38:16	19
7/18/2018	7:56:03	22	8:00:46	24	7:53:16	19
7/18/2018	8:11:03	22	8:15:46	23	8:08:16	19
7/18/2018	8:26:03	23	8:30:46	23	8:23:16	20
7/18/2018	8:41:03	23	8:45:46	27	8:38:16	20
7/18/2018	8:56:03	23	9:00:46	21	8:53:16	20
7/18/2018	9:11:03	24	9:15:46	18	9:08:16	21
7/18/2018	9:26:03	23	9:30:46	22	9:23:16	21
7/18/2018	9:41:03	23	9:45:46	20	9:38:16	21
7/18/2018	9:56:03	23	10:00:46	21	9:53:16	20
7/18/2018	10:11:03	23	10:15:46	18	10:08:16	20
7/18/2018	10:26:03	25	10:30:46	23	10:23:16	21
7/18/2018	10:41:03	25	10:45:46	18	10:38:16	22
7/18/2018	10:56:03	25	11:00:46	15	10:53:16	22
7/18/2018	11:11:03	25	11:15:46	16	11:08:16	21
7/18/2018	11:26:03	25	11:30:46	18	11:23:16	22
7/18/2018	11:41:03	25	11:45:46	21	11:38:16	23
7/18/2018	11:56:03	26	12:00:46	16	11:53:16	23
7/18/2018	12:11:03	26	12:15:46	14	12:08:16	23
7/18/2018	12:26:03	27	12:30:46	12	12:23:16	24
7/18/2018	12:41:03	27	12:45:46	15	12:38:16	24
7/18/2018	12:56:03	28	13:00:46	15	12:53:16	24
7/18/2018	13:11:03	28	13:15:46	16	13:08:16	24
7/18/2018	13:26:03	27	13:30:46	14	13:23:16	24
7/18/2018	13:41:03	27	13:45:46	13	13:38:16	24
7/18/2018	13:56:03	26	14:00:46	10	13:53:16	23
7/18/2018	14:11:03	27	14:15:46	17	14:08:16	24
7/18/2018	14:26:03	27	14:30:46	13	14:23:16	24
7/18/2018	14:41:03	27	14:45:46	14	14:38:16	24
7/18/2018	14:56:03	27	15:00:46	16	14:53:16	24
7/18/2018	15:11:03	26	15:15:46	11	15:08:16	24
7/18/2018	15:26:03	24	15:30:46	8	15:23:16	22
7/18/2018	15:41:03	20	15:45:46	5	15:38:16	20
7/18/2018	15:56:03	18	16:00:46	3	15:53:16	17
7/18/2018	16:11:03	19	16:15:46	2	16:08:16	18
7/18/2018	16:26:03	17	16:30:46	1	16:23:16	16
7/18/2018	16:41:03	16	16:45:46	1	16:38:16	15
7/18/2018	16:56:03	15	17:00:46	1	16:53:16	14
7/18/2018	17:11:03	15	17:15:46	0	17:08:16	14
7/18/2018	17:26:03	16	17:30:46	0	17:23:16	15
7/18/2018	17:41:03	14	17:45:46	0	17:38:16	13
7/18/2018	17:56:03	13	18:00:46	2	17:53:16	12
7/18/2018	18:11:03	13	18:15:46	0	18:08:16	12
7/18/2018	18:26:03	12	18:30:46	0	18:23:16	12

AECOM

07/19/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/19/2018	7:33:10	14	7:38:10	19	7:30:08	13
7/19/2018	7:48:10	12	7:53:10	21	7:45:08	11
7/19/2018	8:03:10	12	8:08:10	20	8:00:08	10
7/19/2018	8:18:10	13	8:23:10	19	8:15:08	11
7/19/2018	8:33:10	12	8:38:10	18	8:30:08	10
7/19/2018	8:48:10	13	8:53:10	19	8:45:08	11
7/19/2018	9:03:10	13	9:08:10	18	9:00:08	11
7/19/2018	9:18:10	13	9:23:10	15	9:15:08	11
7/19/2018	9:33:10	14	9:38:10	12	9:30:08	12
7/19/2018	9:48:10	14	9:53:10	15	9:45:08	12
7/19/2018	10:03:10	14	10:08:10	15	10:00:08	12
7/19/2018	10:18:10	14	10:23:10	20	10:15:08	12
7/19/2018	10:33:10	14	10:38:10	4	10:30:08	12
7/19/2018	10:48:10	12	10:53:10	5	10:45:08	11
7/19/2018	11:03:10	11	11:08:10	2	11:00:08	10
7/19/2018	11:18:10	12	11:23:10	2	11:15:08	10
7/19/2018	11:33:10	11	11:38:10	4	11:30:08	9
7/19/2018	11:48:10	12	11:53:10	14	11:45:08	10
7/19/2018	12:03:10	12	12:08:10	0	12:00:08	10
7/19/2018	12:18:10	12	12:23:10	0	12:15:08	10
7/19/2018	12:33:10	12	12:38:10	1	12:30:08	10
7/19/2018	12:48:10	12	12:53:10	9	12:45:08	10
7/19/2018	13:03:10	13	13:08:10	27	13:00:08	11
7/19/2018	13:18:10	13	13:23:10	21	13:15:08	12
7/19/2018	13:33:10	14	13:38:10	25	13:30:08	12
7/19/2018	13:48:10	14	13:53:10	13	13:45:08	12
7/19/2018	14:03:10	14	14:08:10	19	14:00:08	12
7/19/2018	14:18:10	14	14:23:10	11	14:15:08	13
7/19/2018	14:33:10	14	14:38:10	13	14:30:08	13
7/19/2018	14:48:10	15	14:53:10	17	14:45:08	13
7/19/2018	15:03:10	15	15:08:10	20	15:00:08	13
7/19/2018	15:18:10	15	15:23:10	13	15:15:08	14
7/19/2018	15:33:10	15	15:38:10	18	15:30:08	13
7/19/2018	15:48:10	15	15:53:10	13	15:45:08	13
7/19/2018	16:03:10	15	16:08:10	5	16:00:08	13
7/19/2018	16:18:10	15	16:23:10	2	16:15:08	12
7/19/2018	16:33:10	15	16:38:10	11	16:30:08	13
7/19/2018	16:48:10	16	16:53:10	9	16:45:08	14
7/19/2018	17:03:10	15	17:08:10	6	17:00:08	13
7/19/2018	17:18:10	15	17:23:10	3	17:15:08	13
7/19/2018	17:33:10	15	17:38:10	47	17:30:08	13
7/19/2018	17:48:10	15	17:53:10	38	17:45:08	13
7/19/2018	18:03:10	14	18:08:10	41	18:00:08	13
7/19/2018	18:18:10	14	18:23:10	108	18:15:08	13

AECOM

07/20/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
7/20/2018	7:30:44	31	7:24:21	12	7:22:55	8
7/20/2018	7:45:44	22	7:39:21	11	7:37:55	4
7/20/2018	8:00:44	17	7:54:21	11	7:52:55	5
7/20/2018	8:15:44	18	8:09:21	12	8:07:55	7
7/20/2018	8:30:44	18	8:24:21	15	8:22:55	9
7/20/2018	8:45:44	17	8:39:21	35	8:37:55	33
7/20/2018	9:00:44	20	8:54:21	19	8:52:55	24
7/20/2018	9:15:44	17	9:09:21	30	9:07:55	30
7/20/2018	9:30:44	17	9:24:21	9	9:22:55	16
7/20/2018	9:45:44	18	9:39:21	39	9:37:55	21
7/20/2018	10:00:44	18	9:54:21	44	9:52:55	20
7/20/2018	10:15:44	20	10:09:21	12	10:07:55	19
7/20/2018	10:30:44	18	10:24:21	19	10:22:55	18
7/20/2018	10:45:44	22	10:39:21	34	10:37:55	22
7/20/2018	11:00:44	18	10:54:21	33	10:52:55	19
7/20/2018	11:15:44	18	11:09:21	29	11:07:55	22
7/20/2018	11:30:44	18	11:24:21	6	11:22:55	18
7/20/2018	11:45:44	18	11:39:21	24	11:37:55	20
7/20/2018	12:00:44	18	11:54:21	7	11:52:55	19
7/20/2018	12:15:44	18	12:09:21	4	12:07:55	17
7/20/2018	12:30:44	18	12:24:21	2	12:22:55	17
7/20/2018	12:45:44	18	12:39:21	7	12:37:55	21
7/20/2018	13:00:44	15	12:54:21	3	12:52:55	18
7/20/2018	13:15:44	15	13:09:21	3	13:07:55	15
7/20/2018	13:30:44	15	13:24:21	21	13:22:55	23
7/20/2018	13:45:44	15	13:39:21	15	13:37:55	24
7/20/2018	14:00:44	14	13:54:21	15	13:52:55	25
7/20/2018	14:15:44	14	14:09:21	5	14:07:55	23
7/20/2018	14:30:44	16	14:24:21	8	14:22:55	27
7/20/2018	14:45:44	16	14:39:21	20	14:37:55	29
7/20/2018	15:00:44	16	14:54:21	8	14:52:55	28
7/20/2018	15:15:44	16	15:09:21	5	15:07:55	21
7/20/2018	15:30:44	19	15:24:21	12	15:22:55	25
7/20/2018	15:45:44	20	15:39:21	5	15:37:55	27
7/20/2018	16:00:44	20	15:54:21	6	15:52:55	23

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading
7/16/2018	0915	0.0
7/16/2018	1100	0.0
7/16/2018	1250	0.0
7/16/2018	1430	0.0
7/16/2018	1600	0.0
7/16/2018	1720	0.0
7/17/2018	0930	0.0
7/17/2018	1200	0.0
7/17/2018	1400	0.0
7/17/2018	1540	0.0
7/17/2018	1700	0.0
7/18/2018	0900	0.0
7/18/2018	1030	0.0
7/18/2018	1250	0.0
7/18/2018	1430	0.0
7/18/2018	1610	0.0
7/18/2018	1800	0.0
7/19/2018	0910	0.0
7/19/2018	1110	0.0
7/19/2018	1305	0.0
7/19/2018	1520	0.0
7/19/2018	1730	0.0
7/20/2018	0840	0.0
7/20/2018	1030	0.0
7/20/2018	1215	0.0
7/20/2018	1400	0.0
7/20/2018	1550	0.0

Filename: WE 071618_Formatted.docx
Directory: P:\Jobs\Indl_Service\Project Files\BASF-0760\Rensselaer Design 2016_2018\600-CONSTRUCTION SUPPORT\601 Construction Documentation\Air monitoring data BASF 2018\Weekly Reports
Template: C:\Users\GardnerM1\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Gardner, Mike
Keywords:
Comments:
Creation Date: 7/27/2018 2:05:00 PM
Change Number: 2
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Number of Characters: 11,167 (approx.)

Weekly CAMP Monitoring Report # 6
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday July 27th, 2018, main activities included installing the metal sheets into the ground, tie rod fabrication and installation, soil removal along the trench line and core drilling. Terraforming of the South end of the worksite in preparation for the tent structure installation continued. Daily temperatures averaged in the high 80s, with high humidity throughout the week. Low wind speeds throughout the week, with thunderstorms on 7/23 throughout the day, as well as on 7/27 starting at 1230 which forced the worksite to close early. Light rain throughout the day on 7/25.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

The particulate or VOC action levels were not exceeded during this week's operations. .

AECOM

07/23/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/23/2018	7:33:05	18	7:26:27	21	7:24:39	14
7/23/2018	7:48:05	26	7:41:27	15	7:39:39	14
7/23/2018	8:03:05	16	7:56:27	11	7:54:39	14
7/23/2018	8:18:05	17	8:11:27	9	8:09:39	12
7/23/2018	8:33:05	21	8:26:27	8	8:24:39	12
7/23/2018	8:48:05	15	8:41:27	5	8:39:39	13
7/23/2018	9:03:05	21	8:56:27	5	8:54:39	12
7/23/2018	9:18:05	16	9:11:27	4	9:09:39	13
7/23/2018	9:33:05	16	9:26:27	3	9:24:39	12
7/23/2018	9:48:05	12	9:41:27	2	9:39:39	12
7/23/2018	10:03:05	13	9:56:27	3	9:54:39	12
7/23/2018	10:18:05	15	10:11:27	3	10:09:39	12
7/23/2018	10:33:05	13	10:26:27	3	10:24:39	13
7/23/2018	10:48:05	12	10:41:27	7	10:39:39	13
7/23/2018	11:03:05	14	10:56:27	8	10:54:39	13
7/23/2018	11:18:05	14	11:11:27	8	11:09:39	15
7/23/2018	11:33:05	10	11:26:27	4	11:24:39	14
7/23/2018	11:48:05	9	11:41:27	8	11:39:39	14
7/23/2018	12:03:05	10	11:56:27	4	11:54:39	16
7/23/2018	12:18:05	10	12:11:27	3	12:09:39	34
7/23/2018	12:33:05	12	12:26:27	6	12:24:39	15
7/23/2018	12:48:05	11	12:41:27	6	12:39:39	15
7/23/2018	13:03:05	10	12:56:27	4	12:54:39	16
7/23/2018	13:18:05	10	13:11:27	7	13:09:39	25
7/23/2018	13:33:05	11	13:26:27	15	13:24:39	22
7/23/2018	13:48:05	12	13:41:27	4	13:39:39	22
7/23/2018	14:03:05	12	13:56:27	18	13:54:39	28
7/23/2018	14:18:05	13	14:11:27	20	14:09:39	30
7/23/2018	14:33:05	14	14:26:27	13	14:24:39	39
7/23/2018	14:48:05	14	14:41:27	24	14:39:39	30
7/23/2018	15:03:05	14	14:56:27	7	14:54:39	18
7/23/2018	15:18:05	14	15:11:27	30	15:09:39	20
7/23/2018	15:33:05	17	15:26:27	19	15:24:39	27
7/23/2018	15:48:05	15	15:41:27	40	15:39:39	18
7/23/2018	16:03:05	9	15:56:27	32	15:54:39	17
7/23/2018	16:18:05	7	16:11:27	27	16:09:39	13
7/23/2018	16:33:05	8	16:26:27	17	16:24:39	11
7/23/2018	16:48:05	9	16:41:27	18	16:39:39	12
7/23/2018	17:03:05	11	16:56:27	26	16:54:39	15
7/23/2018	17:18:05	10	17:11:27	14	17:09:39	23

07/24/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/24/2018	7:30:57	17	7:23:51	23	7:22:06	22
7/24/2018	7:45:57	19	7:38:51	19	7:37:06	15
7/24/2018	8:00:57	21	7:53:51	17	7:52:06	14
7/24/2018	8:15:57	17	8:08:51	24	8:07:06	14
7/24/2018	8:30:57	15	8:23:51	30	8:22:06	16
7/24/2018	8:45:57	13	8:38:51	27	8:37:06	16
7/24/2018	9:00:57	17	8:53:51	20	8:52:06	16
7/24/2018	9:15:57	16	9:08:51	26	9:07:06	16
7/24/2018	9:30:57	21	9:23:51	14	9:22:06	17
7/24/2018	9:45:57	23	9:38:51	13	9:37:06	18
7/24/2018	10:00:57	14	9:53:51	24	9:52:06	17
7/24/2018	10:15:57	20	10:08:51	46	10:07:06	13
7/24/2018	10:30:57	20	10:23:51	41	10:22:06	13
7/24/2018	10:45:57	17	10:38:51	40	10:37:06	17
7/24/2018	11:00:57	13	10:53:51	19	10:52:06	14
7/24/2018	11:15:57	12	11:08:51	26	11:07:06	14
7/24/2018	11:30:57	16	11:23:51	38	11:22:06	16
7/24/2018	11:45:57	15	11:38:51	17	11:37:06	23
7/24/2018	12:00:57	18	11:53:51	17	11:52:06	30
7/24/2018	12:15:57	16	12:08:51	8	12:07:06	18
7/24/2018	12:30:57	14	12:23:51	8	12:22:06	16
7/24/2018	12:45:57	27	12:38:51	21	12:37:06	22
7/24/2018	13:00:57	20	12:53:51	20	12:52:06	27
7/24/2018	13:15:57	17	13:08:51	26	13:07:06	22
7/24/2018	13:30:57	20	13:23:51	13	13:22:06	20
7/24/2018	13:45:57	25	13:38:51	34	13:37:06	27
7/24/2018	14:00:57	20	13:53:51	26	13:52:06	24
7/24/2018	14:15:57	20	14:08:51	28	14:07:06	29
7/24/2018	14:30:57	20	14:23:51	34	14:22:06	35
7/24/2018	14:45:57	22	14:38:51	42	14:37:06	20
7/24/2018	15:00:57	14	14:53:51	13	14:52:06	22
7/24/2018	15:15:57	24	15:08:51	25	15:07:06	17
7/24/2018	15:30:57	26	15:23:51	42	15:22:06	25
7/24/2018	15:45:57	45	15:38:51	31	15:37:06	27
7/24/2018	16:00:57	18	15:53:51	17	15:52:06	24
7/24/2018	16:15:57	16	16:08:51	19	16:07:06	20
7/24/2018	16:30:57	17	16:23:51	11	16:22:06	15
7/24/2018	16:45:57	15	16:38:51	11	16:37:06	18

07/25/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/25/2018	7:33:20	43	7:27:04	21	7:25:19	19
7/25/2018	7:48:20	14	7:42:04	17	7:40:19	13
7/25/2018	8:03:20	14	7:57:04	15	7:55:19	12
7/25/2018	8:18:20	14	8:12:04	9	8:10:19	12
7/25/2018	8:33:20	12	8:27:04	9	8:25:19	12
7/25/2018	8:48:20	13	8:42:04	4	8:40:19	12
7/25/2018	9:03:20	13	8:57:04	9	8:55:19	12
7/25/2018	9:18:20	9	9:12:04	6	9:10:19	10
7/25/2018	9:33:20	8	9:27:04	8	9:25:19	9
7/25/2018	9:48:20	7	9:42:04	4	9:40:19	10
7/25/2018	10:03:20	10	9:57:04	2	9:55:19	10
7/25/2018	10:18:20	7	10:12:04	2	10:10:19	9
7/25/2018	10:33:20	11	10:27:04	3	10:25:19	8
7/25/2018	10:48:20	9	10:42:04	0	10:40:19	10
7/25/2018	11:03:20	14	10:57:04	3	10:55:19	11
7/25/2018	11:18:20	9	11:12:04	5	11:10:19	11
7/25/2018	11:33:20	10	11:27:04	6	11:25:19	12
7/25/2018	11:48:20	8	11:42:04	2	11:40:19	12
7/25/2018	12:03:20	5	11:57:04	0	11:55:19	9
7/25/2018	12:18:20	7	12:12:04	0	12:10:19	8
7/25/2018	12:33:20	12	12:27:04	1	12:25:19	10
7/25/2018	12:48:20	8	12:42:04	2	12:40:19	11
7/25/2018	13:03:20	8	12:57:04	0	12:55:19	9
7/25/2018	13:18:20	9	13:12:04	0	13:10:19	10
7/25/2018	13:33:20	9	13:27:04	10	13:25:19	10
7/25/2018	13:48:20	11	13:42:04	6	13:40:19	10
7/25/2018	14:03:20	11	13:57:04	1	13:55:19	12
7/25/2018	14:18:20	15	14:12:04	4	14:10:19	13
7/25/2018	14:33:20	13	14:27:04	8	14:25:19	18
7/25/2018	14:48:20	13	14:42:04	6	14:40:19	15
7/25/2018	15:03:20	15	14:57:04	2	14:55:19	12
7/25/2018	15:18:20	13	15:12:04	2	15:10:19	13

AECOM

07/26/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/26/2018	8:44:20	41	8:43:21	84	8:42:43	50
7/26/2018	8:59:20	60	8:58:21	72	8:57:43	57
7/26/2018	9:14:20	20	9:13:21	25	9:12:43	22
7/26/2018	9:29:20	14	9:28:21	14	9:27:43	15
7/26/2018	9:44:20	16	9:43:21	16	9:42:43	16
7/26/2018	9:59:20	18	9:58:21	8	9:57:43	12
7/26/2018	10:14:20	16	10:13:21	12	10:12:43	15
7/26/2018	10:29:20	17	10:28:21	11	10:27:43	13
7/26/2018	10:44:20	21	10:43:21	14	10:42:43	17
7/26/2018	10:59:20	25	10:58:21	28	10:57:43	24
7/26/2018	11:14:20	25	11:13:21	22	11:12:43	22
7/26/2018	11:29:20	25	11:28:21	21	11:27:43	23
7/26/2018	11:44:20	27	11:43:21	19	11:42:43	22
7/26/2018	11:59:20	24	11:58:21	18	11:57:43	23
7/26/2018	12:14:20	24	12:13:21	18	12:12:43	23
7/26/2018	12:29:20	24	12:28:21	16	12:27:43	23
7/26/2018	12:44:20	25	12:43:21	15	12:42:43	24
7/26/2018	12:59:20	27	12:58:21	17	12:57:43	25
7/26/2018	13:14:20	27	13:13:21	16	13:12:43	27
7/26/2018	13:29:20	28	13:28:21	17	13:27:43	30
7/26/2018	13:44:20	30	13:43:21	17	13:42:43	28
7/26/2018	13:59:20	31	13:58:21	18	13:57:43	53
7/26/2018	14:14:20	31	14:13:21	16	14:12:43	31
7/26/2018	14:29:20	30	14:28:21	14	14:27:43	30
7/26/2018	14:44:20	28	14:43:21	12	14:42:43	26
7/26/2018	14:59:20	28	14:58:21	11	14:57:43	26
7/26/2018	15:14:20	28	15:13:21	12	15:12:43	27
7/26/2018	15:29:20	28	15:28:21	12	15:27:43	26
7/26/2018	15:44:20	28	15:43:21	12	15:42:43	29
7/26/2018	15:59:20	28	15:58:21	11	15:57:43	26
7/26/2018	16:14:20	28	16:13:21	11	16:12:43	25
7/26/2018	16:29:20	27	16:28:21	10	16:27:43	25
7/26/2018	16:44:20	26				

07/27/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/27/2018	7:27:46	83	7:21:47	63	7:20:02	49
7/27/2018	7:42:46	61	7:36:47	52	7:35:02	50
7/27/2018	7:57:46	62	7:51:47	55	7:50:02	49
7/27/2018	8:12:46	52	8:06:47	50	8:05:02	44
7/27/2018	8:27:46	58	8:21:47	44	8:20:02	43
7/27/2018	8:42:46	71	8:36:47	55	8:35:02	50
7/27/2018	8:57:46	56	8:51:47	50	8:50:02	48
7/27/2018	9:12:46	51	9:06:47	45	9:05:02	46
7/27/2018	9:27:46	55	9:21:47	44	9:20:02	47
7/27/2018	9:42:46	51	9:36:47	42	9:35:02	43
7/27/2018	9:57:46	48	9:51:47	42	9:50:02	44
7/27/2018	10:12:46	48	10:06:47	51	10:05:02	43
7/27/2018	10:27:46	49	10:21:47	41	10:20:02	45
7/27/2018	10:42:46	54	10:36:47	47	10:35:02	48
7/27/2018	10:57:46	54	10:51:47	69	10:50:02	49
7/27/2018	11:12:46	52	11:06:47	52	11:05:02	47
7/27/2018	11:27:46	55	11:21:47	41	11:20:02	45
7/27/2018	11:42:46	65	11:36:47	44	11:35:02	48
7/27/2018	11:57:46	67	11:51:47	49	11:50:02	48
7/27/2018	12:12:46	58	12:06:47	55	12:05:02	51
7/27/2018	12:27:46	56	12:21:47	46	12:20:02	46
7/27/2018	12:42:46	56	12:36:47	45	12:35:02	48
7/27/2018	12:57:46	58	12:51:47	55	12:50:02	60
7/27/2018	13:12:46	53	13:06:47	44	13:05:02	46
7/27/2018	13:27:46	34	13:21:47	32	13:20:02	41
7/27/2018	13:42:46	26	13:36:47	15	13:35:02	24

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading
7/23/2018	0900	0.0
7/23/2018	1045	0.0
7/23/2018	1250	0.0
7/23/2018	1440	0.0
7/23/2018	1620	0.0
7/24/2018	0935	0.0
7/24/2018	1110	0.0
7/24/2018	1305	0.0
7/24/2018	1500	0.0
7/24/2018	1630	0.0
7/25/2018	1000	0.0
7/25/2018	1130	0.0
7/25/2018	1315	0.0
7/25/2018	1500	0.0
7/26/2018	1005	0.1
7/26/2018	1130	0.0
7/26/2018	1310	0.1
7/26/2018	1505	0.1
7/26/2018	1650	0.1
7/27/2018	0845	0.0
7/27/2018	1020	0.0
7/27/2018	1210	0.0

Weekly CAMP Monitoring Report # 7
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday August 3rd, 2018, main activities included installing the metal sheets into the ground, tie rod fabrication and installation, soil removal along the trench line and core drilling. An aquatic vegetation survey was conducted by AECOM on Monday 7/30 and Tuesday 7/31. Terraforming of the South end of the worksite in preparation for the tent structure installation continued. Daily temperatures averaged in the high 70s and low 80's, with high humidity throughout the week. There were rain showers throughout the day on Wednesday 8/1, as well as thunderstorms beginning at 1200 on Friday 8/3. Dust monitors were not used on Friday, 8/3 due to the severe weather. On 8/3, PID was used until 1200 when the worksite closed due to severe weather.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period. All PID measurements were recorded by hand.

The particulate and VOC action levels were not exceeded during the monitoring period.

AECOM

07/30/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/30/2018	7:32:49	37	7:26:35	34	7:24:57	28
7/30/2018	7:47:49	40	7:41:35	40	7:39:57	30
7/30/2018	8:02:49	22	7:56:35	30	7:54:57	26
7/30/2018	8:17:49	21	8:11:35	18	8:09:57	20
7/30/2018	8:32:49	22	8:26:35	25	8:24:57	25
7/30/2018	8:47:49	24	8:41:35	20	8:39:57	29
7/30/2018	9:02:49	23	8:56:35	26	8:54:57	27
7/30/2018	9:17:49	21	9:11:35	17	9:09:57	24
7/30/2018	9:32:49	19	9:26:35	15	9:24:57	22
7/30/2018	9:47:49	19	9:41:35	12	9:39:57	24
7/30/2018	10:02:49	19	9:56:35	10	9:54:57	23
7/30/2018	10:17:49	19	10:11:35	11	10:09:57	20
7/30/2018	10:32:49	20	10:26:35	9	10:24:57	19
7/30/2018	10:47:49	20	10:41:35	12	10:39:57	21
7/30/2018	11:02:49	20	10:56:35	12	10:54:57	21
7/30/2018	11:17:49	20	11:11:35	10	11:09:57	21
7/30/2018	11:32:49	21	11:26:35	14	11:24:57	22
7/30/2018	11:47:49	20	11:41:35	14	11:39:57	21
7/30/2018	12:02:49	20	11:56:35	9	11:54:57	21
7/30/2018	12:17:49	18	12:11:35	8	12:09:57	21
7/30/2018	12:32:49	19	12:26:35	6	12:24:57	21
7/30/2018	12:47:49	19	12:41:35	6	12:39:57	20
7/30/2018	13:02:49	25	12:56:35	6	12:54:57	23
7/30/2018	13:17:49	20	13:11:35	7	13:09:57	23
7/30/2018	13:32:49	24	13:26:35	9	13:24:57	26
7/30/2018	13:47:49	21	13:41:35	13	13:39:57	24
7/30/2018	14:02:49	23	13:56:35	15	13:54:57	26
7/30/2018	14:17:49	28	14:11:35	14	14:09:57	27
7/30/2018	14:32:49	23	14:26:35	12	14:24:57	26
7/30/2018	14:47:49	28	14:41:35	11	14:39:57	24
7/30/2018	15:02:49	25	14:56:35	16	14:54:57	26
7/30/2018	15:17:49	69	15:11:35	21	15:09:57	35
7/30/2018	15:32:49	52	15:26:35	23	15:24:57	36
7/30/2018	15:47:49	32	15:41:35	22	15:39:57	46
7/30/2018	16:02:49	24	15:56:35	14	15:54:57	26
7/30/2018	16:17:49	29	16:11:35	16	16:09:57	25
7/30/2018	16:32:49	27	16:26:35	15	16:24:57	28
7/30/2018	16:47:49	26	16:41:35	14	16:39:57	26
7/30/2018	17:02:49	23	16:56:35	11	16:54:57	31
7/30/2018	17:17:49	24	17:11:35	14	17:09:57	36
7/30/2018			17:26:35	13	17:24:57	27

AECOM

07/31/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
7/31/2018	7:32:56	46	7:26:53	47	7:25:11	39
7/31/2018	7:47:56	38	7:41:53	38	7:40:11	52
7/31/2018	8:02:56	35	7:56:53	34	7:55:11	33
7/31/2018	8:17:56	44	8:11:53	35	8:10:11	33
7/31/2018	8:32:56	40	8:26:53	46	8:25:11	46
7/31/2018	8:47:56	35	8:41:53	30	8:40:11	35
7/31/2018	9:02:56	36	8:56:53	31	8:55:11	35
7/31/2018	9:17:56	34	9:11:53	31	9:10:11	32
7/31/2018	9:32:56	32	9:26:53	28	9:25:11	31
7/31/2018	9:47:56	32	9:41:53	22	9:40:11	30
7/31/2018	10:02:56	31	9:56:53	23	9:55:11	30
7/31/2018	10:17:56	31	10:11:53	23	10:10:11	30
7/31/2018	10:32:56	34	10:26:53	24	10:25:11	31
7/31/2018	10:47:56	34	10:41:53	23	10:40:11	32
7/31/2018	11:02:56	33	10:56:53	25	10:55:11	33
7/31/2018	11:17:56	33	11:11:53	23	11:10:11	34
7/31/2018	11:32:56	30	11:26:53	21	11:25:11	30
7/31/2018	11:47:56	28	11:41:53	18	11:40:11	28
7/31/2018	12:02:56	27	11:56:53	19	11:55:11	31
7/31/2018	12:17:56	27	12:11:53	15	12:10:11	25
7/31/2018	12:32:56	28	12:26:53	16	12:25:11	28
7/31/2018	12:47:56	27	12:41:53	16	12:40:11	29
7/31/2018	13:02:56	27	12:56:53	16	12:55:11	26
7/31/2018	13:17:56	32	13:11:53	20	13:10:11	27
7/31/2018	13:32:56	26	13:26:53	15	13:25:11	29
7/31/2018	13:47:56	28	13:41:53	12	13:40:11	25
7/31/2018	14:02:56	32	13:56:53	15	13:55:11	27
7/31/2018	14:17:56	31	14:11:53	20	14:10:11	氈愀
7/31/2018	14:32:56	28	14:26:53	22	14:25:11	42
7/31/2018	14:47:56	35	14:41:53	22	14:40:11	56
7/31/2018	15:02:56	29	14:56:53	20	14:55:11	28
7/31/2018	15:17:56	30	15:11:53	15	15:10:11	26
7/31/2018	15:32:56	34	15:26:53	18	15:25:11	28
7/31/2018	15:47:56	32	15:41:53	15	15:40:11	27
7/31/2018	16:02:56	35	15:56:53	19	15:55:11	29
7/31/2018	16:17:56	42	16:11:53	19	16:10:11	30
7/31/2018	16:32:56	32	16:26:53	21	16:25:11	32
7/31/2018	16:47:56	30	16:41:53	21	16:40:11	35

08/1/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/1/2018	7:29:20	35	7:23:23	25	7:21:38	17
8/1/2018	7:44:20	68	7:38:23	40	7:36:38	26
8/1/2018	7:59:20	50	7:53:23	43	7:51:38	43
8/1/2018	8:14:20	33	8:08:23	24	8:06:58	21
8/1/2018	8:29:20	28	8:23:23	17	8:21:58	15
8/1/2018	8:44:20	17	8:38:23	16	8:36:58	16
8/1/2018	8:59:20	24	8:53:23	23	8:51:58	21
8/1/2018	9:14:20	23	9:08:23	17	9:06:58	21
8/1/2018	9:29:20	40	9:23:23	24	9:21:58	26
8/1/2018	9:44:20	25	9:38:23	19	9:36:58	21
8/1/2018	9:59:20	28	9:53:23	18	9:51:58	18
8/1/2018	10:14:20	25	10:08:23	20	10:06:58	25
8/1/2018	10:29:20	26	10:23:23	19	10:21:58	20
8/1/2018	10:44:20	19	10:38:23	23	10:36:58	21
8/1/2018	10:59:20	19	10:53:23	17	10:51:58	19
8/1/2018	11:14:20	20	11:08:23	22	11:06:58	21
8/1/2018	11:29:20	21	11:23:23	20	11:21:58	23
8/1/2018	11:44:20	22	11:38:23	18	11:36:58	20
8/1/2018	11:59:20	25	11:53:23	20	11:51:58	23
8/1/2018	12:14:20	24	12:08:23	21	12:06:58	22
8/1/2018	12:29:20	18	12:23:23	17	12:21:58	18
8/1/2018	12:44:20	17	12:38:23	16	12:36:58	19
8/1/2018	12:59:20	18	12:53:23	15	12:51:58	17
8/1/2018	13:14:20	20	13:08:23	15	13:06:58	18
8/1/2018	13:29:20	22	13:23:23	19	13:21:58	20
8/1/2018	13:44:20	20	13:38:23	17	13:36:58	19
8/1/2018	13:59:20	18	13:53:23	14	13:51:58	17
8/1/2018	14:14:20	18	14:08:23	16	14:06:58	20
8/1/2018	14:29:20	18	14:23:23	15	14:21:58	19
8/1/2018	14:44:20	10	14:38:23	8	14:36:58	14
8/1/2018	14:59:20	9	14:53:23	6	14:51:58	12
8/1/2018	15:14:20	9	15:08:23	4	15:06:58	10
8/1/2018	15:29:20	6	15:23:23	2	15:21:58	9
8/1/2018	15:44:20	5	15:38:23	0	15:36:58	7
8/1/2018	15:59:20	4	15:53:23	0	15:51:58	7
8/1/2018	16:14:20	6	16:08:23	0	16:06:58	7
8/1/2018	16:29:20	6	16:23:23	0	16:21:58	8
8/1/2018	16:44:20	6	16:38:23	0	16:36:58	7
8/1/2018	16:59:20	6	16:53:23	0	16:51:58	8
8/1/2018	17:14:20	7	17:08:23	0	17:06:58	11
8/1/2018	17:29:20	7			17:21:58	10

08/2//2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/2/2018	7:37:56	91	7:31:53	68	7:30:08	57
8/2/2018	7:52:56	58	7:46:53	57	7:45:08	49
8/2/2018	8:07:56	42	8:01:53	40	8:00:08	34
8/2/2018	8:22:56	43	8:16:53	37	8:15:08	35
8/2/2018	8:37:56	37	8:31:53	29	8:30:08	30
8/2/2018	8:52:56	35	8:46:53	27	8:45:08	28
8/2/2018	9:07:56	40	9:01:53	32	9:00:08	32
8/2/2018	9:22:56	30	9:16:53	25	9:15:08	27
8/2/2018	9:37:56	31	9:31:53	22	9:30:08	25
8/2/2018	9:52:56	30	9:46:53	24	9:45:08	27
8/2/2018	10:07:56	31	10:01:53	22	10:00:08	27
8/2/2018	10:22:56	30	10:16:53	22	10:15:08	27
8/2/2018	10:37:56	29	10:31:53	22	10:30:08	28
8/2/2018	10:52:56	29	10:46:53	21	10:45:08	28
8/2/2018	11:07:56	30	11:01:53	21	11:00:08	28
8/2/2018	11:22:56	28	11:16:53	22	11:15:08	28
8/2/2018	11:37:56	27	11:31:53	20	11:30:08	27
8/2/2018	11:52:56	24	11:46:53	12	11:45:08	23
8/2/2018	12:07:56	25	12:01:53	12	12:00:08	23
8/2/2018	12:22:56	26	12:16:53	17	12:15:08	25
8/2/2018	12:37:56	25	12:31:53	16	12:30:08	25
8/2/2018	12:52:56	23	12:46:53	12	12:45:08	22
8/2/2018	13:07:56	25	13:01:53	13	13:00:08	22
8/2/2018	13:22:56	25	13:16:53	13	13:15:08	24
8/2/2018	13:37:56	24	13:31:53	13	13:30:08	23
8/2/2018	13:52:56	25	13:46:53	13	13:45:08	23
8/2/2018	14:07:56	24	14:01:53	13	14:00:08	23
8/2/2018	14:22:56	23	14:16:53	13	14:15:08	23
8/2/2018	14:37:56	28	14:31:53	16	14:30:08	23
8/2/2018	14:52:56	30	14:46:53	20	14:45:08	25
8/2/2018	15:07:56	31	15:01:53	25	15:00:08	30
8/2/2018	15:22:56	28	15:16:53	22	15:15:08	27
8/2/2018	15:37:56	28	15:31:53	20	15:30:08	26
8/2/2018	15:52:56	29	15:46:53	17	15:45:08	24
8/2/2018	16:07:56	32	16:01:53	20	16:00:08	25
8/2/2018	16:22:56	25	16:16:53	20	16:15:08	24
8/2/2018	16:37:56	27	16:31:53	16	16:30:08	20

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading
7/30/2018	0940	0.0
7/30/2018	1045	0.0
7/30/2018	1135	0.0
7/30/2018	1245	0.0
7/30/2018	1345	0.0
7/30/2018	1450	0.0
7/30/2018	1540	0.0
7/30/2018	1645	0.0
7/31/2018	0830	0.0
7/31/2018	0930	0.0
7/31/2018	1130	0.0
7/31/2018	1330	0.0
7/31/2018	1530	0.0
8/1/2018	0930	0.0
8/1/2018	1100	0.0
8/1/2018	1250	0.0
8/1/2018	1440	0.0
8/1/2018	1630	0.0
8/2/2018	0900	0.0
8/2/2018	1040	0.0
8/2/2018	1220	0.0
8/2/2018	1400	0.0
8/3/2018	0900	0.0
8/3/2018	1030	0.0
8/3/2018	1140	0.0

Filename: WE 073018-BASF_Formatted.docx
Directory: P:\Jobs\Indl_Service\Project Files\BASF-0760\Rensselaer Design 2016_2018\600-CONSTRUCTION SUPPORT\601 Construction Documentation\Air monitoring data BASF 2018\Weekly Reports
Template: C:\Users\GardnerM1\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Gardner, Mike
Keywords:
Comments:
Creation Date: 8/15/2018 1:17:00 PM
Change Number: 2
Last Saved On: 8/15/2018 1:17:00 PM
Last Saved By: Gardner, Mike
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Number of Characters: 9,383 (approx.)

Weekly CAMP Monitoring Report # 8
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday August 10th, 2018, main activities included installing the metal sheets into the ground, tie rod fabrication and installation, soil removal along the trench line and core drilling. Terraforming of the South end of the worksite in preparation for the tent structure installation continued. Daily temperatures averaged from the mid 80's to low 90's, with high humidity throughout the week. There was a thunderstorm on 8/7 at 1235, as well as rain showers on 8/8 at 1440..

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period. All PID measurements were recorded by hand.

The particulate and VOC action levels were not exceeded during the monitoring period. Elevated particulate readings were recorded at all three monitoring locations during the morning of 08/07/18. Site activities were not generating visible dust during this period.

AECOM

08/6/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/6/2018	7:27:09	87	7:21:08	95	7:19:33	72
8/6/2018	7:42:09	64	7:36:08	69	7:34:33	57
8/6/2018	7:57:09	49	7:51:08	51	7:49:33	45
8/6/2018	8:12:09	50	8:06:08	45	8:04:33	41
8/6/2018	8:27:09	48	8:21:08	47	8:19:33	45
8/6/2018	8:42:09	49	8:36:08	43	8:34:33	44
8/6/2018	8:57:09	47	8:51:08	44	8:49:33	45
8/6/2018	9:12:09	48	9:06:08	44	9:04:33	44
8/6/2018	9:27:09	48	9:21:08	44	9:19:33	45
8/6/2018	9:42:09	45	9:36:08	42	9:34:33	42
8/6/2018	9:57:09	44	9:51:08	39	9:49:33	48
8/6/2018	10:12:09	44	10:06:08	40	10:04:33	49
8/6/2018	10:27:09	43	10:21:08	37	10:19:33	45
8/6/2018	10:42:09	44	10:36:08	37	10:34:33	42
8/6/2018	10:57:09	44	10:51:08	36	10:49:33	49
8/6/2018	11:12:09	44	11:06:08	38	11:04:33	48
8/6/2018	11:27:09	44	11:21:08	36	11:19:33	47
8/6/2018	11:42:09	45	11:36:08	42	11:34:33	43
8/6/2018	11:57:09	45	11:51:08	41	11:49:33	45
8/6/2018	12:12:09	43	12:06:08	33	12:04:33	39
8/6/2018	12:27:09	43	12:21:08	32	12:19:33	39
8/6/2018	12:42:09	45	12:36:08	32	12:34:33	41
8/6/2018	12:57:09	46	12:51:08	35	12:49:33	46
8/6/2018	13:12:09	46	13:06:08	39	13:04:33	44
8/6/2018	13:27:09	47	13:21:08	36	13:19:33	53
8/6/2018	13:42:09	48	13:36:08	37	13:34:33	50
8/6/2018	13:57:09	48	13:51:08	44	13:49:33	51
8/6/2018	14:12:09	49	14:06:08	40	14:04:33	46
8/6/2018	14:27:09	48	14:21:08	38	14:19:33	45
8/6/2018	14:42:09	51	14:36:08	44	14:34:33	53
8/6/2018	14:57:09	51	14:51:08	45	14:49:33	58
8/6/2018	15:12:09	51	15:06:08	43	15:04:33	67
8/6/2018	15:27:09	51	15:21:08	43	15:19:33	49
8/6/2018	15:42:09	52	15:36:08	44	15:34:33	49
8/6/2018	15:57:09	53	15:51:08	41	15:49:33	54
8/6/2018	16:12:09	50	16:06:08	42	16:04:33	50
8/6/2018	16:27:09	48	16:21:08	54	16:19:33	64
8/6/2018			16:36:08	40	16:34:33	47

08/7/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/7/2018	7:21:36	112	7:15:33	109	7:13:22	98
8/7/2018	7:36:36	93	7:30:33	94	7:28:22	87
8/7/2018	7:51:36	88	7:45:33	80	7:43:22	76
8/7/2018	8:06:36	82	8:00:33	77	7:58:22	72
8/7/2018	8:21:36	76	8:15:33	72	8:13:22	74
8/7/2018	8:36:36	72	8:30:33	72	8:28:22	90
8/7/2018	8:51:36	80	8:45:33	70	8:43:22	109
8/7/2018	9:06:36	77	9:00:33	73	8:58:22	89
8/7/2018	9:21:36	78	9:15:33	74	9:13:22	90
8/7/2018	9:36:36	75	9:30:33	81	9:28:22	65
8/7/2018	9:51:36	68	9:45:33	70	9:43:22	73
8/7/2018	10:06:36	74	10:00:33	73	9:58:22	70
8/7/2018	10:21:36	71	10:15:33	70	10:13:22	65
8/7/2018	10:36:36	75	10:30:33	76	10:28:22	70
8/7/2018	10:51:36	68	10:45:33	73	10:43:22	62
8/7/2018	11:06:36	68	11:00:33	65	10:58:22	61
8/7/2018	11:21:36	65	11:15:33	63	11:13:22	72
8/7/2018	11:36:36	68	11:30:33	63	11:28:22	60
8/7/2018	11:51:36	63	11:45:33	69	11:43:22	69
8/7/2018	12:06:36	62	12:00:33	58	11:58:22	57
8/7/2018	12:21:36	67	12:15:33	56	12:13:22	59
8/7/2018	12:36:36	59	12:30:33	64	12:28:22	64
8/7/2018	12:51:36	39	12:45:33	40	12:43:22	45
8/7/2018	13:06:36	38	13:00:33	35	12:58:22	39
8/7/2018	13:21:36	38	13:15:33	37	13:13:22	40
8/7/2018	13:36:36	40	13:30:33	33	13:28:22	37
8/7/2018	13:51:36	44	13:45:33	39	13:43:22	41
8/7/2018	14:06:36	46	14:00:33	41	13:58:22	44
8/7/2018	14:21:36	50	14:15:33	44	14:13:22	45
8/7/2018	14:36:36	53	14:30:33	48	14:28:22	47
8/7/2018	14:51:36	50	14:45:33	60	14:43:22	55
8/7/2018	15:06:36	28	15:00:33	72	14:58:22	31

08/8/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/8/2018	7:25:34	64	7:19:27	62	7:17:33	51
8/8/2018	7:40:34	56	7:34:27	69	7:32:33	48
8/8/2018	7:55:34	42	7:49:27	56	7:47:33	45
8/8/2018	8:10:34	34	8:04:27	39	8:02:33	35
8/8/2018	8:25:34	35	8:19:27	43	8:17:33	36
8/8/2018	8:40:34	36	8:34:27	37	8:32:33	45
8/8/2018	8:55:34	35	8:49:27	34	8:47:33	39
8/8/2018	9:10:34	37	9:04:27	33	9:02:33	37
8/8/2018	9:25:34	44	9:19:27	39	9:17:33	43
8/8/2018	9:40:34	42	9:34:27	37	9:32:33	42
8/8/2018	9:55:34	43	9:49:27	39	9:47:33	40
8/8/2018	10:10:34	37	10:04:27	37	10:02:33	39
8/8/2018	10:25:34	37	10:19:27	32	10:17:33	39
8/8/2018	10:40:34	37	10:34:27	32	10:32:33	42
8/8/2018	10:55:34	37	10:49:27	30	10:47:33	37
8/8/2018	11:10:34	35	11:04:27	30	11:02:33	35
8/8/2018	11:25:34	35	11:19:27	35	11:17:33	39
8/8/2018	11:40:34	34	11:34:27	30	11:32:33	43
8/8/2018	11:55:34	37	11:49:27	30	11:47:33	41
8/8/2018	12:10:34	37	12:04:27	28	12:02:33	40
8/8/2018	12:25:34	33	12:19:27	28	12:17:33	34
8/8/2018	12:40:34	36	12:34:27	20	12:32:33	27
8/8/2018	12:55:34	37	12:49:27	27	12:47:33	35
8/8/2018	13:10:34	36	13:04:27	26	13:02:33	33
8/8/2018	13:25:34	34	13:19:27	26	13:17:33	32
8/8/2018	13:40:34	33	13:34:27	25	13:32:33	31
8/8/2018	13:55:34	31	13:49:27	40	13:47:33	52
8/8/2018	14:10:34	33	14:04:27	25	14:02:33	45
8/8/2018	14:25:34	33	14:19:27	26	14:17:33	42
8/8/2018	14:40:34	43	14:34:27	31	14:32:33	36
8/8/2018	14:55:34	33	14:49:27	31	14:47:33	36
8/8/2018	15:10:34	26	15:04:27	19	15:02:33	25

AECOM

08/9/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/9/2018	7:18:49	34	7:25:48	60	7:16:07	29
8/9/2018	7:33:49	33	7:40:48	45	7:31:07	29
8/9/2018	7:48:49	34	7:55:48	45	7:46:07	41
8/9/2018	8:03:49	71	8:10:48	52	8:01:07	38
8/9/2018	8:18:49	49	8:25:48	46	8:16:07	33
8/9/2018	8:33:49	32	8:40:48	37	8:31:07	28
8/9/2018	8:48:49	32	8:55:48	35	8:46:07	38
8/9/2018	9:03:49	33	9:10:48	34	9:01:07	37
8/9/2018	9:18:49	62	9:25:48	29	9:16:07	35
8/9/2018	9:33:49	25	9:40:48	16	9:31:07	25
8/9/2018	9:48:49	17	9:55:48	9	9:46:07	17
8/9/2018	10:03:49	16	10:10:48	9	10:01:07	16
8/9/2018	10:18:49	16	10:25:48	10	10:16:07	16
8/9/2018	10:33:49	19	10:40:48	9	10:31:07	17
8/9/2018	10:48:49	18	10:55:48	11	10:46:07	18
8/9/2018	11:03:49	20	11:10:48	13	11:01:07	19
8/9/2018	11:18:49	21	11:25:48	13	11:16:07	20
8/9/2018	11:33:49	21	11:40:48	11	11:31:07	20
8/9/2018	11:48:49	21	11:55:48	12	11:46:07	21
8/9/2018	12:03:49	22	12:10:48	12	12:01:07	21
8/9/2018	12:18:49	22	12:25:48	13	12:16:07	21
8/9/2018	12:33:49	23	12:40:48	14	12:31:07	22
8/9/2018	12:48:49	24	12:55:48	15	12:46:07	23
8/9/2018	13:03:49	24	13:10:48	15	13:01:07	24
8/9/2018	13:18:49	25	13:25:48	15	13:16:07	25
8/9/2018	13:33:49	25	13:40:48	16	13:31:07	25
8/9/2018	13:48:49	26	13:55:48	17	13:46:07	25
8/9/2018	14:03:49	28	14:10:48	21	14:01:07	27
8/9/2018	14:18:49	33	14:25:48	29	14:16:07	31
8/9/2018	14:33:49	43	14:40:48	36	14:31:07	39
8/9/2018	14:48:49	47	14:55:48	39	14:46:07	43
8/9/2018	15:03:49	51	15:10:48	43	15:01:07	46
8/9/2018	15:18:49	54	15:25:48	46	15:16:07	49
8/9/2018	15:33:49	56	15:40:48	47	15:31:07	51
8/9/2018	15:48:49	55	15:55:48	44	15:46:07	51
8/9/2018	16:03:49	54	16:10:48	44	16:01:07	49
8/9/2018	16:18:49	55	16:25:48	46	16:16:07	50
8/9/2018	16:33:49	58	16:40:48	50	16:31:07	51
8/9/2018	16:48:49	60	16:55:48	54	16:46:07	54
8/9/2018	17:03:49	67	17:10:48	62	17:01:07	59
8/9/2018	17:18:49	74	17:25:48	68	17:16:07	66
8/9/2018	17:33:49	80	17:40:48	73	17:31:07	71
8/9/2018	17:48:49	83	17:55:48	74	17:46:07	74

AECOM

08/10/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/10/2018	7:12:44	65	7:19:20	78	7:09:57	53
8/10/2018	7:27:44	72	7:34:20	64	7:24:57	64
8/10/2018	7:42:44	53	7:49:20	61	7:39:57	48
8/10/2018	7:57:44	63	8:04:20	64	7:54:57	55
8/10/2018	8:12:44	80	8:19:20	70	8:09:57	62
8/10/2018	8:27:44	61	8:34:20	55	8:24:57	54
8/10/2018	8:42:44	54	8:49:20	53	8:39:57	48
8/10/2018	8:57:44	55	9:04:20	48	8:54:57	49
8/10/2018	9:12:44	46	9:19:20	38	9:09:57	42
8/10/2018	9:27:44	40	9:34:20	31	9:24:57	37
8/10/2018	9:42:44	38	9:49:20	32	9:39:57	35
8/10/2018	9:57:44	38	10:04:20	36	9:54:57	35
8/10/2018	10:12:44	39	10:19:20	31	10:09:57	35
8/10/2018	10:27:44	39	10:34:20	33	10:24:57	36
8/10/2018	10:42:44	39	10:49:20	37	10:39:57	35
8/10/2018	10:57:44	42	11:04:20	38	10:54:57	37
8/10/2018	11:12:44	43	11:19:20	39	11:09:57	39
8/10/2018	11:27:44	43	11:34:20	40	11:24:57	39
8/10/2018	11:42:44	43	11:49:20	45	11:39:57	38
8/10/2018	11:57:44	43	12:04:20	43	11:54:57	40
8/10/2018	12:12:44	42	12:19:20	50	12:09:57	38
8/10/2018	12:27:44	41	12:34:20	39	12:24:57	38
8/10/2018	12:42:44	42	12:49:20	39	12:39:57	38
8/10/2018	12:57:44	41	13:04:20	38	12:54:57	37
8/10/2018	13:12:44	40	13:19:20	35	13:09:57	37
8/10/2018	13:27:44	40	13:34:20	34	13:24:57	36
8/10/2018	13:42:44	39	13:49:20	33	13:39:57	36
8/10/2018	13:57:44	35	14:04:20	30	13:54:57	33
8/10/2018	14:12:44	33	14:19:20	28	14:09:57	30
8/10/2018	14:27:44	33	14:34:20	26	14:24:57	31
8/10/2018	14:42:44	30	14:49:20	36	14:39:57	28
8/10/2018	14:57:44	30	15:04:20	30	14:54:57	28

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading
8/6/2018	0900	0.0
8/6/2018	1020	0.0
8/6/2018	1145	0.0
8/6/2018	1350	0.0
8/6/2018	1515	0.0
8/6/2018	1650	0.0
8/7/2018	0855	0.0
8/7/2018	1055	0.0
8/7/2018	1200	0.0
8/7/2018	1330	0.0
8/8/2018	0855	0.0
8/8/2018	1020	0.0
8/8/2018	1150	0.0
8/8/2018	1320	0.0
8/9/2018	0840	0.0
8/9/2018	1000	0.0
8/9/2018	1130	0.0
8/9/2018	1420	0.0
8/9/2018	1550	0.0
8/9/2018	1720	0.0
8/10/2018	0830	0.0
8/10/2018	1010	0.0
8/10/2018	1140	0.0
8/10/2018	1320	0.0

Filename: WE 080618-BASF_Formatted.docx
Directory: P:\Jobs\Indl_Service\Project Files\BASF-0760\Rensselaer Design 2016_2018\600-CONSTRUCTION SUPPORT\601 Construction Documentation\Air monitoring data BASF 2018\Weekly Reports
Template: C:\Users\GardnerM1\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Gardner, Mike
Keywords:
Comments:
Creation Date: 8/15/2018 1:20:00 PM
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Weekly CAMP Monitoring Report # 9
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday August 17th, 2018, main activities included installation of the nylon liner over the TFS. Rain showers throughout the week slowed progress, but by Friday the TFS was nearing completion.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period. All PID measurements were recorded by hand.

There were elevated dust readings in the upwind station AMS-01and AMS -02 on Thursday, 8/16, as well as 17 dust exceedances on Friday, 8/17. The data displayed by the AMS's during this time was skewed due to the high humidity and light rain showers that the site received for the first half of the day. There was no visual dust identified leaving the worksite during these days. There were no PID exceedances to report for this week.

AECOM

08/13/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/13/2018	7:23:26	26	7:27:09	28	7:20:48	24
8/13/2018	7:38:26	22	7:42:09	24	7:35:48	20
8/13/2018	7:53:26	23	7:57:09	22	7:50:48	20
8/13/2018	8:08:26	23	8:12:09	19	8:05:48	21
8/13/2018	8:23:26	23	8:27:09	19	8:20:48	21
8/13/2018	8:38:26	22	8:42:09	19	8:35:48	20
8/13/2018	8:53:26	22	8:57:09	19	8:50:48	21
8/13/2018	9:08:26	23	9:12:09	19	9:05:48	22
8/13/2018	9:23:26	21	9:27:09	18	9:20:48	21
8/13/2018	9:38:26	21	9:42:09	18	9:35:48	20
8/13/2018	9:53:26	20	9:57:09	17	9:50:48	20
8/13/2018	10:08:26	20	10:12:09	18	10:05:48	20
8/13/2018	10:23:26	20	10:27:09	16	10:20:48	20
8/13/2018	10:38:26	20	10:42:09	14	10:35:48	20
8/13/2018	10:53:26	19	10:57:09	14	10:50:48	19
8/13/2018	11:08:26	20	11:12:09	14	11:05:48	20
8/13/2018	11:23:26	20	11:27:09	15	11:20:48	20
8/13/2018	11:38:26	21	11:42:09	15	11:35:48	21
8/13/2018	11:53:26	20	11:57:09	13	11:50:48	20
8/13/2018	12:08:26	18	12:12:09	12	12:05:48	19
8/13/2018	12:23:26	19	12:27:09	13	12:20:48	19
8/13/2018	12:38:26	20	12:42:09	14	12:35:48	21
8/13/2018	12:53:26	22	12:57:09	16	12:50:48	22
8/13/2018	13:08:26	21	13:12:09	15	13:05:48	22
8/13/2018	13:23:26	21	13:27:09	15	13:20:48	22
8/13/2018	13:38:26	22	13:42:09	15	13:35:48	22
8/13/2018	13:53:26	22	13:57:09	12	13:50:48	22
8/13/2018	14:08:26	21	14:12:09	12	14:05:48	21
8/13/2018	14:23:26	20	14:27:09	10	14:20:48	21
8/13/2018	14:38:26	18	14:42:09	13	14:35:48	19
8/13/2018	14:53:26	26	14:57:09	16	14:50:48	27
8/13/2018	15:08:26	24	15:12:09	15	15:05:48	24
8/13/2018	15:23:26	24	15:27:09	16	15:20:48	26
8/13/2018	15:38:26	26	15:42:09	15	15:35:48	34
8/13/2018	15:53:26	25	15:57:09	14	15:50:48	43
8/13/2018	16:08:26	24	16:12:09	14	16:05:48	30
8/13/2018	16:23:26	20	16:27:09	10	16:20:48	22
8/13/2018	16:38:26	16	16:42:09	8	16:35:48	18
8/13/2018	16:53:26	16	16:57:09	6	16:50:48	17

08/14/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/14/2018	7:27:07	13	7:19:43	12	7:17:54	10
8/14/2018	7:42:07	14	7:34:43	10	7:32:54	8
8/14/2018	7:57:07	8	7:49:43	9	7:47:54	8
8/14/2018	8:12:07	9	8:04:43	7	8:02:54	9
8/14/2018	8:27:07	12	8:19:43	6	8:17:54	10
8/14/2018	8:42:07	12	8:34:43	8	8:32:54	11
8/14/2018	8:57:07	12	8:49:43	7	8:47:54	10
8/14/2018	9:12:07	11	9:04:43	5	9:02:54	11
8/14/2018	9:27:07	14	9:19:43	5	9:17:54	11
8/14/2018	9:42:07	19	9:34:43	7	9:32:54	13
8/14/2018	9:57:07	18	9:49:43	9	9:47:54	15
8/14/2018	10:12:07	19	10:04:43	10	10:02:54	16
8/14/2018	10:27:07	17	10:19:43	8	10:17:54	16
8/14/2018	10:42:07	17	10:34:43	11	10:32:54	17
8/14/2018	10:57:07	24	10:49:43	7	10:47:54	29
8/14/2018	11:12:07	24	11:04:43	13	11:02:54	34
8/14/2018	11:27:07	20	11:19:43	32	11:17:54	27
8/14/2018	11:42:07	25	11:34:43	27	11:32:54	20
8/14/2018	11:57:07	22	11:49:43	17	11:47:54	29
8/14/2018	12:12:07	18	12:04:43	10	12:02:54	19
8/14/2018	12:27:07	20	12:19:43	10	12:17:54	18
8/14/2018	12:42:07	24	12:34:43	14	12:32:54	19
8/14/2018	12:57:07	19	12:49:43	11	12:47:54	24
8/14/2018	13:12:07	20	13:04:43	10	13:02:54	19
8/14/2018	13:27:07	20	13:19:43	11	13:17:54	20
8/14/2018	13:42:07	21	13:34:43	11	13:32:54	20
8/14/2018	13:57:07	22	13:49:43	12	13:47:54	21
8/14/2018	14:12:07	31	14:04:43	11	14:02:54	22
8/14/2018	14:27:07	21	14:19:43	15	14:17:54	28
8/14/2018	14:42:07	23	14:34:43	10	14:32:54	25
8/14/2018	14:57:07	21	14:49:43	10	14:47:54	20
8/14/2018	15:12:07	25	15:04:43	13	15:02:54	22
8/14/2018	15:27:07	30	15:19:43	12	15:17:54	20
8/14/2018	15:42:07	23	15:34:43	12	15:32:54	24
8/14/2018	15:57:07	24	15:49:43	11	15:47:54	24
8/14/2018	16:12:07	22	16:04:43	12	16:02:54	23
8/14/2018	16:27:07	20	16:19:43	12	16:17:54	23
8/14/2018	16:42:07	19	16:34:43	14	16:32:54	33
8/14/2018	16:57:07	18	16:49:43	10	16:47:54	23
8/14/2018	17:12:07	19	17:04:43	9	17:02:54	19
8/14/2018	17:27:07	15	17:19:43	8	17:17:54	20
8/14/2018	17:42:07	14	17:34:43	8	17:32:54	16

AECOM

08/15/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/15/2018	7:21:57	26	9:13:53	2	7:12:42	26
8/15/2018	7:36:57	20	9:28:53	1	7:27:42	20
8/15/2018	7:51:57	18	9:43:53	1	7:42:42	19
8/15/2018	8:06:57	16	9:58:53	1	7:57:42	13
8/15/2018	8:21:57	20	10:13:53	1	8:12:42	19
8/15/2018	8:36:57	19	10:28:53	0	8:27:42	20
8/15/2018	8:51:57	23	10:43:53	0	8:42:42	21
8/15/2018	9:06:57	26	10:58:53	0	8:57:42	23
8/15/2018	9:21:57	34	11:13:53	0	9:12:42	27
8/15/2018	9:36:57	40	11:28:53	0	9:27:42	31
8/15/2018	9:51:57	39	11:43:53	0	9:42:42	34
8/15/2018	10:06:57	40	11:58:53	0	9:57:42	35
8/15/2018	10:21:57	42	12:13:53	0	10:12:42	35
8/15/2018	10:36:57	44	12:28:53	0	10:27:42	38
8/15/2018	10:51:57	41	12:43:53	0	10:42:42	37
8/15/2018	11:06:57	42	13:14:41	5	10:57:42	36
8/15/2018	11:21:57	42	13:29:41	5	11:12:42	37
8/15/2018	11:36:57	42	13:44:41	5	11:27:42	37
8/15/2018	11:51:57	41	13:59:41	5	11:42:42	37
8/15/2018	12:06:57	42	14:14:41	5	11:57:42	37
8/15/2018	12:21:57	43	14:29:41	5	12:12:42	38
8/15/2018	12:36:57	44	14:44:41	5	12:27:42	39
8/15/2018	12:51:57	50	14:59:41	5	12:42:42	41
8/15/2018	13:06:57	48	15:14:41	5	12:57:42	43
8/15/2018	13:21:57	51	15:29:41	5	13:12:42	44
8/15/2018	13:36:57	51	15:44:41	5	13:27:42	46
8/15/2018	13:51:57	56	15:59:41	5	13:42:42	46
8/15/2018	14:06:57	64	16:14:41	5	13:57:42	53
8/15/2018	14:21:57	64	16:29:41	5	14:12:42	57
8/15/2018	14:36:57	63	16:44:41	5	14:27:42	56
8/15/2018	14:51:57	63	16:59:41	5	14:42:42	55
8/15/2018	15:06:57	64	17:14:41	6	14:57:42	53
8/15/2018	15:21:57	65	17:29:41	6	15:12:42	57
8/15/2018	15:36:57	67	17:44:41	6	15:27:42	61
8/15/2018	15:51:57	69	17:59:41	6	15:42:42	59
8/15/2018	16:06:57	69	18:14:41	6	15:57:42	60
8/15/2018	16:21:57	70			16:12:42	61
8/15/2018	16:36:57	71			16:27:42	61
8/15/2018	16:51:57	71			16:42:42	61
8/15/2018	17:06:57	72			16:57:42	62
8/15/2018	17:21:57	73			17:12:42	63
8/15/2018	17:36:57	74			17:27:42	64
8/15/2018	17:51:57	74			17:42:42	64
8/15/2018	18:06:57	75			17:57:42	65
8/15/2018	18:21:57	75			18:12:42	66

AECOM

08/16/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/16/2018	7:30:25	145	7:24:17	6	7:22:45	114
8/16/2018	7:45:25	104	7:39:17	5	7:37:45	104
8/16/2018	8:00:25	106	7:54:17	4	7:52:45	90
8/16/2018	8:15:25	96	8:09:17	3	8:07:45	94
8/16/2018	8:30:25	101	8:24:17	3	8:22:45	92
8/16/2018	8:45:25	97	8:39:17	2	8:37:45	93
8/16/2018	9:00:25	103	8:54:17	1	8:52:45	84
8/16/2018	9:15:25	95	9:09:17	0	9:07:45	81
8/16/2018	9:30:25	89	9:24:17	0	9:22:45	75
8/16/2018	9:45:25	86	9:39:17	0	9:37:45	72
8/16/2018	10:00:25	80	9:54:17	0	9:52:45	68
8/16/2018	10:15:25	78	10:09:17	0	10:07:45	66
8/16/2018	10:30:25	75	10:24:17	0	10:22:45	65
8/16/2018	10:45:25	73	10:39:17	0	10:37:45	63
8/16/2018	11:00:25	72	10:54:17	0	10:52:45	62
8/16/2018	11:15:25	71	11:09:17	0	11:07:45	61
8/16/2018	11:30:25	70	11:24:17	0	11:22:45	61
8/16/2018	11:45:25	69	11:39:17	0	11:37:45	60
8/16/2018	12:00:25	68	11:54:17	0	11:52:45	60
8/16/2018	12:15:25	67	12:09:17	0	12:07:45	59
8/16/2018	12:30:25	67	12:24:17	0	12:22:45	58
8/16/2018	12:45:25	67	12:39:17	0	12:37:45	58
8/16/2018	13:00:25	67	12:54:17	0	12:52:45	58
8/16/2018	13:15:25	66	13:09:17	0	13:07:45	58
8/16/2018	13:30:25	65	13:24:17	0	13:22:45	57
8/16/2018	13:45:25	64	13:44:19	0	13:37:45	57
8/16/2018	14:00:25	64	13:59:19	0	13:52:45	58
8/16/2018	14:15:25	64	14:14:19	-1	14:07:45	56
8/16/2018	14:30:25	63	14:29:19	-1	14:22:45	55
8/16/2018	14:45:25	63	14:44:19	-1	14:37:45	55
8/16/2018	15:00:25	63	15:13:39	1	14:52:45	55
8/16/2018	15:15:25	62	15:28:39	1	15:07:45	55
8/16/2018	15:30:25	67	15:43:39	1	15:22:45	55
8/16/2018	15:45:25	65	15:58:39	1	15:37:45	76
8/16/2018	16:00:25	65	16:13:39	1	15:52:45	66
8/16/2018	16:15:25	63	16:28:39	1	16:07:45	56
8/16/2018	16:30:25	63	16:43:39	1	16:22:45	56
8/16/2018	16:45:25	64	16:58:39	1	16:37:45	56
8/16/2018	17:00:25	64	17:13:39	1	16:52:45	56
8/16/2018	17:15:25	65			17:07:45	58

AECOM

08/17/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m^3)	Time	AMS-03 (ug/m^3)	Time	AMS-02 (ug/m^3)
8/17/2018	7:28:16	104	7:20:36	5	7:19:00	103
8/17/2018	7:43:16	98	7:35:36	4	7:34:00	79
8/17/2018	7:58:16	109	7:50:36	3	7:49:00	76
8/17/2018	8:13:16	113	8:05:36	2	8:04:00	80
8/17/2018	8:28:16	111	8:20:36	2	8:19:00	83
8/17/2018	8:43:16	112	8:35:36	2	8:34:00	83
8/17/2018	8:58:16	102	8:50:36	1	8:49:00	89
8/17/2018	9:13:16	99	9:05:36	1	9:04:00	80
8/17/2018	9:28:16	98	9:20:36	1	9:19:00	82
8/17/2018	9:43:16	102	9:35:36	1	9:34:00	99
8/17/2018	9:58:16	101	9:50:36	1	9:49:00	89
8/17/2018	10:13:16	101	10:05:36	1	10:04:00	87
8/17/2018	10:28:16	100	10:20:36	1	10:19:00	83
8/17/2018	10:43:16	101	10:44:45	1	10:34:00	84
8/17/2018	10:58:16	101	10:59:45	1	10:49:00	85
8/17/2018	11:13:16	102	11:14:45	1	11:04:00	88
8/17/2018	11:28:16	107	11:29:45	0	11:19:00	85
8/17/2018	11:43:16	100	11:44:45	0	11:34:00	83
8/17/2018	11:58:16	99	11:59:45	0	11:49:00	89
8/17/2018	12:13:16	101	12:14:45	0	12:04:00	86
8/17/2018	12:28:16	99	12:29:45	0	12:19:00	86
8/17/2018	12:43:16	98	12:44:45	0	12:34:00	84
8/17/2018	12:58:16	94	12:59:45	0	12:49:00	82
8/17/2018	13:13:16	94	13:14:45	0	13:04:00	80
8/17/2018	13:28:16	95	13:29:45	0	13:19:00	81
8/17/2018	13:43:16	95	13:44:45	0	13:34:00	81
8/17/2018	13:58:16	95	13:59:45	0	13:49:00	81
8/17/2018	14:13:16	91	14:14:45	0	14:04:00	81
8/17/2018	14:28:16	91	14:29:45	0	14:19:00	80
8/17/2018	14:43:16	72	14:44:45	0	14:34:00	63
8/17/2018	14:58:16	70	14:59:45	0	14:49:00	59
8/17/2018	15:13:16	69	15:14:45	0	15:04:00	57
8/17/2018	15:28:16	67	15:29:45	0	15:19:00	56
8/17/2018	15:43:16	68	15:44:45	0	15:34:00	57
8/17/2018	15:58:16	70			15:49:00	59

AECOM

PID Readings, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Time	Reading

Filename: WE 081318-BASF_Formatted.docx
Directory: C:\Users\GardnerM1\Documents
Template: C:\Users\GardnerM1\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title:
Subject:
Author: Gardner, Mike
Keywords:
Comments:
Creation Date: 8/13/2018 11:10:00 AM
Change Number: 7
Last Saved On: 9/25/2018 9:10:00 AM
Last Saved By: Gardner, Mike
Total Editing Time: 32 Minutes
Last Printed On: 9/25/2018 9:10:00 AM
As of Last Complete Printing
Number of Pages: 7
Number of Words: 1,876 (approx.)
Number of Characters: 10,696 (approx.)

AECOM

Weekly CAMP Monitoring Report # 10
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.
During upland site preparation activities, AECOM is performing the perimeter air monitoring in accordance with the Community Air Monitoring Plan (CAMP) for OU1 presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday August 24th, 2018, main activities included tie rod fabrication and installation, soil removal along the trench line and core drilling, terraforming of the south end of the worksite in preparation for the tent structure installation continued.

MONITORING LOCATIONS AND DURATION

Fence-line monitoring was conducted during site work hours only.
Daily locations of particulate monitoring stations were determined based on wind direction established from a meteorological station located on-site. These included:

- A PM10 air monitoring station located upwind of site activities (Station AMS-01)
- A PM10 air monitoring station located downwind of site activities (Station AMS-03)
- A PM10 air monitoring station located on the east site fence-line approximately 50 ft. from the NE corner, near the Albany Molecular parking area (Station AMS-02).
- TVOC monitoring was also conducted downwind at AMS-03 during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the 15-minute average PM-10 concentration at the downwind AMS is 100 µg/m3 greater than background (upwind AMS concentration), if visible dust is observed leaving the site perimeter, or if the 15-minute average concentration of total volatile organic compounds (TVOC) at the downwind AMS exceeds 5 parts per million (ppm) above background.

There were no PM10 or TVOC exceedances during the week ending August 24, 2018.

AECOM

Date	Up Wind		Down Wind		Building		Down Wind TVOC	
		AMS01		AMS03		AMS02		AMS03
	Time	mg/m^3	Time	mg/m^3	Time	mg/m^3	Time	ppm
8/20/2018	7:40:16	0.04	7:38:36	0.002	7:38:10	0.041	8:38:36	0
8/20/2018	7:55:16	0.037	7:53:36	0.001	7:53:10	0.032	8:50:36	0.1
8/20/2018	8:10:16	0.037	8:08:36	0	8:08:10	0.037	9:02:36	0.1
8/20/2018	8:25:16	0.034	8:23:36	0	8:23:10	0.032	9:14:36	0.1
8/20/2018	8:40:16	0.028	8:38:36	0	8:38:10	0.026	9:26:36	0.1
8/20/2018	8:55:16	0.024	8:53:36	0	8:53:10	0.023	9:38:36	0.1
8/20/2018	9:10:16	0.023	9:08:36	0	9:08:10	0.022	9:50:36	0.1
8/20/2018	9:25:16	0.02	9:23:36	0	9:23:10	0.02	10:02:36	0.2
8/20/2018	9:40:16	0.02	9:38:36	0	9:38:10	0.02	10:14:36	0.2
8/20/2018	9:55:16	0.02	9:53:36	0	9:53:10	0.02	10:26:36	0.2
8/20/2018	10:10:16	0.019	10:08:36	0	10:08:10	0.019	10:38:36	0.2
8/20/2018	10:25:16	0.019	10:39:35	0.007	10:23:10	0.019	10:50:36	0.2
8/20/2018	10:40:16	0.018	10:54:35	0.007	10:38:10	0.019	11:02:36	0.3
8/20/2018	10:55:16	0.017	11:09:35	0.006	10:53:10	0.018	11:14:36	0.3
8/20/2018	11:10:16	0.017	11:24:35	0.006	11:08:10	0.017	11:26:36	0.3
8/20/2018	11:25:16	0.015	11:39:35	0.006	11:23:10	0.015	11:38:36	0.3
8/20/2018	11:40:16	0.015	11:54:35	0.006	11:38:10	0.016	11:50:36	0.3
8/20/2018	11:55:16	0.016	12:09:35	0.006	11:53:10	0.017	12:02:36	0.3
8/20/2018	12:10:16	0.014	12:24:35	0.006	12:08:10	0.014	12:14:36	0.2
8/20/2018	12:25:16	0.015	12:39:35	0.006	12:23:10	0.015	12:26:36	0.2
8/20/2018	12:40:16	0.015	12:54:35	0.006	12:38:10	0.016	12:38:36	0.2
8/20/2018	12:55:16	0.014	13:09:35	0.006	12:53:10	0.015	12:50:36	0.2
8/20/2018	13:10:16	0.012	13:24:35	0.006	13:08:10	0.013	1:02:36	0.2
8/20/2018	13:25:16	0.011	13:39:35	0.006	13:23:10	0.012	1:14:36	0.2
8/20/2018	13:40:16	0.012	13:54:35	0.006	13:38:10	0.013	1:26:36	0.2
8/20/2018	13:55:16	0.011	14:09:35	0.006	13:53:10	0.012	1:38:36	0.2
8/20/2018	14:10:16	0.011	14:24:35	0.006	14:08:10	0.013	1:50:36	0.2
8/20/2018	14:25:16	0.011	14:39:35	0.006	14:23:10	0.012	2:02:36	0.1
8/20/2018	14:40:16	0.011	14:54:35	0.006	14:38:10	0.012	2:14:36	0.1
8/20/2018	14:55:16	0.012	15:09:35	0.006	14:53:10	0.013	2:26:36	0.2
8/20/2018	15:10:16	0.012	15:24:35	0.006	15:08:10	0.013	2:38:36	0.2
8/20/2018	15:25:16	0.012	15:39:35	0.006	15:23:10	0.013	2:50:36	0.2
8/20/2018	15:40:16	0.012	15:54:35	0.006	15:38:10	0.013	3:02:36	0.1
8/20/2018	15:55:16	0.012	16:09:35	0.006	15:53:10	0.013	3:14:36	0.1
8/20/2018	16:10:16	0.013	16:24:35	0.007	16:08:10	0.014	3:26:36	0.1
8/20/2018	16:25:16	0.013	16:39:35	0.006	16:23:10	0.015	3:38:36	0.1
8/20/2018	16:40:16	0.014	16:54:35	0.007	16:38:10	0.015	3:50:36	0.1
8/20/2018	16:55:16	0.014	17:09:35	0.006	16:53:10	0.015	4:02:36	0.1
8/20/2018	17:10:16	0.015	17:24:35	0.006	17:08:10	0.015	4:14:36	0.2
8/20/2018	17:25:16	0.014	17:39:35	0.006	17:23:10	0.016	4:26:36	0.2
8/20/2018	17:40:16	0.015	17:54:35	0.006	17:38:10	0.015	4:38:36	0.2
8/20/2018	17:55:16	0.014	18:09:35	0.006	17:53:10	0.015	4:50:36	0.1
8/20/2018	18:10:16	0.015	18:24:35	0.006	18:08:10	0.017	5:02:36	0.1
8/20/2018	18:25:16	0.014	18:39:35	0.007	18:23:10	0.015	5:14:36	0.1
8/20/2018							5:26:36	0.1
8/20/2018							5:38:36	0.1
8/20/2018							5:50:36	0.2
8/20/2018							6:02:36	0.1
8/20/2018							6:14:36	0.1
8/20/2018							6:26:36	0.1

AECOM

Date	Up Wind		Down Wind		Building		Down Wind TVOC	
		AMS01		AMS03		AMS02		AMS03
	Time	mg/m^3	Time	mg/m^3	Time	mg/m^3	Time	ppm
8/21/2018	7:43:01	0.026	7:53:59	0.003	7:33:00	0.016	7:28:56	0
8/21/2018	7:58:01	0.025	8:08:59	0.001	7:48:00	0.015	7:40:56	0
8/21/2018	8:13:01	0.024	8:23:59	0	8:03:00	0.015	7:52:56	0
8/21/2018	8:28:01	0.018	8:38:59	0	8:18:00	0.019	8:04:56	0
8/21/2018	8:43:01	0.026	8:53:59	0	8:33:00	0.018	8:16:56	0
8/21/2018	8:58:01	0.039	9:08:59	0	8:48:00	0.027	8:28:56	0
8/21/2018	9:13:01	0.039	9:23:59	0	9:03:00	0.024	8:40:56	0
8/21/2018	9:28:01	0.027	9:38:59	0	9:18:00	0.022	8:52:56	0
8/21/2018	9:43:01	0.026	9:53:59	0	9:33:00	0.018	9:04:56	0
8/21/2018	9:58:01	0.026	10:08:59	0	9:48:00	0.017	9:16:56	0
8/21/2018	10:13:01	0.027	10:23:59	0	10:03:00	0.015	9:28:56	0
8/21/2018	10:28:01	0.017	10:38:59	0	10:18:00	0.019	9:40:56	0
8/21/2018	10:43:01	0.024	11:04:16	0	10:33:00	0.021	9:52:56	0
8/21/2018	10:58:01	0.02	11:19:16	0	10:48:00	0.024	10:04:56	0
8/21/2018	11:13:01	0.021	11:34:16	0	11:03:00	0.017	10:16:56	0
8/21/2018	11:28:01	0.019	11:49:16	0	11:18:00	0.015	10:28:56	0.1
8/21/2018	11:43:01	0.029	12:04:16	0	11:33:00	0.018	10:40:56	0
8/21/2018	11:58:01	0.029	12:19:16	0	11:48:00	0.02	10:52:56	0.1
8/21/2018	12:13:01	0.029	12:34:16	0	12:03:00	0.022	11:04:56	0.1
8/21/2018	12:28:01	0.023	12:49:16	0	12:18:00	0.017	11:16:56	0.1
8/21/2018	12:43:01	0.028	13:04:16	0	12:33:00	0.016	11:28:56	0.1
8/21/2018	12:58:01	0.025	13:19:16	0	12:48:00	0.016	11:40:56	0.1
8/21/2018	13:13:01	0.034	13:34:16	0	13:03:00	0.017	11:52:56	0.1
8/21/2018	13:28:01	0.023	13:49:16	0	13:18:00	0.018	12:04:56	0.1
8/21/2018	13:43:01	0.046	14:04:16	0	13:33:00	0.022	12:16:56	0.1
8/21/2018	13:58:01	0.023	14:19:16	0	13:48:00	0.017	12:28:56	0.1
8/21/2018	14:13:01	0.038	14:34:16	0	14:03:00	0.018	12:40:56	0.1
8/21/2018	14:28:01	0.042	14:49:16	0	14:18:00	0.023	12:52:56	0.1
8/21/2018	14:43:01	0.036	15:04:16	0	14:33:00	0.025	1:04:56	0.2
8/21/2018	14:58:01	0.031	15:19:16	0	14:48:00	0.026	1:16:56	0.2
8/21/2018	15:13:01	0.028	15:34:16	0	15:03:00	0.019	1:28:56	0.2
8/21/2018	15:28:01	0.028	15:49:16	0	15:18:00	0.025	1:40:56	0.3
8/21/2018	15:43:01	0.029	16:04:16	0	15:33:00	0.021	1:52:56	0.3
8/21/2018	15:58:01	0.029	16:19:16	0	15:48:00	0.019	2:04:56	0.3
8/21/2018	16:13:01	0.028	16:34:16	0	16:03:00	0.035	2:16:56	0.3
8/21/2018	16:28:01	0.04	16:49:16	0	16:18:00	0.026	2:28:56	0.3
8/21/2018	16:43:01	0.036	17:04:16	0	16:33:00	0.031	2:40:56	0.3
8/21/2018	16:58:01	0.024	17:19:16	0	16:48:00	0.021	2:52:56	0.3
8/21/2018	17:13:01	0.02	17:34:16	0	17:03:00	0.021	3:04:56	0.3
8/21/2018	17:28:01	0.025			17:18:00	0.018	3:16:56	0.3
8/21/2018	17:43:01	0.038			17:33:00	0.023	3:28:56	0.3
8/21/2018							3:40:56	0.3
8/21/2018							3:52:56	0.2
8/21/2018							4:04:56	0.2
8/21/2018							4:16:56	0.3
8/21/2018							4:28:56	0.3
8/21/2018							4:40:56	0.2
8/21/2018							4:52:56	0.3
8/21/2018							5:04:56	0.3
8/21/2018							5:16:56	0.3
8/21/2018							5:28:56	0.2
8/21/2018							5:40:56	0.3

AECOM

Date	Up Wind		Down Wind		Building		Down Wind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
8/22/2018	8:14:03	0.004	8:22:27	0.031	8:19:28	0.03	8:19:00	0
8/22/2018	8:29:03	0.003	8:37:27	0.012	8:34:28	0.009	8:27:00	0
8/22/2018	8:44:03	0.003	8:52:27	0.013	8:49:28	0.009	8:39:00	0
8/22/2018	8:59:03	0.003	9:07:27	0.016	9:04:28	0.014	8:51:00	0
8/22/2018	9:14:03	0.002	9:22:27	0.011	9:19:28	0.01	9:03:00	0
8/22/2018	9:29:03	0.002	9:37:27	0.006	9:34:28	0.005	9:15:00	0
8/22/2018	9:44:03	0.002	9:52:27	0.012	9:49:28	0.007	9:27:00	0
8/22/2018	9:59:03	0.002	10:07:27	0.022	10:04:28	0.007	9:39:00	0
8/22/2018	10:14:03	0.002	10:22:27	0.016	10:19:28	0.013	9:51:00	0
8/22/2018	10:29:03	0.002	10:37:27	0.008	10:34:28	0.009	10:03:00	0
8/22/2018	10:44:03	0.001	10:52:27	0.006	10:49:28	0.008	10:15:00	0
8/22/2018	10:59:03	0.002	11:07:27	0.008	11:04:28	0.01	10:27:00	0
8/22/2018	11:14:03	0.002	11:22:27	0.008	11:19:28	0.01	10:39:00	0
8/22/2018	11:29:03	0.001	11:37:27	0.01	11:34:28	0.011	10:51:00	0
8/22/2018	11:44:03	0.002	11:52:27	0.016	11:49:28	0.016	11:03:00	0
8/22/2018	DustTrak replaced at 11:45:00.		12:07:27	0.014	12:04:28	0.015	11:15:00	0
8/22/2018	12:04:02	0.012	12:22:27	0.014	12:19:28	0.015	11:27:00	0
8/22/2018	12:19:02	0.013	12:37:27	0.016	12:34:28	0.016	11:39:00	0
8/22/2018	12:34:02	0.009	12:52:27	0.019	12:49:28	0.019	11:51:00	0
8/22/2018	12:49:02	0.011	13:07:27	0.022	13:04:28	0.022	12:03:00	0
8/22/2018	13:04:02	0.013	13:22:27	0.024	13:19:28	0.023	12:15:00	0.1
8/22/2018	13:19:02	0.015	13:37:27	0.027	13:34:28	0.027	12:27:00	0.1
8/22/2018	13:34:02	0.017	13:52:27	0.031	13:49:28	0.029	12:39:00	0.1
8/22/2018	13:49:02	0.02	14:07:27	0.036	14:04:28	0.033	12:55:00	0.1
8/22/2018	14:04:02	0.024	14:22:27	0.038	14:19:28	0.035	1:07:00	0.1
8/22/2018	14:19:02	0.026	14:37:27	0.041	14:34:28	0.038	1:19:00	0.1
8/22/2018	14:34:02	0.028	14:52:27	0.037	14:49:28	0.034	1:38:00	0.1
8/22/2018	14:49:02	0.026	15:07:27	0.038	15:04:28	0.035	1:53:00	0.1
8/22/2018	15:04:02	0.027	15:22:27	0.039	15:19:28	0.037	2:08:00	0.2
8/22/2018	15:19:02	0.028	15:37:27	0.042	15:34:28	0.04	2:23:00	0.1
8/22/2018	15:34:02	0.03	15:52:27	0.042	15:49:28	0.042	2:38:00	0.1
8/22/2018	15:49:02	0.03	16:07:27	0.043	16:04:28	0.042	2:53:00	0.1
8/22/2018	16:04:02	0.03	16:22:27	0.045	16:19:28	0.042	3:08:00	0.1
8/22/2018	16:19:02	0.032	16:37:27	0.045	16:34:28	0.042	3:23:00	0.1
8/22/2018	16:34:02	0.032	16:52:27	0.045	16:49:28	0.041	3:38:00	0.1
8/22/2018	16:49:02	0.032	17:07:27	0.044	17:04:28	0.041	3:53:00	0.1
8/22/2018	17:04:02	0.031	17:22:27	0.045	17:19:28	0.041	4:08:00	0.1
8/22/2018	17:19:02	0.032					4:23:00	0.1
8/22/2018	17:34:02	0.033					4:38:00	0.1
8/22/2018							4:53:00	0.1
8/22/2018							5:08:00	0.1
8/22/2018							5:23:00	0.1

AECOM

Date	UpWind PM10		DownWind PM10		Building		DownWind TVOC	
	Time	AMS01	Time	AMS03	Time	AMS02	Time	AMS03
		mg/m^3		mg/m^3		mg/m^3		ppm
8/23/2018	7:43:32	0.033	7:40:02	0.03	7:34:42	0.032	7:38:48	0.7
8/23/2018	7:58:32	0.022	7:55:02	0.027	7:49:42	0.03	7:53:48	0
8/23/2018	8:13:32	0.021	8:10:02	0.027	8:04:42	0.029	8:08:48	0
8/23/2018	8:28:32	0.02	8:25:02	0.025	8:19:42	0.028	8:23:48	0
8/23/2018	8:43:32	0.019	8:40:02	0.023	8:34:42	0.027	8:38:48	0
8/23/2018	8:58:32	0.017	8:55:02	0.021	8:49:42	0.025	8:53:48	0
8/23/2018	9:13:32	0.016	9:10:02	0.021	9:04:42	0.023	9:08:48	0
8/23/2018	9:28:32	0.013	9:25:02	0.017	9:19:42	0.024	9:23:48	0
8/23/2018	9:43:32	0.012	9:40:02	0.016	9:34:42	0.018	9:38:48	0
8/23/2018	9:58:32	0.011	9:55:02	0.016	9:49:42	0.017	9:53:48	0
8/23/2018	10:13:32	0.011	10:10:02	0.016	10:04:42	0.017	10:08:48	0
8/23/2018	10:28:32	0.01	10:25:02	0.015	10:19:42	0.017	10:23:48	0.1
8/23/2018	10:43:32	0.009	10:40:02	0.014	10:34:42	0.015	10:38:48	0.1
8/23/2018	10:58:32	0.009	10:55:02	0.014	10:49:42	0.015	10:53:48	0.1
8/23/2018	11:13:32	0.008	11:10:02	0.014	11:04:42	0.015	11:08:48	0.1
8/23/2018	11:28:32	0.007	11:25:02	0.013	11:19:42	0.013	11:23:48	0.1
8/23/2018	11:43:32	0.007	11:40:02	0.013	11:34:42	0.013	11:38:48	0
8/23/2018	11:58:32	0.006	11:55:02	0.012	11:49:42	0.012	11:53:48	0
8/23/2018	12:13:32	0.005	12:10:02	0.011	12:04:42	0.012	12:08:48	0.1
8/23/2018	12:28:32	0.005	12:25:02	0.011	12:19:42	0.011	12:23:48	0.1
8/23/2018	12:43:32	0.005	12:40:02	0.011	12:34:42	0.011	12:38:48	0
8/23/2018	12:58:32	0.005	12:55:02	0.011	12:49:42	0.011	12:53:48	0.1
8/23/2018	13:13:32	0.005	13:10:02	0.012	13:04:42	0.012	1:08:48	0
8/23/2018	13:28:32	0.006	13:25:02	0.014	13:19:42	0.016	1:23:48	0
8/23/2018	13:43:32	0.006	13:40:02	0.014	13:34:42	0.014	1:38:48	0
8/23/2018	13:58:32	0.006	13:55:02	0.014	13:49:42	0.018	1:53:48	0.1
8/23/2018	14:13:32	0.006	14:10:02	0.014	14:04:42	0.022	2:08:48	0.1
8/23/2018	14:28:32	0.007	14:25:02	0.015	14:19:42	0.015	2:23:48	0
8/23/2018	14:43:32	0.006	14:40:02	0.015	14:34:42	0.015	2:38:48	0
8/23/2018	14:58:32	0.006	14:55:02	0.015	14:49:42	0.016	2:53:48	0
8/23/2018	15:13:32	0.006	15:10:02	0.015	15:04:42	0.016	3:08:48	0
8/23/2018	15:28:32	0.006	15:25:02	0.016	15:19:42	0.014	3:23:48	0
8/23/2018	15:43:32	0.006	15:40:02	0.016	15:34:42	0.017	3:38:48	0
8/23/2018	15:58:32	0.006	15:55:02	0.016	15:49:42	0.015	3:53:48	0
8/23/2018	16:13:32	0.006	16:10:02	0.015	16:04:42	0.015	4:08:48	0
8/23/2018	16:28:32	0.007	16:25:02	0.015	16:19:42	0.016	4:23:48	0
8/23/2018	16:43:32	0.008	16:40:02	0.016	16:34:42	0.016	4:38:48	0
8/23/2018	16:58:32	0.008	16:55:02	0.017	16:49:42	0.017	4:53:48	0
8/23/2018	17:13:32	0.008	17:10:02	0.017	17:04:42	0.017	5:08:48	0
8/23/2018					17:19:42	0.016	5:23:48	0

AECOM

Date	Up Wind PM10		Down Wind PM10		Building		Down Wind TVOC	
	Time	AMS01	Time	AMS03	Time	AMS02	Time	AMS03
		mg/m^3		mg/m^3		mg/m^3		ppm
8/24/2018	7:36:46	0.046	7:26:17	0.037	7:29:34	0.044	7:33:40	0
8/24/2018	7:51:46	0.031	7:41:17	0.038	7:44:34	0.044	7:48:40	0
8/24/2018	8:06:46	0.024	7:56:17	0.033	7:59:34	0.036	8:03:40	0
8/24/2018	8:21:46	0.028	8:11:17	0.032	8:14:34	0.036	8:18:40	0
8/24/2018	8:36:46	0.028	8:26:17	0.031	8:29:34	0.042	8:33:40	0
8/24/2018	8:51:46	0.023	8:41:17	0.029	8:44:34	0.035	8:48:40	0
8/24/2018	9:06:46	0.027	8:56:17	0.143	8:59:34	0.036	9:03:40	0
8/24/2018	9:21:46	0.025	9:11:17	0.031	9:14:34	0.033	9:18:40	0
8/24/2018	9:36:46	0.024	9:26:17	0.036	9:29:34	0.031	9:33:40	0
8/24/2018	9:51:46	0.025	9:41:17	0.049	9:44:34	0.034	9:48:40	0
8/24/2018	10:06:46	0.025	9:56:17	0.037	9:59:34	0.034	10:03:40	0
8/24/2018	10:21:46	0.026	10:11:17	0.035	10:14:34	0.035	10:18:40	0
8/24/2018	10:36:46	0.025	10:26:17	0.032	10:29:34	0.032	10:33:40	0
8/24/2018	10:51:46	0.025	10:41:17	0.03	10:44:34	0.033	10:48:40	0
8/24/2018	11:06:46	0.025	10:56:17	0.03	10:59:34	0.032	11:03:40	0.1
8/24/2018	11:21:46	0.025	11:11:17	0.039	11:14:34	0.033	11:18:40	0.1
8/24/2018	11:36:46	0.03	11:26:17	0.053	11:29:34	0.034	11:33:40	0.1
8/24/2018	11:51:46	0.025	11:41:17	0.041	11:44:34	0.036	11:48:40	0.1
8/24/2018	12:06:46	0.025	11:56:17	0.033	11:59:34	0.038	12:03:40	0.1
8/24/2018	12:21:46	0.027	12:11:17	0.04	12:14:34	0.041	12:18:40	0.1
8/24/2018	12:36:46	0.025	12:26:17	0.033	12:29:34	0.035	12:33:40	0.1
8/24/2018	12:51:46	0.026	12:41:17	0.032	12:44:34	0.035	12:48:40	0.1
8/24/2018	13:06:46	0.026	12:56:17	0.039	12:59:34	0.034	1:03:40	0.1
8/24/2018	13:21:46	0.026	13:11:17	0.055	13:14:34	0.044	1:18:40	0.1
8/24/2018	13:36:46	0.028	13:26:17	0.037	13:29:34	0.039	1:33:40	0.1
8/24/2018	13:51:46	0.026	13:41:17	0.035	13:44:34	0.039	1:48:40	0.1
8/24/2018	14:06:46	0.026	13:56:17	0.035	13:59:34	0.041	2:03:40	0.1
8/24/2018	14:21:46	0.027	14:11:17	0.037	14:14:34	0.038	2:18:40	0.1
8/24/2018	14:36:46	0.026	14:26:17	0.038	14:29:34	0.039	2:33:40	0.1
8/24/2018	14:51:46	0.029	14:41:17	0.036	14:44:34	0.039	2:48:40	0.1
8/24/2018			14:56:17	0.038	14:59:34	0.04	3:03:40	0.1

AECOM

Weekly CAMP Monitoring Report # 11
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.
During upland site preparation activities, AECOM is performing the perimeter air monitoring in accordance with the Community Air Monitoring Plan (CAMP) for OU1 presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday August 31th, 2018, main activities included trenching, placing, and backfilling of electrical conduit and pipe trenches, water side work and backfilling of Deadman wall area, placing of stone and block deliveries, general site grading, disposal of old tarps, and the paving of the TFS pad.

MONITORING LOCATIONS AND DURATION

Fence-line monitoring was conducted during site work hours only.
Daily locations of particulate monitoring stations were determined based on wind direction established from a meteorological station located on-site. These included:

- A PM10 air monitoring station located upwind of site activities (Station AMS-01)
- A PM10 air monitoring station located downwind of site activities (Station AMS-03)
- A PM10 air monitoring station located on the east site fence-line approximately 50 ft. from the NE corner, near the Albany Molecular parking area (Station AMS-02).
- TVOC monitoring was also conducted downwind at AMS-03 during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the 15-minute average PM-10 concentration at the downwind AMS is 100 µg/m3 greater than background (upwind AMS concentration), if visible dust is observed leaving the site perimeter, or if the 15-minute average concentration of total volatile organic compounds (TVOC) at the downwind AMS exceeds 5 parts per million (ppm) above background.

PID measurements were logged by instrument 8/27-8/28 and were recorded by hand 8/29-8/31. There were four PM10 exceedances this week, all occurring Thursday, 8/30. These exceedances were not likely the result of intrusive soil activities. Rather, a combination of emissions from paving the TFS pad and a possible malfunction of the upwind monitor resulting in a lower than expected upwind PM10 reading was the probable cause. There were no reports of visible dust leaving the worksite. There were no TVOC exceedances.

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01	Time	AMS03	Time	AMS02	Time	AMS03
		mg/m^3		mg/m^3		mg/m^3		ppm
8/27/2018	7:43:35	0.056	7:43:10	0.048	7:41:33	0.043	8:05:54	0
8/27/2018	7:58:35	0.051	7:58:10	0.066	7:56:33	0.057	8:20:54	0
8/27/2018	8:13:35	0.047	8:13:10	0.057	8:11:33	0.051	8:35:54	0
8/27/2018	8:28:35	0.043	8:28:10	0.053	8:26:33	0.051	8:50:54	0
8/27/2018	8:43:35	0.041	8:43:10	0.052	8:41:33	0.045	9:05:54	0
8/27/2018	8:58:35	0.042	8:58:10	0.052	8:56:33	0.047	9:20:54	0
8/27/2018	9:13:35	0.042	9:13:10	0.055	9:11:33	0.047	9:35:54	0
8/27/2018	9:28:35	0.042	9:28:10	0.051	9:26:33	0.046	9:50:54	0
8/27/2018	9:43:35	0.042	9:43:10	0.053	9:41:33	0.047	10:05:54	0
8/27/2018	9:58:35	0.045	9:58:10	0.060	9:56:33	0.052	10:20:54	0
8/27/2018	10:13:35	0.047	10:13:10	0.060	10:11:33	0.053	10:35:54	0
8/27/2018	10:28:35	0.047	10:28:10	0.064	10:26:33	0.057	10:50:54	0
8/27/2018	10:43:35	0.047	10:43:10	0.064	10:41:33	0.056	11:05:54	0
8/27/2018	10:58:35	0.047	10:58:10	0.064	10:56:33	0.057	11:20:54	0
8/27/2018	11:13:35	0.049	11:13:10	0.065	11:11:33	0.058	11:35:54	0
8/27/2018	11:28:35	0.047	11:28:10	0.064	11:26:33	0.057	11:50:54	0.1
8/27/2018	11:43:35	0.045	11:43:10	0.062	11:41:33	0.056	12:05:54	0.1
8/27/2018	11:58:35	0.043	11:58:10	0.059	11:56:33	0.054	12:20:54	0.1
8/27/2018	12:13:35	0.042	12:13:10	0.059	12:11:33	0.054	12:35:54	0.1
8/27/2018	12:28:35	0.043	12:28:10	0.059	12:26:33	0.054	12:50:54	0.1
8/27/2018	12:43:35	0.044	12:43:10	0.059	12:41:33	0.054	13:05:54	0.1
8/27/2018	12:58:35	0.043	12:58:10	0.060	12:56:33	0.054	13:20:54	0.1
8/27/2018	13:13:35	0.041	13:13:10	0.060	13:11:33	0.055	13:35:54	0
8/27/2018	13:28:35	0.041	13:28:10	0.061	13:26:33	0.054	13:50:54	0
8/27/2018	13:43:35	0.043	13:43:10	0.064	13:41:33	0.057	14:05:54	0
8/27/2018	13:58:35	0.044	13:58:10	0.063	13:56:33	0.057	14:20:54	0
8/27/2018	14:13:35	0.043	14:13:10	0.064	14:11:33	0.058	14:35:54	0
8/27/2018	14:28:35	0.044	14:28:10	0.065	14:26:33	0.058	14:50:54	0.1
8/27/2018	14:43:35	0.043	14:43:10	0.066	14:41:33	0.060	15:05:54	0
8/27/2018	14:58:35	0.046	14:58:10	0.067	14:56:33	0.060	15:20:54	0.1
8/27/2018	15:13:35	0.046	15:13:10	0.070	15:11:33	0.063	15:35:54	0
8/27/2018	15:28:35	0.048	15:28:10	0.072	15:26:33	0.067	15:50:54	0
8/27/2018	15:43:35	0.048	15:43:10	0.072	15:41:33	0.066	16:05:54	0.1
8/27/2018	15:58:35	0.048	15:58:10	0.073	15:56:33	0.073	16:20:54	0
8/27/2018	16:13:35	0.050	16:13:10	0.074	16:11:33	0.066	16:35:54	0
8/27/2018	16:28:35	0.051	16:28:10	0.074	16:26:33	0.069	16:50:54	0
8/27/2018	16:43:35	0.052	16:43:10	0.074	16:41:33	0.066	17:05:54	0
8/27/2018			16:58:10	0.077	16:56:33	0.067	17:20:54	0

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
8/28/2018	7:31:43	0.091	7:37:49	0.115	7:34:48	0.099	7:46:30	0.2
8/28/2018	7:46:43	0.095	7:52:49	0.108	7:49:48	0.096	8:01:30	0
8/28/2018	8:01:43	0.094	8:07:49	0.106	8:04:48	0.094	8:16:30	0
8/28/2018	8:16:43	0.093	8:22:49	0.101	8:19:48	0.091	8:31:30	0
8/28/2018	8:31:43	0.077	8:37:49	0.098	8:34:48	0.094	8:46:30	0
8/28/2018	8:46:43	0.083	8:52:49	0.108	8:49:48	0.095	9:01:30	0
8/28/2018	9:01:43	0.079	9:07:49	0.094	9:04:48	0.086	9:16:30	0
8/28/2018	9:16:43	0.067	9:22:49	0.088	9:19:48	0.084	9:31:30	0
8/28/2018	9:31:43	0.068	9:37:49	0.090	9:34:48	0.083	9:46:30	0
8/28/2018	9:46:43	0.068	9:52:49	0.088	9:49:48	0.083	10:01:30	0
8/28/2018	10:01:43	0.067	10:07:49	0.084	10:04:48	0.083	10:16:30	0
8/28/2018	10:16:43	0.066	10:22:49	0.086	10:19:48	0.075	10:31:30	0
8/28/2018	10:31:43	0.066	10:37:49	0.089	10:34:48	0.122	10:46:30	0
8/28/2018	10:46:43	0.060	10:52:49	0.086	10:49:48	0.073	11:01:30	0
8/28/2018	11:01:43	0.057	11:07:49	0.083	11:04:48	0.083	11:16:30	0
8/28/2018	11:16:43	0.058	11:22:49	0.092	11:19:48	0.075	11:31:30	0
8/28/2018	11:31:43	0.061	11:37:49	0.102	11:34:48	0.089	11:46:30	0
8/28/2018	11:46:43	0.063	11:52:49	0.101	11:49:48	0.077	12:01:30	0
8/28/2018	12:01:43	0.060	12:07:49	0.096	12:04:48	0.075	12:16:30	0
8/28/2018	12:16:43	0.064	12:22:49	0.084	12:19:48	0.078	12:31:30	0
8/28/2018	12:31:43	0.060	12:37:49	0.079	12:34:48	0.073	12:46:30	0
8/28/2018	12:46:43	0.058	12:52:49	0.088	12:49:48	0.078	13:01:30	0
8/28/2018	13:01:43	0.058	13:07:49	0.102	13:04:48	0.078	13:16:30	0
8/28/2018	13:16:43	0.061	13:22:49	0.082	13:19:48	0.078	13:31:30	0
8/28/2018	13:31:43	0.053	13:37:49	0.075	13:34:48	0.090	13:46:30	0
8/28/2018	13:46:43	0.052	13:52:49	0.076	13:49:48	0.073	14:01:30	0
8/28/2018	14:01:43	0.051	14:07:49	0.080	14:04:48	0.066	14:16:30	0
8/28/2018	14:16:43	0.055	14:22:49	0.079	14:19:48	0.070	14:31:30	0
8/28/2018	14:31:43	0.056	14:37:49	0.088	14:34:48	0.077	14:46:30	0
8/28/2018	14:46:43	0.063	14:52:49	0.079	14:49:48	0.070	15:01:30	0
8/28/2018	15:01:43	0.055	15:07:49	0.077	15:04:48	0.069	15:16:30	0
8/28/2018	15:16:43	0.058	15:22:49	0.072	15:19:48	0.062	15:31:30	0
8/28/2018	15:31:43	0.054	15:37:49	0.080	15:34:48	0.075	15:46:30	0
8/28/2018	15:46:43	0.051	15:52:49	0.072	15:49:48	0.063	16:01:30	0
8/28/2018	16:01:43	0.048	16:07:49	0.070	16:04:48	0.061	16:16:30	0
8/28/2018	16:16:43	0.047	16:22:49	0.071	16:19:48	0.062	16:31:30	0
8/28/2018	16:31:43	0.048	16:37:49	0.071	16:34:48	0.059	16:46:30	0
8/28/2018	16:46:43	0.045	16:52:49	0.069	16:49:48	0.059	17:01:30	0
8/28/2018	17:01:43	0.043	17:07:49	0.065	17:04:48	0.061	17:16:30	0
8/28/2018							17:31:30	0.1

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
8/29/2018	6:44:23	0.123	6:46:21	0.103	6:47:16	0.108	7:20:00	0
8/29/2018	6:59:23	0.111	7:01:21	0.116	7:02:16	0.105	8:35:00	0
8/29/2018	7:14:23	0.118	7:16:21	0.109	7:17:16	0.1	10:10:00	0
8/29/2018	7:29:23	0.112	7:31:21	0.091	7:32:16	0.082	11:30:00	0
8/29/2018	7:44:23	0.1	7:46:21	0.092	7:47:16	0.09	13:00:00	0.1
8/29/2018	7:59:23	0.085	8:01:21	0.089	8:02:16	0.082	14:20:00	0.1
8/29/2018	8:14:23	0.086	8:16:21	0.088	8:17:16	0.087	15:35:00	0
8/29/2018	8:29:23	0.076	8:43:31	0.073	8:32:16	0.071	17:00:00	0
8/29/2018	8:44:23	0.06	8:58:31	0.073	8:47:16	0.066		
8/29/2018	8:59:23	0.063	9:13:31	0.075	9:02:16	0.07		
8/29/2018	9:14:23	0.064	9:28:31	0.071	9:17:16	0.069		
8/29/2018	9:29:23	0.057	9:43:31	0.071	9:32:16	0.066		
8/29/2018	9:44:23	0.055	9:58:31	0.077	9:47:16	0.082		
8/29/2018	9:59:23	0.058	10:13:31	0.072	10:02:16	0.065		
8/29/2018	10:14:23	0.055	10:28:31	0.067	10:17:16	0.061		
8/29/2018	10:29:23	0.053	10:43:31	0.066	10:32:16	0.064		
8/29/2018	10:44:23	0.054	10:58:31	0.069	10:47:16	0.063		
8/29/2018	10:59:23	0.054	11:13:31	0.065	11:02:16	0.061		
8/29/2018	11:14:23	0.051	11:28:31	0.063	11:17:16	0.058		
8/29/2018	11:29:23	0.052	11:43:31	0.07	11:32:16	0.058		
8/29/2018	11:44:23	0.062	11:58:31	0.07	11:47:16	0.079		
8/29/2018	11:59:23	0.065	12:13:31	0.063	12:02:16	0.063		
8/29/2018	12:14:23	0.055	12:28:31	0.06	12:17:16	0.062		
8/29/2018	12:29:23	0.049	12:43:31	0.062	12:32:16	0.054		
8/29/2018	12:44:23	0.053	12:58:31	0.062	12:47:16	0.083		
8/29/2018	12:59:23	0.052	13:13:31	0.063	13:02:16	0.058		
8/29/2018	13:14:23	0.049	13:28:31	0.059	13:17:16	0.065		
8/29/2018	13:29:23	0.054	13:43:31	0.056	13:32:16	0.051		
8/29/2018	13:44:23	0.049	13:58:31	0.067	13:47:16	0.054		
8/29/2018	13:59:23	0.051	14:13:31	0.061	14:02:16	0.068		
8/29/2018	14:14:23	0.054	14:28:31	0.068	14:17:16	0.053		
8/29/2018	14:29:23	0.055	14:43:31	0.059	14:32:16	0.062		
8/29/2018	14:44:23	0.061	14:58:31	0.057	14:47:16	0.053		
8/29/2018	14:59:23	0.047	15:13:31	0.068	15:02:16	0.056		
8/29/2018	15:14:23	0.057	15:28:31	0.06	15:17:16	0.062		
8/29/2018	15:29:23	0.052	15:43:31	0.057	15:32:16	0.049		
8/29/2018	15:44:23	0.044	15:58:31	0.063	15:47:16	0.048		
8/29/2018	15:59:23	0.044	16:13:31	0.054				
8/29/2018	16:14:23	0.029	16:28:31	0.068				
8/29/2018	16:29:23		16:43:31	0.042				
8/29/2018	16:44:23							
8/29/2018	16:59:23							

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
8/30/2018	6:46:18	0.019	6:55:35	0.029	6:37:44	0.024	6:45:00	0
8/30/2018	7:01:18	0.018	7:10:35	0.024	6:52:44	0.02	7:50:00	0
8/30/2018	7:16:18	0.019	7:25:35	0.025	7:07:44	0.02	9:00:00	0
8/30/2018	7:31:18	0.019	7:40:35	0.024	7:22:44	0.021	10:15:00	0
8/30/2018	7:46:18	0.02	7:55:35	0.03	7:37:44	0.022	11:25:00	0
8/30/2018	8:01:18	0.017	8:10:35	0.022	7:52:44	0.022	12:30:00	0
8/30/2018	8:16:18	0.014	8:25:35	0.021	8:07:44	0.017	13:50:00	0
8/30/2018	8:31:18	0.014	8:40:35	0.02	8:22:44	0.016	14:55:00	0
8/30/2018	8:46:18	0.014	8:55:35	0.028	8:37:44	0.015	16:30:00	0
8/30/2018	9:01:18	0.013	9:10:35	0.023	8:52:44	0.015	17:50:00	0
8/30/2018	9:16:18	0.013	9:25:35	0.032	9:07:44	0.015		
8/30/2018	9:31:18	0.011	9:40:35	0.076	9:22:44	0.013		
8/30/2018	9:46:18	0.011	9:55:35	0.108	9:37:44	0.012		
8/30/2018	10:01:18	0.011	10:10:35	0.095	9:52:44	0.013		
8/30/2018	10:16:18	0.011	10:25:35	0.151	10:07:44	0.013		
8/30/2018	10:31:18	0.01	10:40:35	0.048	10:22:44	0.013		
8/30/2018	10:46:18	0.011	10:55:35	0.024	10:37:44	0.014		
8/30/2018	11:01:18	0.01	11:10:35	0.107	10:52:44	0.012		
8/30/2018	11:16:18	0.009	11:25:35	0.038	11:07:44	0.012		
8/30/2018	11:31:18	0.009	11:40:35	0.023	11:22:44	0.012		
8/30/2018	11:46:18	0.009	11:55:35	0.018	11:37:44	0.012		
8/30/2018	12:01:18	0.009	12:10:35	0.02	11:52:44	0.012		
8/30/2018	12:16:18	0.009	12:25:35	0.019	12:07:44	0.012		
8/30/2018	12:31:18	0.009	12:40:35	0.039	12:22:44	0.012		
8/30/2018	12:46:18	0.009	12:55:35	0.025	12:37:44	0.012		
8/30/2018	13:01:18	0.009	13:10:35	0.025	12:52:44	0.012		
8/30/2018	13:16:18	0.01	13:25:35	0.032	13:07:44	0.013		
8/30/2018	13:31:18	0.01	13:40:35	0.024	13:22:44	0.013		
8/30/2018	13:46:18	0.01	13:55:35	0.032	13:37:44	0.013		
8/30/2018	14:01:18	0.01	14:10:35	0.022	13:52:44	0.013		
8/30/2018	14:16:18	0.011	14:25:35	0.042	14:07:44	0.014		
8/30/2018	14:31:18	0.011	14:40:35	0.051	14:22:44	0.014		
8/30/2018	14:46:18	0.011	14:55:35	0.046	14:37:44	0.015		
8/30/2018	15:01:18	0.011	15:10:35	0.043	14:52:44	0.015		
8/30/2018	15:16:18	0.011	15:25:35	0.03	15:07:44	0.015		
8/30/2018	15:31:18	0.011	15:40:35	0.024	15:22:44	0.015		
8/30/2018	15:46:18	0.011	15:55:35	0.059	15:37:44	0.015		
8/30/2018	16:01:18	0.011	16:10:35	0.114	15:52:44	0.015		
8/30/2018	16:16:18	0.011	16:25:35	0.047	16:07:44	0.015		
8/30/2018	16:31:18	0.01	16:40:35	0.024	16:22:44	0.015		
8/30/2018	16:46:18	0.01	16:55:35	0.017	16:37:44	0.014		
8/30/2018	17:01:18	0.01	17:10:35	0.023	16:52:44	0.014		
8/30/2018	17:16:18	0.01	17:25:35	0.019	17:07:44	0.014		
8/30/2018					17:22:44	0.013		

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
8/31/2018	7:13:39	0.024	7:20:14	0.019	7:17:13	0.018	7:20:00	0
8/31/2018	7:28:39	0.019	7:35:14	0.019	7:32:13	0.015	8:45:00	0
8/31/2018	7:43:39	0.02	7:50:14	0.019	7:47:13	0.015	10:00:00	0
8/31/2018	7:58:39	0.017	8:05:14	0.019	8:02:13	0.015	11:20:00	0
8/31/2018	8:13:39	0.016	8:20:14	0.02	8:17:13	0.029	12:50:00	0
8/31/2018	8:44:05	0.018	8:35:14	0.02	8:36:37	0.016	13:50:00	0
8/31/2018	Replace monitor		8:50:14	0.02	8:51:37	0.016	15:00:00	0
8/31/2018	8:59:02	0.023	9:05:14	0.02	9:06:37	0.016		
8/31/2018	9:14:02	0.023	9:20:14	0.021	9:21:37	0.016		
8/31/2018	9:29:02	0.02	9:35:14	0.02	9:36:37	0.016		
8/31/2018	9:44:02	0.02	9:50:14	0.019	9:51:37	0.016		
8/31/2018	9:59:02	0.018	10:05:14	0.02	10:06:37	0.017		
8/31/2018	10:14:02	0.018	10:20:14	0.02	10:21:37	0.017		
8/31/2018	10:29:02	0.017	10:35:14	0.019	10:36:37	0.017		
8/31/2018	10:44:02	0.018	10:50:14	0.02	10:51:37	0.018		
8/31/2018	10:59:02	0.022	11:05:14	0.019	11:06:37	0.018		
8/31/2018	11:14:02	0.023	11:20:14	0.022	11:21:37	0.023		
8/31/2018	11:29:02	0.021	11:35:14	0.024	11:36:37	0.021		
8/31/2018	11:44:02	0.019	11:50:14	0.021	11:51:37	0.019		
8/31/2018	11:59:02	0.015	12:05:14	0.018	12:06:37	0.018		
8/31/2018	12:14:02	0.018	12:20:14	0.019	12:21:37	0.017		
8/31/2018	12:29:02	0.017	12:35:14	0.019	12:36:37	0.02		
8/31/2018	12:44:02	0.019	12:50:14	0.024	12:51:37	0.024		
8/31/2018	12:59:02	0.017	13:05:14	0.024	13:06:37	0.021		
8/31/2018	13:14:02	0.015	13:20:14	0.023	13:21:37	0.023		
8/31/2018	13:29:02	0.014	13:35:14	0.021	13:36:37	0.029		
8/31/2018	13:44:02	0.014	13:50:14	0.024	13:51:37	0.03		
8/31/2018	13:59:02	0.013	14:05:14	0.027	14:06:37	0.026		
8/31/2018	14:14:02	0.013	14:20:14	0.031	14:21:37	0.03		
8/31/2018			14:35:14	0.019	14:36:37	0.02		

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AECOM

Weekly CAMP Monitoring Report # 12
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.
During upland site preparation activities, AECOM is performing the perimeter air monitoring in accordance with the Community Air Monitoring Plan (CAMP) for OU1 presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday, September 7th, 2018, main activities included installation of tent, concrete blocks, manholes, and pipes, upgrades to the 1974 wall, backfill and site grading.

MONITORING LOCATIONS AND DURATION

Fence-line monitoring was conducted during site work hours only.
Daily locations of particulate monitoring stations were determined based on wind direction established from a meteorological station located on-site. These included:

- A PM10 air monitoring station located upwind of site activities (Station AMS-01)
- A PM10 air monitoring station located downwind of site activities (Station AMS-03)
- A PM10 air monitoring station located on the east site fence-line approximately 50 ft. from the NE corner, near the Albany Molecular parking area (Station AMS-02).
- TVOC monitoring was also conducted downwind at AMS-03 during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the 15-minute average PM-10 concentration at the downwind AMS is 100 µg/m3 greater than background (upwind AMS concentration), if visible dust is observed leaving the site perimeter, or if the 15-minute average concentration of total volatile organic compounds (TVOC) at the downwind AMS exceeds 5 parts per million (ppm) above background.

PID measurements were logged by instrument everyday aside from Tuesday, 9/5 and Wednesday morning, 9/6 due to a PID malfunction. There were no PM10, TVOC, or visible dust exceedances reported for the entire week.

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
9/4/2018	6:59:35	0.025	7:19:30	0.023	7:07:33	0.015	9:08:46	0.1
9/4/2018	7:14:35	0.019	7:34:30	0.023	7:22:33	0.016	9:23:46	0
9/4/2018	7:29:35	0.019	7:49:30	0.020	7:37:33	0.015	9:38:46	0
9/4/2018	7:44:35	0.019	8:04:30	0.021	7:52:33	0.017	9:53:46	0
9/4/2018	7:59:35	0.019	8:19:30	0.020	8:07:33	0.017	10:08:46	0
9/4/2018	8:14:35	0.018	8:34:30	0.018	8:22:33	0.018	10:23:46	0
9/4/2018	8:29:35	0.015	8:49:30	0.016	8:37:33	0.014	10:38:46	0
9/4/2018	8:44:35	0.014	9:04:30	0.016	8:52:33	0.023	10:53:46	0
9/4/2018	8:59:35	0.013	9:19:30	0.017	9:07:33	0.013	11:08:46	0
9/4/2018	9:14:35	0.013	9:34:30	0.016	9:22:33	0.014	11:23:46	0
9/4/2018	9:29:35	0.012	9:49:30	0.017	9:37:33	0.013	11:38:46	0
9/4/2018	9:44:35	0.014	10:04:30	0.017	9:52:33	0.016	11:53:46	0
9/4/2018	9:59:35	0.013	10:19:30	0.017	10:07:33	0.014	12:08:46	0
9/4/2018	10:14:35	0.012	10:34:30	0.016	10:22:33	0.014	12:23:46	0
9/4/2018	10:29:35	0.011	10:49:30	0.017	10:37:33	0.013	12:38:46	0
9/4/2018	10:44:35	0.012	11:04:30	0.016	10:52:33	0.013	12:53:46	0
9/4/2018	10:59:35	0.012	11:19:30	0.016	11:07:33	0.013	13:08:46	0
9/4/2018	11:14:35	0.012	11:34:30	0.016	11:22:33	0.014	13:23:46	0
9/4/2018	11:29:35	0.012	11:49:30	0.017	11:37:33	0.014	13:38:46	0
9/4/2018	11:44:35	0.011	12:04:30	0.016	11:52:33	0.015	13:53:46	0
9/4/2018	11:59:35	0.011	12:19:30	0.016	12:07:33	0.015	14:08:46	0
9/4/2018	12:14:35	0.011	12:34:30	0.017	12:22:33	0.015	14:23:46	0
9/4/2018	12:29:35	0.011	12:49:30	0.018	12:37:33	0.014	14:38:46	0
9/4/2018	12:44:35	0.010	13:04:30	0.018	12:52:33	0.015	14:53:46	0
9/4/2018	12:59:35	0.011	13:19:30	0.016	13:07:33	0.015	15:08:46	0
9/4/2018	13:14:35	0.010	13:34:30	0.016	13:22:33	0.015	15:23:46	0
9/4/2018	13:29:35	0.010	13:49:30	0.017	13:37:33	0.018	15:38:46	0
9/4/2018	13:44:35	0.010	14:04:30	0.016	13:52:33	0.015	15:53:46	0
9/4/2018	13:59:35	0.010	14:19:30	0.017	14:07:33	0.015	16:08:46	0
9/4/2018	14:14:35	0.010	14:34:30	0.016	14:22:33	0.015	16:23:46	0
9/4/2018	14:29:35	0.010	14:49:30	0.016	14:37:33	0.016	16:38:46	0
9/4/2018	14:44:35	0.010	15:04:30	0.016	14:52:33	0.015	16:53:46	0
9/4/2018	14:59:35	0.011	15:19:30	0.017	15:07:33	0.018	17:08:46	0
9/4/2018	15:14:35	0.011	15:34:30	0.017	15:22:33	0.019	17:23:46	0
9/4/2018	15:29:35	0.010	15:49:30	0.017	15:37:33	0.015		
9/4/2018	15:44:35	0.011	16:04:30	0.017	15:52:33	0.030		
9/4/2018	15:59:35	0.011	16:19:30	0.017	16:07:33	0.016		
9/4/2018	16:14:35	0.011	16:34:30	0.017	16:22:33	0.023		
9/4/2018	16:29:35	0.011	16:49:30	0.016	16:37:33	0.016		
9/4/2018	16:44:35	0.011	17:04:30	0.018	16:52:33	0.016		

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
9/5/2018	7:19:30	0.042	7:09:45	0.037	7:06:22	0.040	NA	NA
9/5/2018	7:34:30	0.045	7:24:45	0.055	7:21:22	0.044	NA	NA
9/5/2018	7:49:30	0.042	7:39:45	0.046	7:36:22	0.045	NA	NA
9/5/2018	8:04:30	0.040	7:54:45	0.036	7:51:22	0.032	NA	NA
9/5/2018	8:19:30	0.033	8:09:45	0.032	8:06:22	0.028	NA	NA
9/5/2018	8:34:30	0.035	8:24:45	0.033	8:21:22	0.027	NA	NA
9/5/2018	8:49:30	0.024	8:39:45	0.045	8:36:22	0.045	NA	NA
9/5/2018	9:04:30	0.041	8:54:45	0.028	8:51:22	0.031	NA	NA
9/5/2018	9:19:30	0.023	9:09:45	0.036	9:06:22	0.037	NA	NA
9/5/2018	9:34:30	0.025	9:24:45	0.032	9:21:22	0.035	NA	NA
9/5/2018	9:49:30	0.024	9:39:45	0.034	9:36:22	0.031	NA	NA
9/5/2018	10:04:30	0.024	9:54:45	0.036	9:51:22	0.040	NA	NA
9/5/2018	10:19:30	0.023	10:09:45	0.030	10:06:22	0.037	NA	NA
9/5/2018	10:34:30	0.026	10:24:45	0.036	10:21:22	0.035	NA	NA
9/5/2018	10:49:30	0.020	10:39:45	0.032	10:36:22	0.029	NA	NA
9/5/2018	11:04:30	0.023	10:54:45	0.025	10:51:22	0.022	NA	NA
9/5/2018	11:19:30	0.021	11:09:45	0.027	11:06:22	0.024	NA	NA
9/5/2018	11:34:30	0.018	11:24:45	0.028	11:21:22	0.024	NA	NA
9/5/2018	11:49:30	0.027	11:39:45	0.024	11:36:22	0.022	NA	NA
9/5/2018	12:04:30	0.017	11:54:45	0.025	11:51:22	0.022	NA	NA
9/5/2018	12:19:30	0.019	12:09:45	0.024	12:06:22	0.021	NA	NA
9/5/2018	12:34:30	0.016	12:24:45	0.025	12:21:22	0.021	NA	NA
9/5/2018	12:49:30	0.019	12:39:45	0.029	12:36:22	0.026	NA	NA
9/5/2018	13:04:30	0.014	12:54:45	0.025	12:51:22	0.023	NA	NA
9/5/2018	13:19:30	0.017	13:09:45	0.030	13:06:22	0.021	NA	NA
9/5/2018	13:34:30	0.021	13:24:45	0.025	13:21:22	0.024	NA	NA
9/5/2018	13:49:30	0.013	13:39:45	0.027	13:36:22	0.021	NA	NA
9/5/2018	14:04:30	0.013	13:54:45	0.030	13:51:22	0.024	NA	NA
9/5/2018	14:19:30	0.017	14:09:45	0.025	14:06:22	0.024	NA	NA
9/5/2018	14:34:30	0.023	14:24:45	0.034	14:21:22	0.029	NA	NA
9/5/2018	14:49:30	0.016	14:39:45	0.031	14:36:22	0.026	NA	NA
9/5/2018	15:04:30	0.015	14:54:45	0.029	14:51:22	0.028	NA	NA
9/5/2018	15:19:30	0.014	15:09:45	0.030	15:06:22	0.029	NA	NA
9/5/2018	15:34:30	0.012	15:24:45	0.031	15:21:22	0.028	NA	NA
9/5/2018	15:49:30	0.013	15:39:45	0.038	15:36:22	0.034	NA	NA
9/5/2018	16:04:30	0.014	15:54:45	0.031	15:51:22	0.025	NA	NA
9/5/2018	16:19:30	0.026	16:09:45	0.033	16:06:22	0.025	NA	NA
9/5/2018	16:34:30	0.015	16:24:45	0.035	16:21:22	0.046	NA	NA
9/5/2018	16:49:30	0.014	16:39:45	0.029	16:36:22	0.029	NA	NA

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
9/6/2018	7:14:42	0.047	7:25:37	0.064	7:09:22	0.051	11:41:44	0.1
9/6/2018	7:29:42	0.048	7:40:37	0.058	7:24:22	0.05	11:56:44	0
9/6/2018	7:44:42	0.043	7:55:37	0.059	7:39:22	0.045	12:11:44	0
9/6/2018	7:59:42	0.044	8:10:37	0.057	7:54:22	0.046	12:26:44	0
9/6/2018	8:14:42	0.04	8:25:37	0.045	8:09:22	0.045	12:41:44	0.1
9/6/2018	8:29:42	0.038	8:40:37	0.066	8:24:22	0.036	12:56:44	0.2
9/6/2018	8:44:42	0.044	8:55:37	0.059	8:39:22	0.041	13:11:44	0.3
9/6/2018	8:59:42	0.039	9:10:37	0.054	8:54:22	0.043	13:26:44	0.3
9/6/2018	9:14:42	0.041	9:25:37	0.069	9:09:22	0.041	13:41:44	0.3
9/6/2018	9:29:42	0.047	9:40:37	0.054	9:24:22	0.048	13:56:44	0.3
9/6/2018	9:44:42	0.037	9:55:37	0.051	9:39:22	0.045	14:11:44	0.3
9/6/2018	9:59:42	0.04	10:10:37	0.057	9:54:22	0.04	14:26:44	0.4
9/6/2018	10:14:42	0.033	10:25:37	0.053	10:09:22	0.035	14:41:44	0.4
9/6/2018	10:29:42	0.033	10:40:37	0.054	10:24:22	0.035	14:56:44	0.4
9/6/2018	10:44:42	0.033	10:55:37	0.059	10:39:22	0.035	15:11:44	0.4
9/6/2018	10:59:42	0.032	11:10:37	0.05	10:54:22	0.036	15:26:44	0.4
9/6/2018	11:14:42	0.033	11:25:37	0.04	11:09:22	0.038	15:41:44	0.3
9/6/2018	11:29:42	0.033	11:40:37	0.055	11:24:22	0.039	15:56:44	0.3
9/6/2018	11:44:42	0.033	11:55:37	0.061	11:39:22	0.038	16:11:44	0.3
9/6/2018	11:59:42	0.032	12:10:37	0.054	11:54:22	0.043	16:26:44	0.3
9/6/2018	12:14:42	0.03	12:25:37	0.044	12:09:22	0.034		
9/6/2018	12:29:42	0.027	12:40:37	0.037	12:24:22	0.033		
9/6/2018	12:44:42	0.02	12:55:37	0.039	12:39:22	0.028		
9/6/2018	12:59:42	0.021	13:10:37	0.041	12:54:22	0.031		
9/6/2018	13:14:42	0.023	13:25:37	0.05	13:09:22	0.03		
9/6/2018	13:29:42	0.025	13:40:37	0.045	13:24:22	0.033		
9/6/2018	13:44:42	0.024	13:55:37	0.036	13:39:22	0.032		
9/6/2018	13:59:42	0.022	14:10:37	0.033	13:54:22	0.029		
9/6/2018	14:14:42	0.021	14:25:37	0.036	14:09:22	0.027		
9/6/2018	14:29:42	0.02	14:40:37	0.044	14:24:22	0.026		
9/6/2018	14:44:42	0.026	14:55:37	0.045	14:39:22	0.03		
9/6/2018	14:59:42	0.025	15:10:37	0.059	14:54:22	0.032		
9/6/2018	15:14:42	0.032	15:25:37	0.036	15:09:22	0.033		
9/6/2018	15:29:42	0.023	15:40:37	0.031	15:24:22	0.026		
9/6/2018	15:44:42	0.021	15:55:37	0.03	15:39:22	0.024		
9/6/2018	15:59:42	0.02	16:10:37	0.026	15:54:22	0.024		
9/6/2018	16:14:42	0.015	16:25:37	0.016	16:09:22	0.019		
9/6/2018	16:29:42	0.009			16:24:22	0.012		

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
9/7/2018	7:09:22	0.008	7:14:34	0.014	7:04:38	0.009	7:04:54	0
9/7/2018	7:24:22	0.008	7:29:34	0.015	7:19:38	0.009	7:19:54	0
9/7/2018	7:39:22	0.008	7:44:34	0.014	7:34:38	0.009	7:34:54	0
9/7/2018	7:54:22	0.008	7:59:34	0.02	7:49:38	0.009	7:49:54	0
9/7/2018	8:09:22	0.009	8:14:34	0.016	8:04:38	0.011	8:04:54	0
9/7/2018	8:24:22	0.011	8:29:34	0.015	8:19:38	0.012	8:19:54	0
9/7/2018	8:39:22	0.009	8:44:34	0.018	8:34:38	0.011	8:34:54	0
9/7/2018	8:54:22	0.008	8:59:34	0.021	8:49:38	0.019	8:49:54	0
9/7/2018	9:09:22	0.008	9:14:34	0.016	9:04:38	0.011	9:04:54	0
9/7/2018	9:24:22	0.009	9:29:34	0.021	9:19:38	0.012	9:19:54	0
9/7/2018	9:39:22	0.009	9:44:34	0.031	9:34:38	0.012	9:34:54	0
9/7/2018	9:54:22	0.009	9:59:34	0.017	9:49:38	0.012	9:49:54	0
9/7/2018	10:09:22	0.009	10:14:34	0.019	10:04:38	0.013	10:04:54	0
9/7/2018	10:24:22	0.009	10:29:34	0.022	10:19:38	0.012	10:19:54	0
9/7/2018	10:39:22	0.01	10:44:34	0.028	10:34:38	0.014	10:34:54	0
9/7/2018	10:54:22	0.01	10:59:34	0.022	10:49:38	0.014	10:49:54	0
9/7/2018	11:09:22	0.01	11:14:34	0.023	11:04:38	0.014	11:04:54	0
9/7/2018	11:24:22	0.01	11:29:34	0.016	11:19:38	0.014	11:19:54	0
9/7/2018	11:39:22	0.01	11:44:34	0.017	11:34:38	0.014	11:34:54	0
9/7/2018	11:54:22	0.012	11:59:34	0.018	11:49:38	0.016	11:49:54	0
9/7/2018	12:09:22	0.012	12:14:34	0.025	12:04:38	0.017	12:04:54	0
9/7/2018	12:24:22	0.011	12:29:34	0.018	12:19:38	0.016	12:19:54	0
9/7/2018	12:39:22	0.012	12:44:34	0.022	12:34:38	0.016	12:34:54	0
9/7/2018	12:54:22	0.012	12:59:34	0.018	12:49:38	0.019	12:49:54	0
9/7/2018	13:09:22	0.013	13:14:34	0.018	13:04:38	0.019	13:04:54	0
9/7/2018	13:24:22	0.014	13:29:34	0.02	13:19:38	0.019	13:19:54	0
9/7/2018	13:39:22	0.011	13:44:34	0.017	13:34:38	0.025	13:34:54	0
9/7/2018	13:54:22	0.01	13:59:34	0.03	13:49:38	0.021	13:49:54	0
9/7/2018	14:09:22	0.011	14:14:34	0.017	14:04:38	0.021	14:04:54	0
9/7/2018	14:24:22	0.01	14:29:34	0.018	14:19:38	0.015	14:19:54	0
9/7/2018	14:39:22	0.012	14:44:34	0.022	14:34:38	0.024	14:34:54	0
9/7/2018	14:54:22	0.011	14:59:34	0.019	14:49:38	0.028	14:49:54	0
9/7/2018	15:09:22	0.012	15:14:34	0.019	15:04:38	0.021	15:04:54	0
9/7/2018	15:24:22	0.01	15:29:34	0.019	15:19:38	0.017	15:19:54	0
9/7/2018	15:39:22	0.009	15:44:34	0.017	15:34:38	0.014	15:34:54	0
9/7/2018					15:49:38	0.014		

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AECOM

Weekly CAMP Monitoring Report # 13
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operable Unit 2 (OU2) sediment remediation.
During upland site preparation activities, AECOM is performing the perimeter air monitoring in accordance with the Community Air Monitoring Plan (CAMP) for OU1 presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday, September 14th, 2018, main activities included installation of tent, unloading and placing of concrete blocks, backfill of electric and water lines, and installation and grading of the crane pad.

MONITORING LOCATIONS AND DURATION

Fence-line monitoring was conducted during site work hours only.
Daily locations of particulate monitoring stations were determined based on wind direction established from a meteorological station located on-site. These included:

- A PM10 air monitoring station located upwind of site activities (Station AMS-01)
- A PM10 air monitoring station located downwind of site activities (Station AMS-03)
- A PM10 air monitoring station located on the east site fence-line approximately 50 ft. from the NE corner, near the Albany Molecular parking area (Station AMS-02).
- TVOC monitoring was also conducted downwind at AMS-03 during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the 15-minute average PM-10 concentration at the downwind AMS is 100 µg/m3 greater than background (upwind AMS concentration), if visible dust is observed leaving the site perimeter, or if the 15-minute average concentration of total volatile organic compounds (TVOC) at the downwind AMS exceeds 5 parts per million (ppm) above background.

There was one PM10 alert level exceedance Thursday, 9/13 when welding was performed in close proximity to a monitoring station. Due to the lack of soil disturbance or particulate matter leaving site boundaries, work was not stopped. There were no TVOC or visible dust exceedances.

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01 mg/m^3	Time	AMS03 mg/m^3	Time	AMS02 mg/m^3	Time	AMS03 ppm
9/10/2018	7:19:21	0.014	7:23:45	0.012	7:12:37	0.008	7:30:00	0.000
9/10/2018	7:34:21	0.014	7:38:45	0.017	7:27:37	0.010	9:00:00	0.000
9/10/2018	7:49:21	0.017	7:53:45	0.018	7:42:37	0.014	10:20:00	0.100
9/10/2018	8:04:21	0.012	8:08:45	0.017	7:57:37	0.013	11:45:00	0.100
9/10/2018	8:19:21	0.012	8:23:45	0.017	8:12:37	0.013	13:30:00	0.100
9/10/2018	8:34:21	0.012	8:38:45	0.018	8:27:37	0.013	15:00:00	0.100
9/10/2018	8:49:21	0.012	8:53:45	0.018	8:42:37	0.013	16:55:00	0.200
9/10/2018	9:04:21	0.014	9:08:45	0.019	8:57:37	0.015		
9/10/2018	9:19:21	0.014	9:23:45	0.019	9:12:37	0.015		
9/10/2018	9:34:21	0.014	9:38:45	0.019	9:27:37	0.015		
9/10/2018	9:49:21	0.012	9:53:45	0.017	9:42:37	0.015		
9/10/2018	10:04:21	0.011	10:08:45	0.015	9:57:37	0.014		
9/10/2018	10:19:21	0.010	10:23:45	0.013	10:12:37	0.011		
9/10/2018	10:34:21	0.007	10:38:45	0.010	10:27:37	0.010		
9/10/2018	10:49:21	0.003	10:53:45	0.006	10:42:37	0.006		
9/10/2018	11:04:21	0.005	11:08:45	0.007	10:57:37	0.004		
9/10/2018	11:19:21	0.005	11:23:45	0.007	11:12:37	0.005		
9/10/2018	11:34:21	0.004	11:38:45	0.006	11:27:37	0.004		
9/10/2018	11:49:21	0.003	11:53:45	0.005	11:42:37	0.004		
9/10/2018	12:04:21	0.003	12:08:45	0.005	11:57:37	0.004		
9/10/2018	12:19:21	0.003	12:23:45	0.006	12:12:37	0.004		
9/10/2018	12:34:21	0.003	12:38:45	0.006	12:27:37	0.005		
9/10/2018	12:49:21	0.003	12:53:45	0.006	12:42:37	0.006		
9/10/2018	13:04:21	0.003	13:08:45	0.006	12:57:37	0.005		
9/10/2018	13:19:21	0.003	13:23:45	0.006	13:12:37	0.005		
9/10/2018	13:34:21	0.004	13:38:45	0.006	13:27:37	0.005		
9/10/2018	13:49:21	0.003	13:53:45	0.006	13:42:37	0.005		
9/10/2018	14:04:21	0.005	14:08:45	0.009	13:57:37	0.006		
9/10/2018	14:19:21	0.004	14:23:45	0.007	14:12:37	0.007		
9/10/2018	14:34:21	0.005	14:38:45	0.008	14:27:37	0.006		
9/10/2018	14:49:21	0.004	14:53:45	0.007	14:42:37	0.008		
9/10/2018	15:04:21	0.004	15:08:45	0.008	14:57:37	0.007		
9/10/2018	15:19:21	0.006	15:23:45	0.011	15:12:37	0.009		
9/10/2018	15:34:21	0.005	15:38:45	0.010	15:27:37	0.009		
9/10/2018	15:49:21	0.005	15:53:45	0.008	15:42:37	0.007		
9/10/2018	16:04:21	0.004	16:08:45	0.006	15:57:37	0.007		
9/10/2018	16:19:21	0.005	16:23:45	0.009	16:12:37	0.007		

AECOM

Date	UpWind PM10		DownWind PM10		Building PM10		DownWind TVOC	
	Time	AMS01	Time	AMS03	Time	AMS02	Time	AMS03
		mg/m^3		mg/m^3		mg/m^3		ppm
9/11/2018	7:11:59	0.008	7:17:15	0.013	7:07:55	0.009	7:21:30	0
9/11/2018	7:26:59	0.011	7:32:15	0.015	7:22:55	0.012	7:36:30	0.1
9/11/2018	7:41:59	0.010	7:47:15	0.015	7:37:55	0.012	7:51:30	0.1
9/11/2018	7:56:59	0.010	8:02:15	0.018	7:52:55	0.012	8:06:30	0.1
9/11/2018	8:11:59	0.014	8:17:15	0.022	8:07:55	0.016	8:21:30	0.2
9/11/2018	8:26:59	0.017	8:32:15	0.029	8:22:55	0.020	8:36:30	0.2
9/11/2018	8:41:59	0.016	8:47:15	0.026	8:37:55	0.020	8:51:30	0.2
9/11/2018	8:56:59	0.016	9:02:15	0.024	8:52:55	0.020	9:06:30	0.2
9/11/2018	9:11:59	0.013	9:17:15	0.017	9:07:55	0.016	9:21:30	0.2
9/11/2018	9:26:59	0.009	9:32:15	0.012	9:22:55	0.012	9:36:30	0.2
9/11/2018	9:41:59	0.007	9:47:15	0.011	9:37:55	0.010	9:51:30	0.2
9/11/2018	9:56:59	0.007	10:02:15	0.009	9:52:55	0.009	10:06:30	0.2
9/11/2018	10:11:59	0.007	10:17:15	0.011	10:07:55	0.009	10:21:30	0.2
9/11/2018	10:26:59	0.005	10:32:15	0.012	10:22:55	0.009	10:36:30	0.2
9/11/2018	10:41:59	0.005	10:47:15	0.013	10:37:55	0.008	10:51:30	0.2
9/11/2018	10:56:59	0.005	11:02:15	0.012	10:52:55	0.008	11:06:30	0.2
9/11/2018	11:11:59	0.006	11:17:15	0.012	11:07:55	0.009	11:21:30	0.2
9/11/2018	11:26:59	0.005	11:32:15	0.010	11:22:55	0.009	11:36:30	0.2
9/11/2018	11:41:59	0.004	11:47:15	0.007	11:37:55	0.007	11:51:30	0.2
9/11/2018	11:56:59	0.004	12:02:15	0.007	11:52:55	0.007	12:06:30	0.2
9/11/2018	12:11:59	0.004	12:17:15	0.010	12:07:55	0.007	12:21:30	0.2
9/11/2018	12:26:59	0.005	12:32:15	0.010	12:22:55	0.008	12:36:30	0.2
9/11/2018	12:41:59	0.005	12:47:15	0.016	12:37:55	0.009	12:51:30	0.2
9/11/2018	12:56:59	0.009	13:02:15	0.013	12:52:55	0.015	13:06:30	0.2
9/11/2018	13:11:59	0.009	13:17:15	0.013	13:07:55	0.014	13:21:30	0.3
9/11/2018	13:26:59	0.008	13:32:15	0.012	13:22:55	0.016	13:36:30	0.3
9/11/2018	13:41:59	0.008	13:47:15	0.014	13:37:55	0.047	13:51:30	0.3
9/11/2018	13:56:59	0.008	14:02:15	0.011	13:52:55	0.019	14:06:30	0.3
9/11/2018	14:11:59	0.006	14:17:15	0.015	14:07:55	0.021	14:21:30	0.3
9/11/2018	14:26:59	0.011	14:32:15	0.020	14:22:55	0.020	14:36:30	0.3
9/11/2018	14:41:59	0.006	14:47:15	0.010	14:37:55	0.012	14:51:30	0.3
9/11/2018	14:56:59	0.006	15:02:15	0.011	14:52:55	0.012	15:06:30	0.3
9/11/2018	15:11:59	0.006	15:17:15	0.011	15:07:55	0.022	15:21:30	0.3
9/11/2018	15:26:59	0.007	15:32:15	0.010	15:22:55	0.020	15:36:30	0.3
9/11/2018	15:41:59	0.006	15:47:15	0.018	15:37:55	0.013	15:51:30	0.3
9/11/2018	15:56:59	0.005	16:02:15	0.011	15:52:55	0.012	16:06:30	0.3
9/11/2018	16:11:59	0.005	16:17:15	0.029	16:07:55	0.012	16:21:30	0.3
9/11/2018	16:26:59	0.006	16:32:15	0.013	16:22:55	0.012	16:36:30	0.3
9/11/2018	16:41:59	0.008	16:47:15	0.017	16:37:55	0.013	16:51:30	0.3

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Number of Words: 348 (approx.)
Number of Characters: 1,986 (approx.)

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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **10/22/18 – 10/28/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, following the start of the sediment processing activities in the Temporary Fabric Structure (TFS), process monitoring and sampling will be conducted to document ambient air quality/conditions at the point of exhaust and ensure the effectiveness of the air handling systems that are installed to control potential fugitive emissions. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Processing monitoring and sampling goals will be added to this report once this program has started in the field.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, and PCB AAC are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level; and
- **Table 2**: Fenceline PCB Acceptable Ambient Concentration.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 3**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 4**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling will be conducted during TSCA sediment removal operations and processing activities and will be reported when results become available from the analytical laboratory. Fenceline PCB sampling is expected to begin in early November 2018.

Process Monitoring and Sampling Summary

Process monitoring and sampling will commence with the start of the sediment processing within the TFS and will be reported when the results become available from the field and analytical laboratory. Process monitoring and sampling is expected to begin in early November 2018.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration
PCBs	10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Table 3: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 10/22/18	0.2	35.2	0.1	24.9	0.1	27.4	0.1	33.4	0.1	23.4	0.1	20.2	NA	NA	NA	NA
Tue 10/23/18	0.1	37.5	0.1	46.1	0.1	59.5	0.1	54.1	0.2	51.5	0.1	37.6	NA	NA	NA	NA
Wed 10/24/18	0.1	11.8	0.1	19.1	0.1	24.3	0.1	15.4	0.1	15.8	0.1	14.3	NA	NA	NA	NA
Thu 10/25/18	0.1	20.8	0.1	15.2	0.1	18.7	0.1	43.0	0.1	20.4	0.1	18.7	NA	NA	NA	NA
Fri 10/26/18	0.2	28.8	0.1	40.0	0.1	73.1	0.1	66.3	0.1	51.7	0.1	27.1	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.2	37.5	0.1	46.1	0.1	73.1	0.1	66.3	0.2	51.7	0.1	37.6	--	--	--	--
Weekly Average	0.1	11.7	0.1	15.6	0.1	20.8	0.1	14.1	0.1	12.5	0.1	8.0	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 4: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

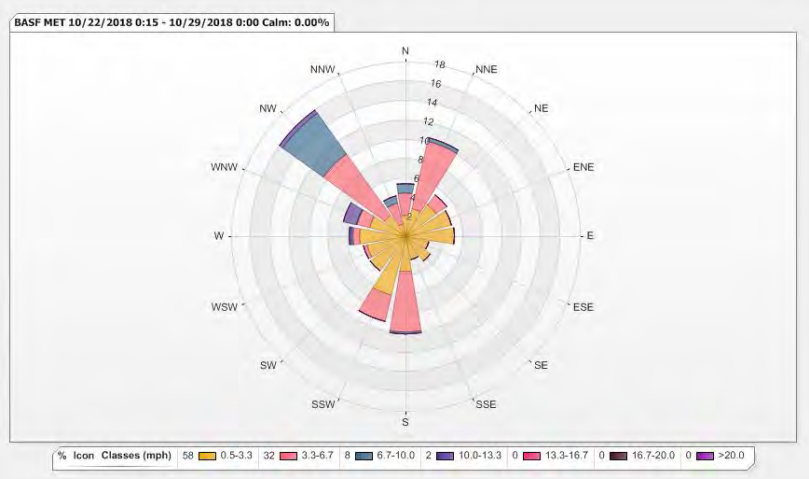
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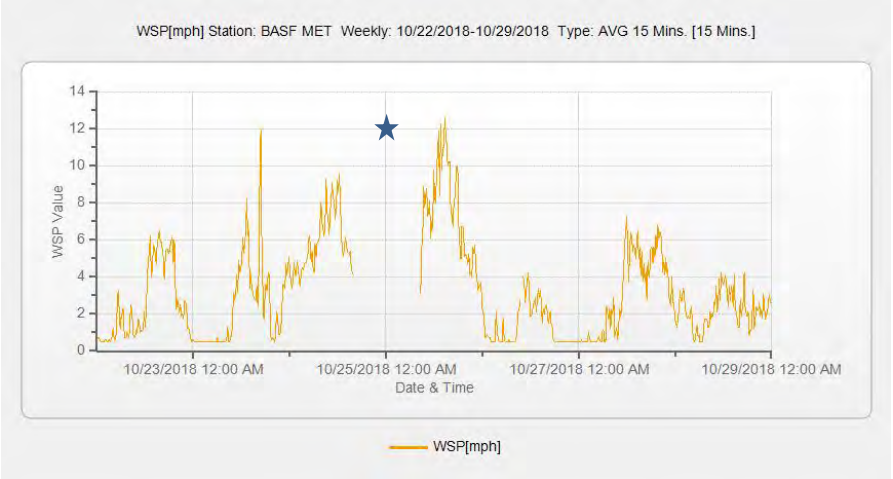
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Figure 1: Meteorological Summaries

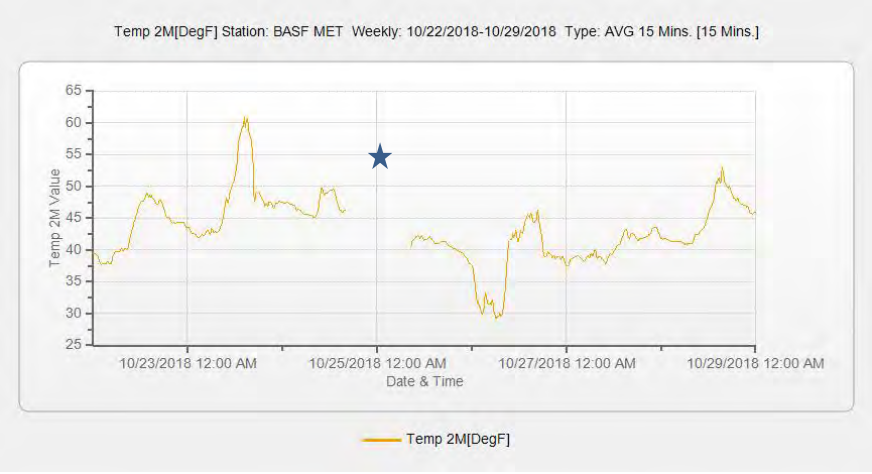
Wind Rose:



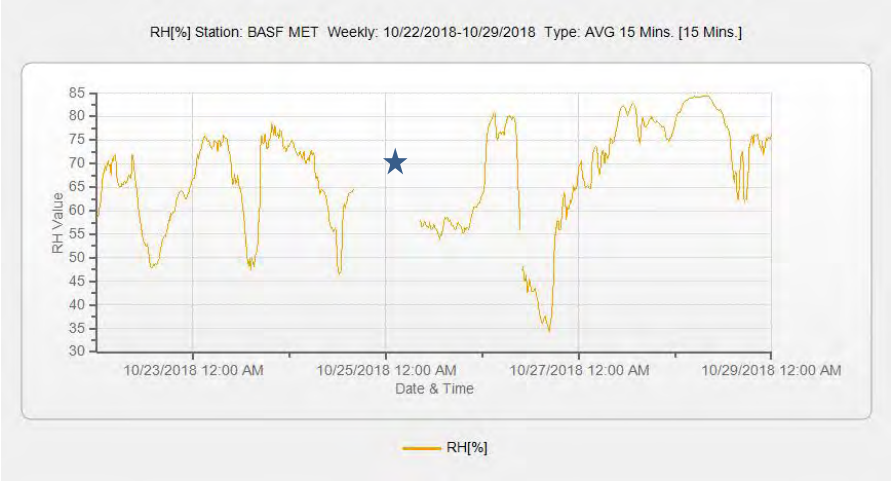
Wind Speed:



Temperature:



Relative Humidity:



*Meteorological data was missing between 10/24/18 (4:15PM) and 10/25/18 (8:30AM) due to a battery failure.

Figure 2: Site Map (10/22/18 – 10/26/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/29/18 – 11/4/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, following the start of the sediment processing activities in the Temporary Fabric Structure (TFS), process monitoring and sampling will be conducted to document ambient air quality/conditions at the point of exhaust and ensure the effectiveness of the air handling systems that are installed to control potential fugitive emissions. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Processing monitoring and sampling goals will be added to this report once this program has started in the field.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, and PCB AAC are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level; and
- **Table 2**: Fenceline PCB Acceptable Ambient Concentration.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 3**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 4**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling will be conducted during TSCA sediment removal operations and processing activities and will be reported when results become available from the analytical laboratory. Fenceline PCB sampling is expected to begin in early November 2018.

Process Monitoring and Sampling Summary

Process monitoring and sampling will commence with the start of the sediment processing within the TFS and will be reported when the results become available from the field and analytical laboratory. Process monitoring and sampling is expected to begin in early November 2018.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration
PCBs	10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Table 3: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 10/29/18	0.1	33.2	0.2	31.4	0.3	43.8	0.1	34.6	0.1	29.3	0.1	38.2	NA	NA	NA	NA
Tue 10/30/18	0.1	12.6	0.1	14.2	0.1	22.0	0.1	14.7	0.1	11.8	0.1	11.5	NA	NA	NA	NA
Wed 10/31/18	0.1	49.6	0.1	46.2	0.1	88.2	0.1	66.1	0.1	64.2	0.1	37.7	NA	NA	NA	NA
Thu 11/1/18	0.1	28.0	0.3	27.7	0.1	28.1	0.1	27.5	0.1	28.2	0.1	32.6	NA	NA	NA	NA
Fri 11/2/18	0.1	36.6	0.1	39.7	0.1	57.5	0.1	76.6	0.1	73.4	0.1	51.1	0.0	29	3	No
Weekly Summary																
Weekly Maximum	0.1	49.6	0.3	46.2	0.3	88.2	0.1	76.6	0.1	73.4	0.1	51.1	--	--	--	--
Weekly Average	0.1	15.6	0.1	19.3	0.1	20.9	0.1	16.7	0.1	14.9	0.1	10.2	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 4: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

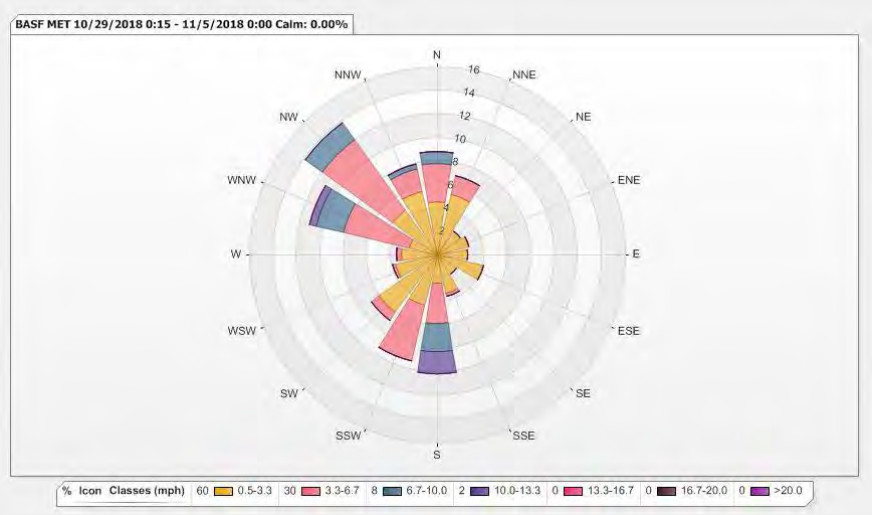
NA – Not Applicable

Notes:

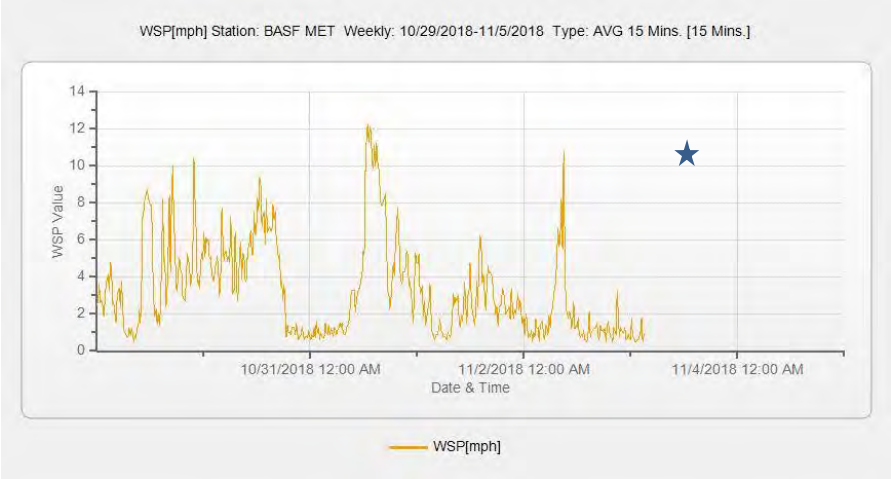
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Figure 1: Meteorological Summaries

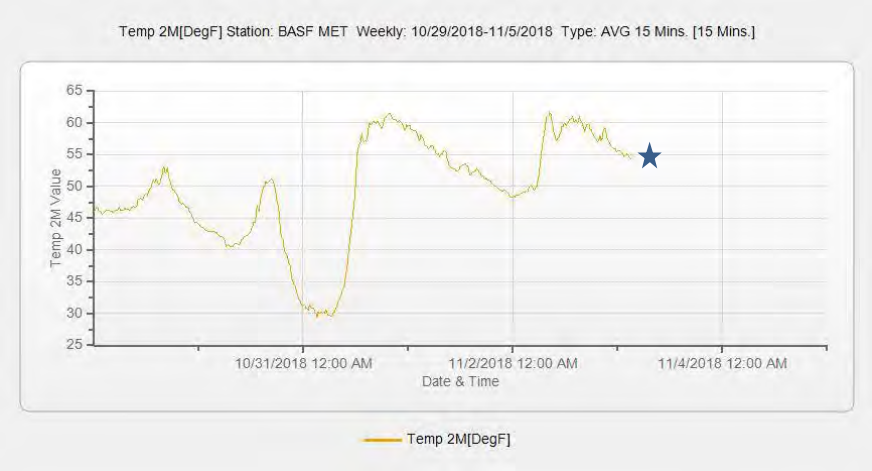
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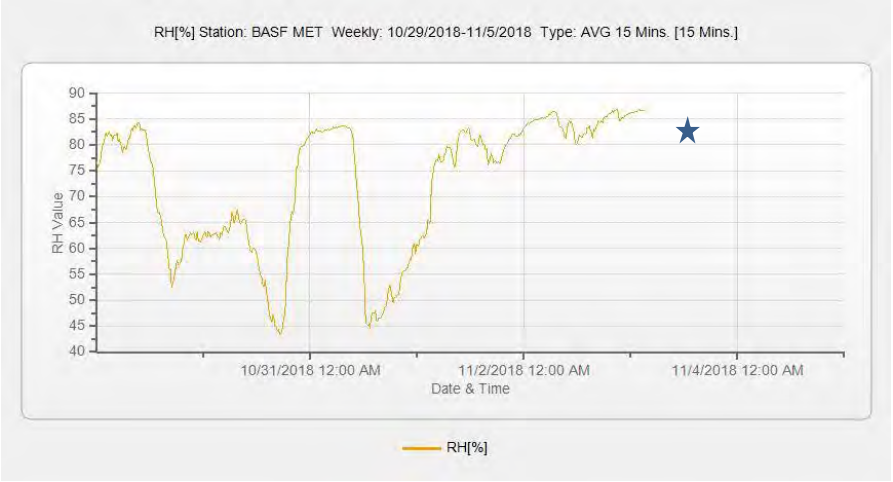
Wind Speed:



Temperature:



Relative Humidity:



*Meteorological data was missing between 11/3/18 (3:15AM) and 11/5/18 (7:30AM) due to a battery failure.

Figure 2: Site Map (10/29/18 – 11/2/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/5/18 – 11/11/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, following the start of the sediment processing activities in the Temporary Fabric Structure (TFS), process monitoring and sampling will be conducted to document ambient air quality/conditions at the point of exhaust and ensure the effectiveness of the air handling systems that are installed to control potential fugitive emissions. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Processing monitoring and sampling goals will be added to this report once this program has started in the field.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, and PCB AAC are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level; and
- **Table 2**: Fenceline PCB Acceptable Ambient Concentration.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 3**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 4**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling will be conducted during TSCA sediment removal operations and processing activities and will be reported when results become available from the analytical laboratory. Fenceline PCB sampling is expected to begin in late November 2018.

Process Monitoring and Sampling Summary

Process monitoring and sampling will commence with the start of the sediment processing within the TFS and will be reported when the results become available from the field and analytical laboratory. Process monitoring and sampling is expected to begin in early December 2018.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration
PCBs	10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Table 3: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/5/18	0.1	41.4	0.1	41.2	0.1	42.9	0.1	60.3	0.1	44.7	0.1	29.8	0.0	12	3	No
Tue 11/6/18	0.1	42.5	0.2	52.8	0.1	53.2	0.1	48.1	0.1	41.5	0.1	31.1	NA	NA	NA	NA
Wed 11/7/18	0.1	16.2	0.1	27.9	0.1	17.8	0.1	17.8	0.1	19.9	0.1	11.5	NA	NA	NA	NA
Thu 11/8/18	0.2	48.5	0.1	52.1	0.4	40.1	0.1	53.8	0.1	66.6	0.1	49.8	0.0	10	0	No
Fri 11/9/18	0.1	85.0	0.1	86.3	0.1	64.5	0.1	82.1	0.1	101.0	0.1	66.4	0.0	22	0	No
Weekly Summary																
Weekly Maximum	0.2	85.0	0.2	86.3	0.4	64.5	0.1	82.1	0.1	101.0	0.1	66.4	--	--	--	--
Weekly Average	0.1	15.9	0.1	17.8	0.1	14.3	0.1	15.8	0.1	14.3	0.1	12.1	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 4: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

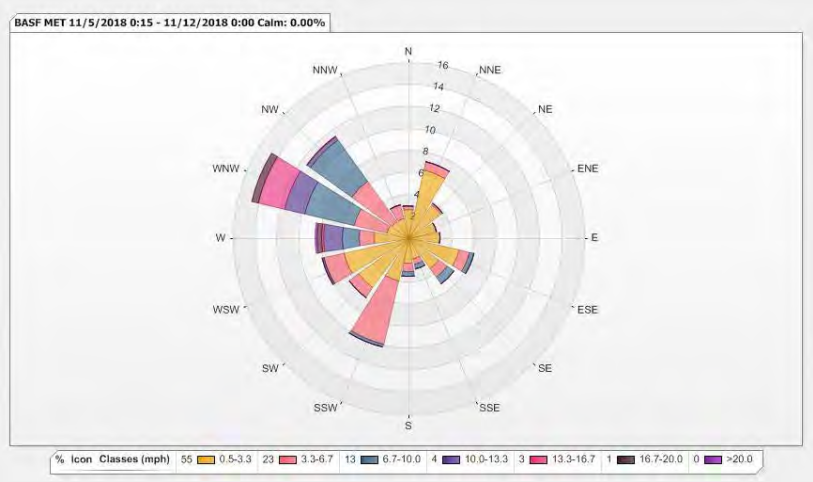
NA – Not Applicable

Notes:

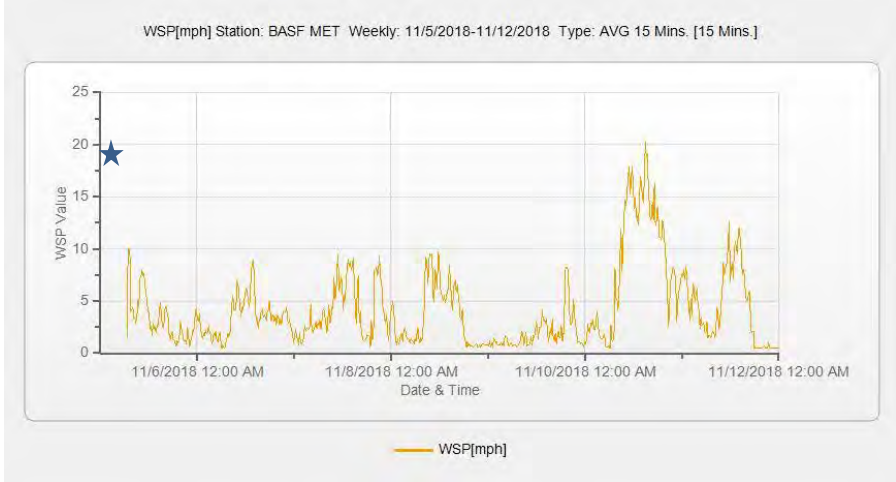
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Figure 1: Meteorological Summaries

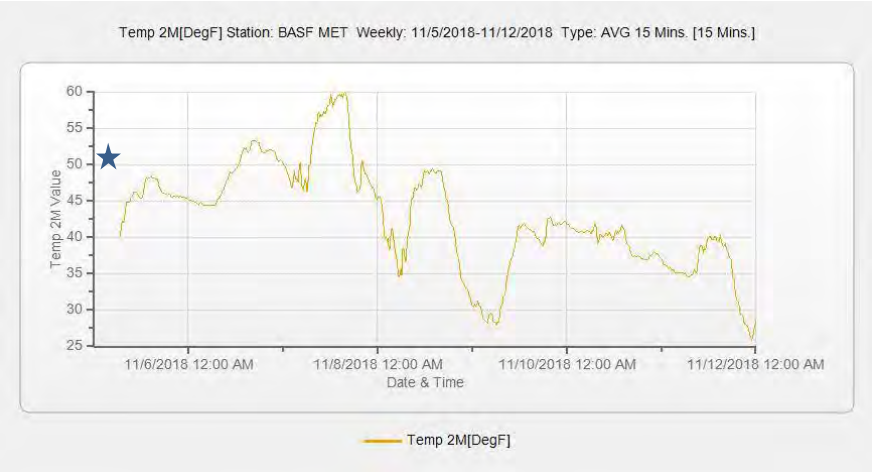
Wind Rose:



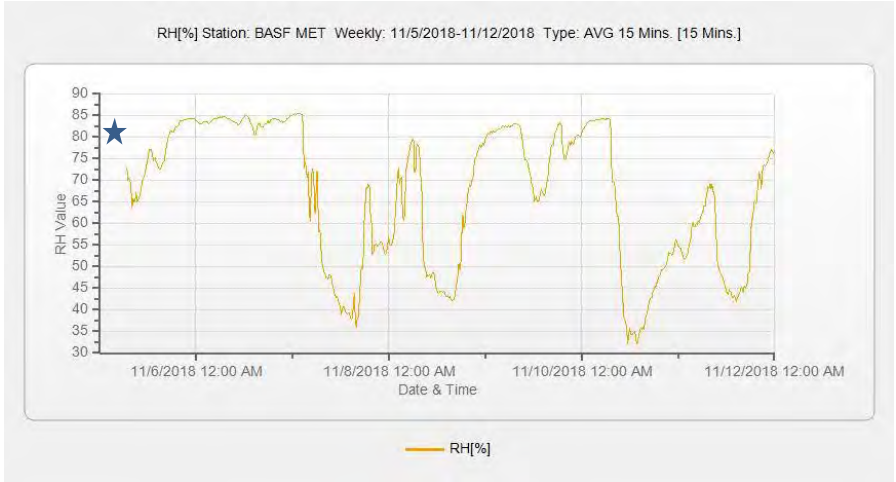
Wind Speed:



Temperature:



Relative Humidity:



*Meteorological data was missing between 11/3/18 (3:15AM) and 11/5/18 (6:30AM) due to a battery failure.

Figure 2: Site Map (11/5/18 – 11/9/18)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **11/12/18 – 11/18/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, following the start of the sediment processing activities in the Temporary Fabric Structure (TFS), process monitoring and sampling will be conducted to document ambient air quality/conditions at the point of exhaust and ensure the effectiveness of the air handling systems that are installed to control potential fugitive emissions. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Processing monitoring and sampling goals will be added to this report once this program has started in the field.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, and PCB AAC are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level; and
- **Table 2**: Fenceline PCB Acceptable Ambient Concentration.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 3**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 4**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling will be conducted during TSCA sediment removal operations and processing activities and will be reported when results become available from the analytical laboratory. Fenceline PCB sampling is expected to begin in late November 2018.

Process Monitoring and Sampling Summary

Process monitoring and sampling will commence with the start of the sediment processing within the TFS and will be reported when the results become available from the field and analytical laboratory. Process monitoring and sampling is expected to begin in early December 2018.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration
PCBs	10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Table 3: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/12/18	0.1	43.5	0.1	62.0	0.1	62.6	0.1	62.6	0.1	59.6	0.1	46.9	0.4	20	0	No
Tue 11/13/18	0.1	48.2	0.1	55.9	0.1	36.0	0.1	58.6	0.1	45.3	0.1	52.2	0.0	22	0	No
Wed 11/14/18	0.1	7.9	0.1	14.4	0.2	9.9	0.1	8.2	0.1	8.6	0.1	12.6	0.0	2	0	No
Thu 11/15/18	0.1	28.0	0.1	28.9	0.1	25.9	0.1	24.4	0.1	30.2	0.1	29.9	0.0	19	0	No
Fri 11/16/18	0.3	19.7	0.2	18.7	0.3	16.0	0.1	15.7	0.1	25.5	0.1	31.5	0.0	14	2	No
Weekly Summary																
Weekly Maximum	0.3	48.2	0.2	62.0	0.3	62.6	0.1	62.6	0.1	59.6	0.1	52.2	--	--	--	--
Weekly Average	0.1	15.5	0.1	14.8	0.1	14.9	0.1	14.9	0.1	15.4	0.1	13.8	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 4: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

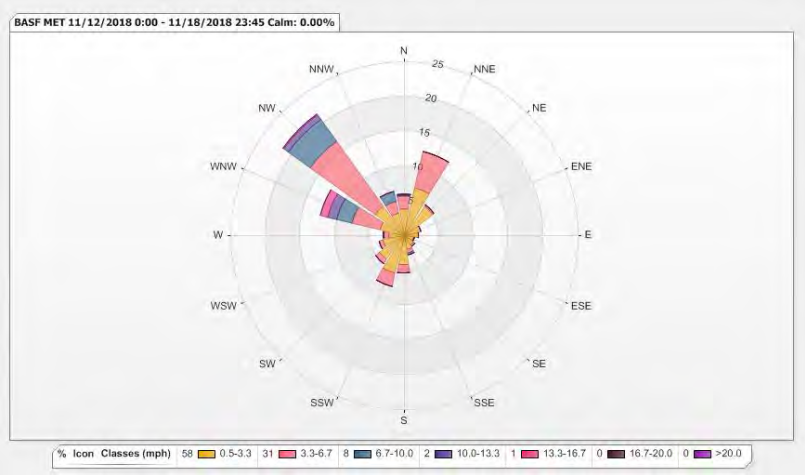
NA – Not Applicable

Notes:

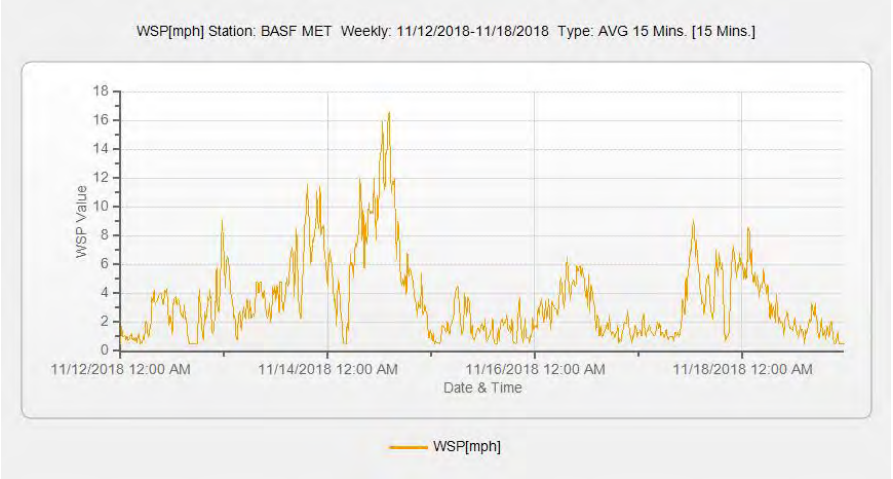
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Figure 1: Meteorological Summaries

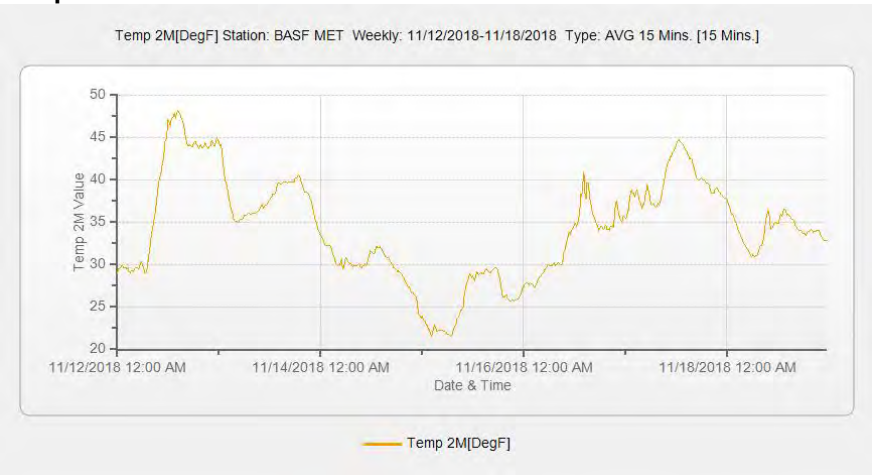
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

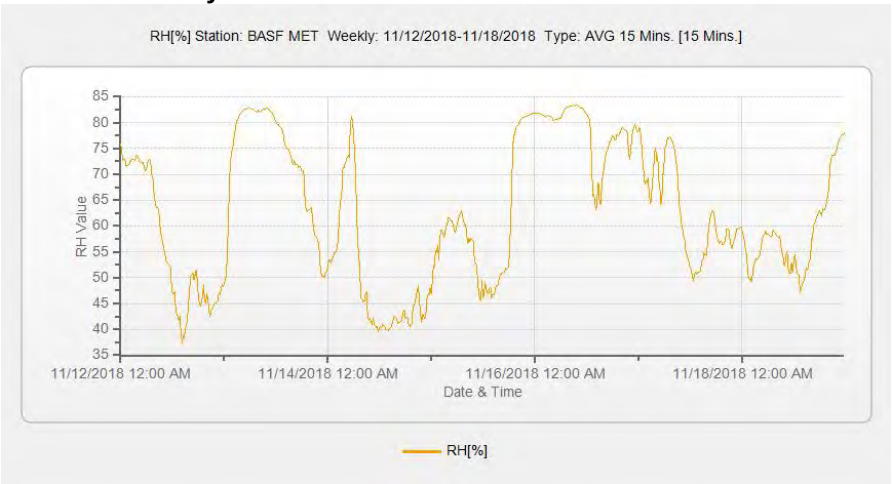


Figure 2: Site Map (11/12/18 – 11/16/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/19/18 – 11/25/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, following the start of the sediment processing activities in the Temporary Fabric Structure (TFS), process monitoring and sampling will be conducted to document ambient air quality/conditions at the point of exhaust and ensure the effectiveness of the air handling systems that are installed to control potential fugitive emissions. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Processing monitoring and sampling goals will be added to this report once this program has started in the field.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, and PCB AAC are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level; and
- **Table 2**: Fenceline PCB Acceptable Ambient Concentration.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC concentrations remained below the Action Levels. However, there was one PM_{10} concentration above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 3**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 4**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities and will be reported when results become available from the analytical laboratory. Fenceline PCB sampling started on November 19, 2018.

Process Monitoring and Sampling Summary

Process monitoring and sampling will commence with the start of the sediment processing within the TFS and will be reported when the results become available from the field and analytical laboratory. Process monitoring and sampling is expected to begin in early December 2018.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration
PCBs	10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Table 3: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/19/18	0.1	83.9	0.1	109.7	0.1	89.4	0.1	77.1	0.1	99.9	0.1	89.1	0.0	51	1	No
Tue 11/20/18	0.1	67.9	0.1	68.3	0.2	68.1	0.1	67.4	0.1[1]	66.6[1]	0.1	66.2	0.0	30	1	No
Wed 11/21/18	0.1	61.0	0.1	121.8	0.1	68.7	0.1	166.5	0.1	122.3	0.1[2]	80.7[2]	0.0	18	1	No
Thu 11/22/18	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
Fri 11/23/18	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
Sat 11/24/18	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
Sun 11/25/18	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]	NA[3]
Weekly Summary																
Weekly Maximum	0.1	83.9	0.1	121.8	0.2	89.4	0.1	166.5	0.1	122.3	0.1	89.1	--	--	--	--
Weekly Average	0.1	36.0	0.1	36.5	0.1	39.1	0.1	36.5	0.1	32.9	0.1	24.9	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

[1] PAM-5 TVOC and PM_{10} data was missing between 11/20/18 (12:00AM) and 11/20/18 (7:15AM) due to a battery failure.

[2] PAM-6 TVOC and PM_{10} data was missing between 11/20/18 (9:30PM) and 11/21/18 (7:15AM) due to a battery failure.

[3] Site was closed for the Thanksgiving holiday (no Site activities).

Table 4: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	Wed 11/21/18	7:30AM	PAM-4	S 2.6 mph	166.5	80.7	85.8	Elevated PM_{10} concentration was due to atmospheric conditions (humidity).
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

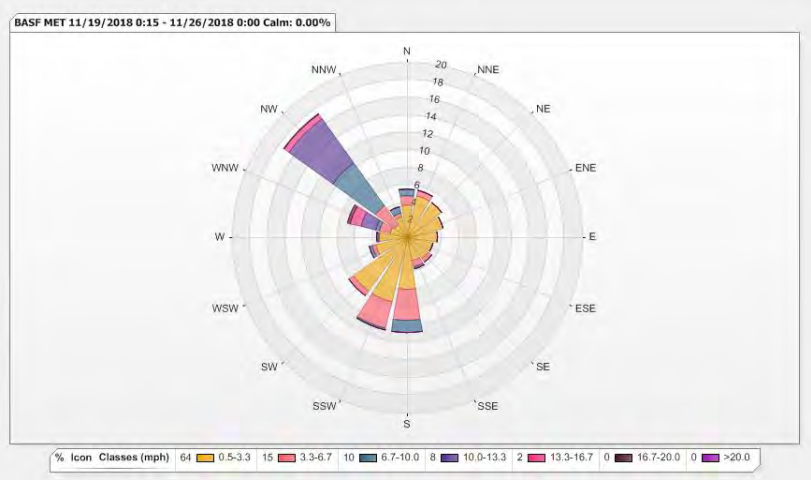
NA – Not Applicable

Notes:

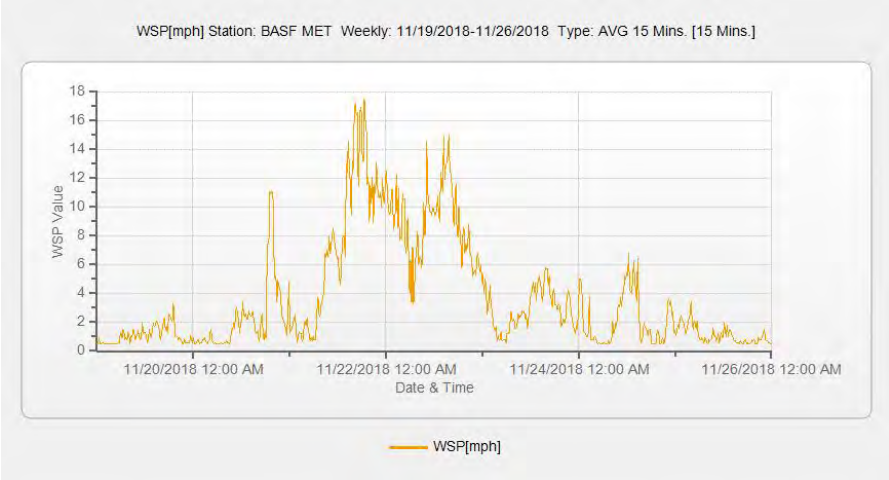
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Figure 1: Meteorological Summaries

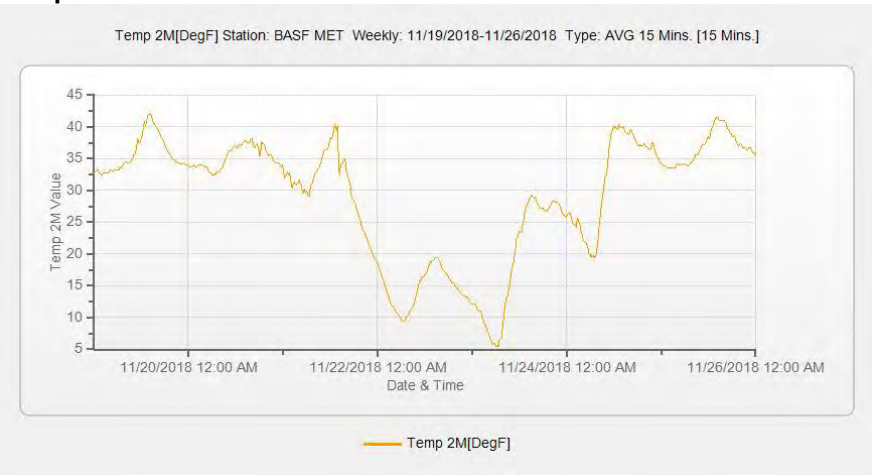
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

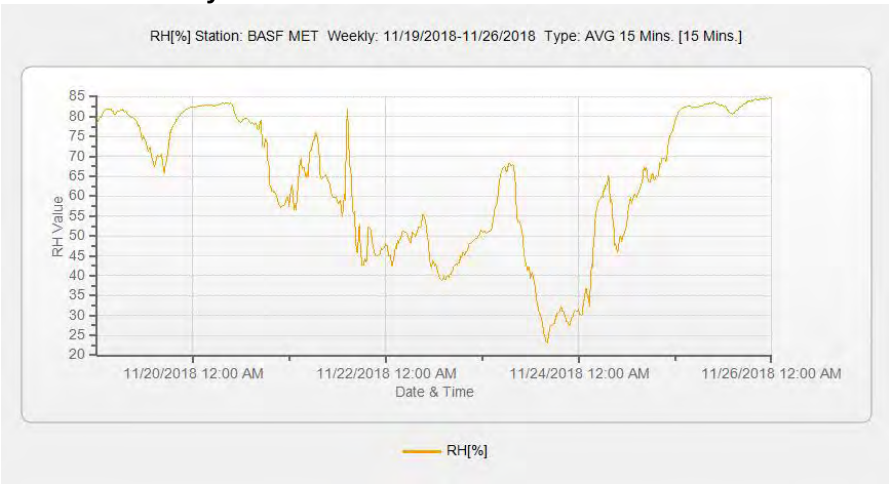


Figure 2: Site Map (11/19/18 – 11/21/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/26/18 – 12/2/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period PM_{10} and TVOC concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/26/18	0.1	84.3	0.1	85.0	0.3	78.0	0.1	95.3	0.1	94.5	0.1	71.0	0.0	58	2	No
Tue 11/27/18	0.1	21.0	0.2	18.1	0.2	24.9	0.1	22.0	0.1	31.4	0.1	19.4	0.0	14	0	No
Wed 11/28/18	0.1	9.1	0.2	6.8	0.2	17.2	0.1	7.5	0.1	11.8	0.1	14.4	0.0	5	0	No
Thu 11/29/18	0.1	13.3	0.1	18.0	0.1	48.4	0.1	9.4	0.1	16.5	0.1	41.6	0.0	17	0	No
Fri 11/30/18	0.1	54.6	0.1	57.9	0.1	48.6	0.1	46.9	0.1	51.9	0.1	78.2	0.0	20	0	No
Sat 12/1/18	0.1	88.9	0.1	75.3	0.1	80.4	0.1	75.6	0.1[1]	84.8[1]	0.1	51.0	0.0	50	0	No
Sun 12/2/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	88.9	0.2	85.0	0.3	80.4	0.1	95.3	0.1	94.5	0.1	78.2	--	--	--	--
Weekly Average	0.1	17.6	0.1	15.1	0.1	21.3	0.1	14.9	0.1	17.7	0.1	13.2	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

[1] PAM-5 TVOC and PM_{10} data was missing between 12/1/18 (2:30AM) and 12/1/18 (7:45AM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 11/19/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1221	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1232	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1242	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1248	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1254	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1260	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1262	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
AROCLOR-1268	µg/m^3	*< 0.43*	*< 0.44*	*< 0.43*
Total PCBs Aroclor	µg/m^3	*< 3.87*	*< 3.96*	*< 3.87*
Sample Date: 11/20/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1221	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1232	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1242	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1248	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1254	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1260	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1262	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
AROCLOR-1268	µg/m^3	*< 0.34*	*< 0.39*	*< 0.51*
Total PCBs Aroclor	µg/m^3	*< 3.06*	*< 3.51*	*< 4.59*

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 11/21/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1221	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1232	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1242	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1248	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1254	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1260	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1262	µg/m^3	< 0.33	< 0.38	< 0.38
AROCLOR-1268	µg/m^3	< 0.33	< 0.38	< 0.38
Total PCBs Aroclor	µg/m^3	< 2.97	*< 3.42*	*< 3.42*
Sample Date: 11/26/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.37*	*< 0.37*	*< 0.38*
Total PCBs Aroclor	µg/m^3	*< 3.33*	*< 3.33*	*< 3.42*

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 11/27/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
Total PCBs Aroclor	µg/m^3	*< 3.60*	*< 3.51*	*< 3.51*
Sample Date: 11/28/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.51	< 3.42

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 11/29/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1221	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1232	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1242	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1248	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1254	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1260	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1262	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
AROCLOR-1268	µg/m^3	*< 0.41*	*< 0.40*	*< 0.40*
Total PCBs Aroclor	µg/m^3	< 3.69	*< 3.60*	*< 3.60*
Sample Date: 11/30/18				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.38*	*< 0.37*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.42	*< 3.33*

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 12/1/18				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.41*	*< 0.41*
Total PCBs Aroclor	µg/m^3	*< 3.60*	< 3.69	< 3.69

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Fenceline PCB Results Summary

			Sample Location					
Analyte	**Units**	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Total PCBs Aroclor	µg/m^3	<10	3.38	NA[1]	NA[1]	3.58	3.60	3.78

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.
[1] PCB sampling has not yet been conducted at this location.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/26/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Tue 11/27/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Wed 11/28/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Thu 11/29/18	lb/hr	<0.7	--	0.26	--	--	--	--	--	--
Fri 11/30/18	lb/hr	<0.7	--	--	0.31	--	--	--	--	--
Sat 12/1/18	lb/hr	<0.7	--	--	--	--	0.35	--	--	--
Sun 12/2/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one location at a frequency of once per day, Monday through Saturday.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/26/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Tue 11/27/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Wed 11/28/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Thu 11/29/18	lb/hr	<0.7	NA[1]	0.0002	0.0010	NA[1]	0.0011	0.0028	0.0002	NA[2]
Fri 11/30/18	lb/hr	<0.7	NA[1]	NA[1]	0.0017	NA[2]	0.0014	0.0006	0.0018	NA[2]
Sat 12/1/18	lb/hr	<0.7	NA[1]	0.0022	0.0026	NA[1]	0.0055	0.0012	0.0009	0.0029
Sun 12/2/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.
[2] AHS could not be sampled due to a capped ball valve on the sample ports.

Table 10: Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/26/18	**lb/hr**	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Tue 11/27/18	**lb/hr**	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Wed 11/28/18	**lb/hr**	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Thu 11/29/18	**lb/hr**	<1.3	NA[1]	0.05	0.05	NA[1]	0.06	0.12	0.11	NA[2]
Fri 11/30/18	**lb/hr**	<1.3	NA[1]	NA[1]	0.05	NA[2]	0.12	0.06	0.05	NA[2]
Sat 12/1/18	**lb/hr**	<1.3	NA[1]	0.15	0.18	NA[1]	0.19	0.15	0.13	0.35
Sun 12/2/18	**lb/hr**	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

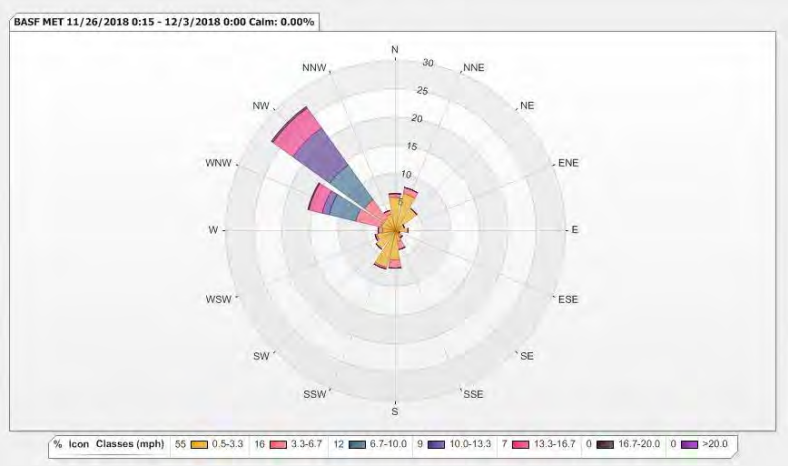
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

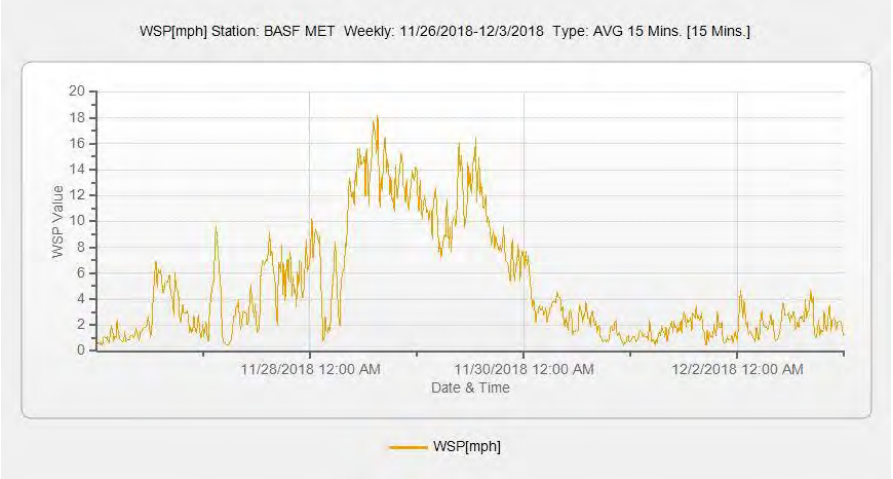
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.
[2] AHS could not be sampled due to a capped ball valve on the sample ports.

Figure 1: Meteorological Summaries

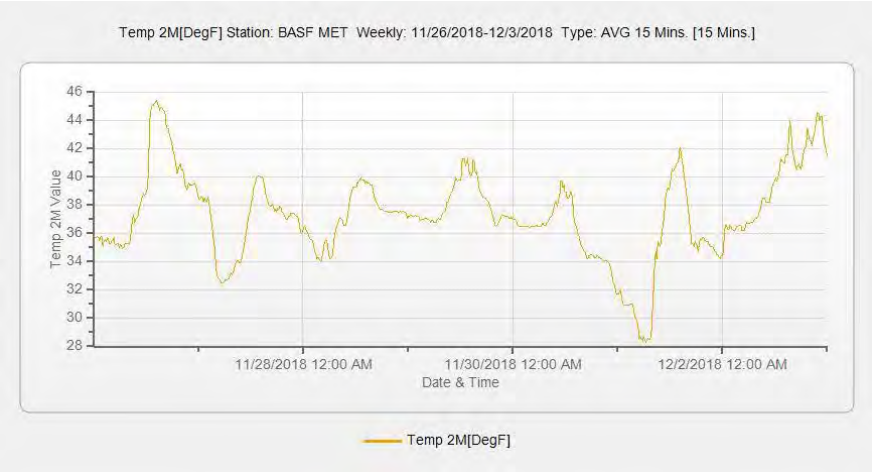
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

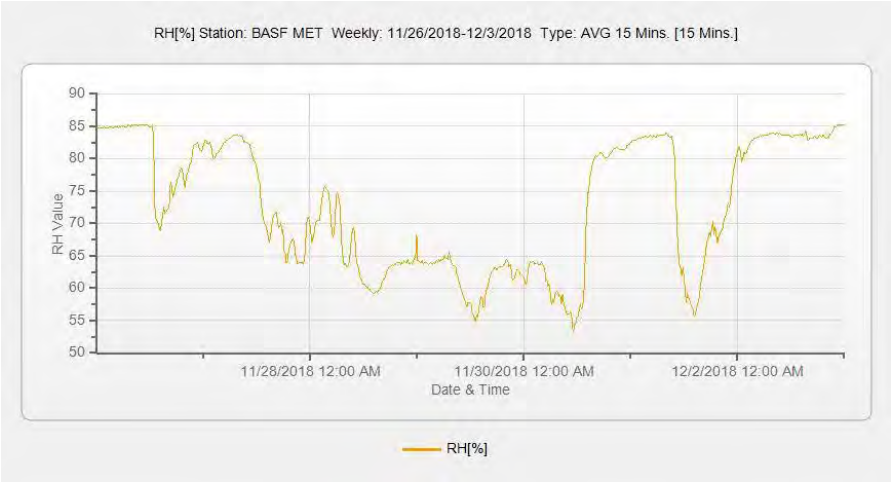


Figure 2: Site Map (11/26/18 – 12/1/18)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **12/3/18 – 12/9/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the first two weeks of operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the first two weeks of sediment processing and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC concentrations remained below the Action Level. There were however, PM_{10} concentrations above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and VOC emission rates calculated for the AHS remained below their respective target emission rates. There were however, elevated PM_{10} concentrations at AHS-4 that resulted in emission rates greater than the target emission rate on December 4, 5, and 8, 2018. The elevated PM_{10} concentrations were caused by the carbon not being level in the AHS unit and carbon dust being emitted from the stack. The carbon was releveled on 12/12/18 and PM_{10} concentrations and emission rates have been subsequently reduced and similar to concentrations at the other locations. The PM_{10} results at the other operational AHS on these days were significantly below the target emission rate; therefore, it's believe that the AHS-4 results were unrelated to the activities ongoing within the temporary fabric structure (TFS).

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/3/18	0.1	63.1	0.3	85.4	0.1	83.5	0.1	56.3	0.1	82.3	0.1	55.1	0.0	10	3	No
Tue 12/4/18	0.1	18.6	0.1	11.8	0.1	159.0	0.1	18.8	0.1	19.1	0.1	11.1	0.0	2	0	No
Wed 12/5/18	0.1	56.7	0.1	51.2	0.1	111.3	0.1	70.4	0.1	55.7	0.1	41.5	0.0	10	0	No
Thu 12/6/18	0.1	207.5	0.1	263.7	0.4	276.5	0.3	272.4	0.4	179.1	0.1	88.9	0.0	37	0	No
Fri 12/7/18	0.1	41.4	0.1	55.1	0.1	90.0	0.1	33.3	0.1	33.2	0.4	20.4	0.0	18	0	No
Sat 12/8/18	0.1	33.9	0.1	30.2	0.1	23.4	0.1	22.6	0.1	22.6	0.2	18.1	0.0	13	0	No
Sun 12/9/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	207.5	0.3	263.7	0.4	276.5	0.3	272.4	0.4	179.1	0.4	88.9	--	--	--	--
Weekly Average	0.1	24.6	0.1	22.0	0.1	20.7	0.1	22.0	0.1	19.3	0.1	13.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	Tue 12/4/18	1:30PM	PAM-3	WNW 13.9 mph	159.0	5.6	153.4	The elevated PM_{10} concentration was due to Portland Cement being pumped into the TFS at a high flow rate while the TFS was under insufficient negative pressure (garage doors were open at the time). Site supervisor was notified and operations were temporarily stopped. The flow rate of Portland Cement was decreased, filters were cleaned, and garage doors were closed and only reopened intermittently as required.
PM_{10}	Thu 12/6/18	5:45AM	PAM-2	SSW 1.6 mph	153.9	30.8	123.1	The elevated PM_{10} concentrations were due to offsite activities. The elevated concentrations were confirmed with a hand-held DustTrak. Slight odors were present with an asphalt/tarry smell (not associated with site activities). Site supervisor was notified.
		6:00AM		SSW 2.3 mph	151.3	47.2	104.1	
		6:30AM		SW 3.4 mph	161.6	41.3	120.3	
		6:45AM		SSW 4.9 mph	263.7	81.2	182.5	
		7:15AM		SSW 5.0 mph	197.8	88.9	108.9	
PM_{10}	Thu 12/6/18	6:15AM	PAM-4	SSW 3.1 mph	192.9	67.3	125.6	
		6:30AM		SW 3.4 mph	152.1	41.3	110.8	
		6:45AM		SSW 4.9 mph	193.8	81.2	112.6	
		7:15AM		SSW 5.0 mph	272.4	88.9	183.5	
		7:30AM		SSW 5.0 mph	250.8	82.5	168.3	
PM_{10}	Thu 12/6/18	6:30AM	PAM-3	SW 3.4 mph	170.6	41.3	129.3	
		6:45AM		SSW 4.9 mph	276.5	81.2	195.3	
		7:15AM		SSW 5.0 mph	219.8	88.9	130.9	
PM_{10}	Thu 12/6/18	6:45AM	PAM-1	SSW 4.9 mph	207.5	81.2	126.3	
		7:15AM		SSW 5.0 mph	162.7	88.9	73.8	

Definitions:

PAM – Portable Air Monitoring Station
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels, continued

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	Thu 12/6/18	6:45AM 7:15AM 7:30AM	PAM-5	SSW 4.9 mph SSW 5.0 mph SSW 5.0 mph	157.6 179.1 164.3	81.2 88.9 82.5	76.4 90.2 81.8	The elevated PM_{10} concentrations were due to offsite activities. The elevated concentrations were confirmed with a hand-held DustTrak. Slight odors were present with an asphalt/tarry smell (not associated with site activities). Site supervisor was notified.
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 12/3/18				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
Total PCBs Aroclor	µg/m^3	< 3.60	< 3.60	< 3.60
Sample Date: 12/4/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.48*	*< 0.39*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 4.32	< 3.51	< 3.51
Sample Date: 12/5/18				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.39*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.51	< 3.51

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 12/6/18				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.37*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.33	< 3.51
Sample Date: 12/7/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1221	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1232	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1242	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1248	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1254	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1260	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1262	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
AROCLOR-1268	µg/m^3	*< 0.36*	*< 0.36*	*< 0.36*
Total PCBs Aroclor	µg/m^3	< 3.24	< 3.24	< 3.24
Sample Date: 12/8/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.40*	*< 0.40*
Total PCBs Aroclor	µg/m^3	< 3.60	< 3.60	< 3.60

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	<3.59	<3.60	<3.60	<3.52	<3.49	<3.53

Definitions:

PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/3/18	lb/hr	<0.7	--	--	--	--	--	<0.34		--
Tue 12/4/18	lb/hr	<0.7	--	--	--	--	--	--	<0.34	--
Wed 12/5/18	lb/hr	<0.7	--	--	--	--	--	--	--	<0.34
Thu 12/6/18	lb/hr	<0.7	<0.30	--	--	--	--	--	--	--
Fri 12/7/18	lb/hr	<0.7	<0.34	--	--	--	--	--	--	--
Sat 12/8/18	lb/hr	<0.7	--	--	<0.32	--	--	--	--	--
Sun 12/9/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day, Monday through Saturday.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/3/18	lb/hr	<0.7	NA[1]	0.0019	0.0011	NA[1]	0.0010	0.0012	0.0012	0.0038
Tue 12/4/18	lb/hr	<0.7	0.0039	NA[1]	0.0010	0.8043[2]	0.0003	0.0005	0.0005	0.0009
Wed 12/5/18	lb/hr	<0.7	0.0031	NA[1]	0.0040	1.3180[2]	0.0015	0.0020	0.0007	0.0011
Thu 12/6/18	lb/hr	<0.7	0.0007	NA[1]	0.0010	NA[1]	0.0010	0.0008	0.0017	0.0007
Fri 12/7/18	lb/hr	<0.7	0.0016	NA[1]	0.0051	0.0008	0.0007	0.0008	0.0009	0.0008
Sat 12/8/18	lb/hr	<0.7	0.0008	NA[1]	0.0064	0.8363[2]	NA[1]	NA[1]	0.1197	NA[1]
Sun 12/9/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.
[2] Elevated PM_{10} due to uneven carbon bed and carbon dust being emitted from stack. Carbon was leveled on 12/12/18 and PM_{10} concentrations subsequently decreased.

Table 10: Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/3/18	lb/hr	<1.3	NA[1]	0.17	0.09	NA[1]	0.11	0.11	0.18	0.16
Tue 12/4/18	lb/hr	<1.3	0.15	0.14	0.15	NA[1]	0.17	0.16	0.14	0.15
Wed 12/5/18	lb/hr	<1.3	0.09	NA[1]	0.16	0.23	0.25	0.24	0.17	0.19
Thu 12/6/18	lb/hr	<1.3	0.13	NA[1]	0.21	NA[1]	0.16	0.21	0.19	0.20
Fri 12/7/18	lb/hr	<1.3	0.12	NA[1]	0.18	0.20	0.19	0.11	0.13	0.14
Sat 12/8/18	lb/hr	<1.3	0.12	NA[1]	0.03	0.11	NA[1]	NA[1]	0.11	NA[1]
Sun 12/9/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

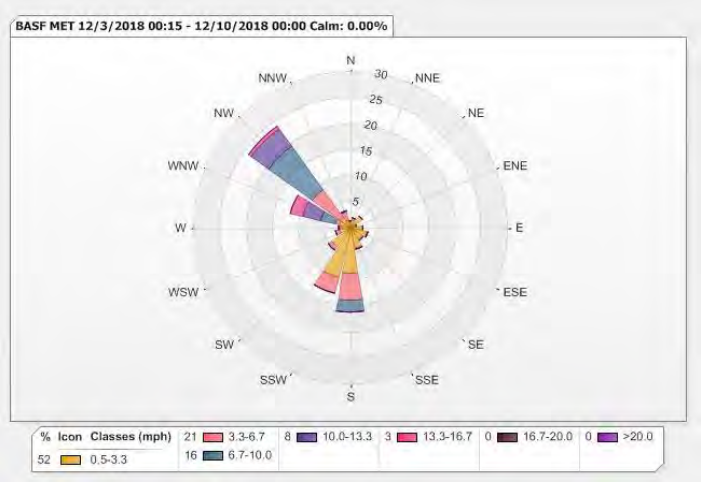
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

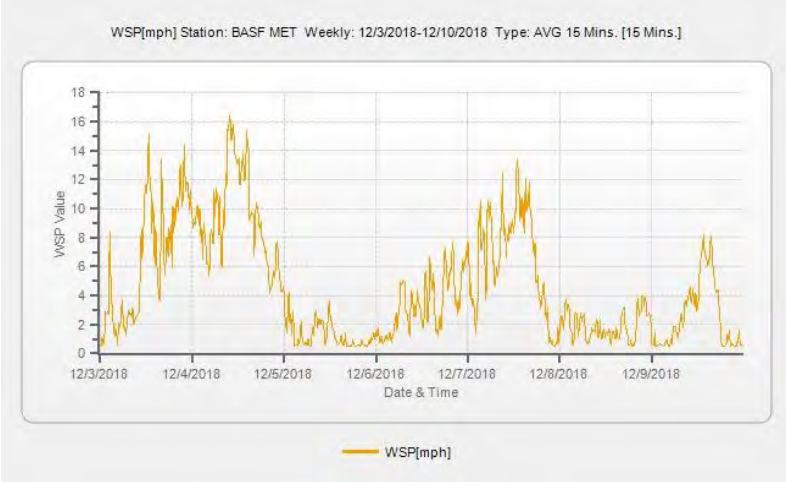
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

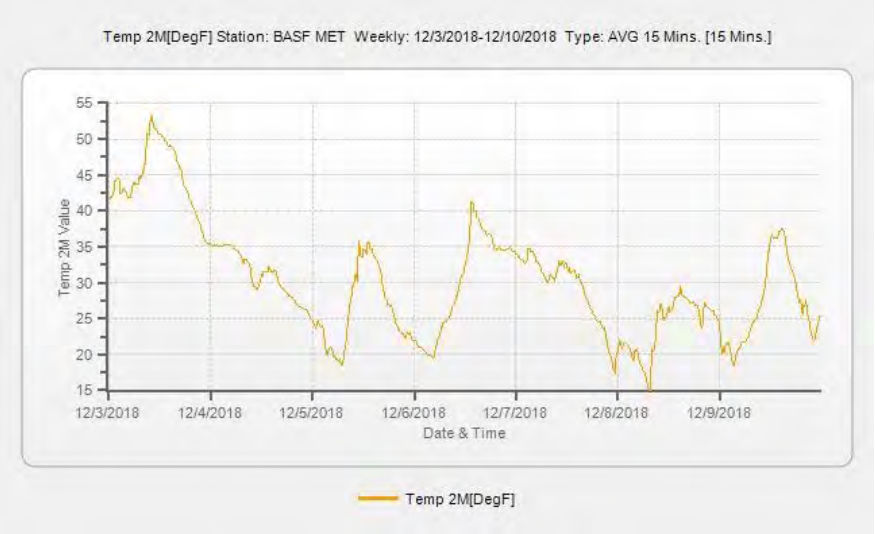
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

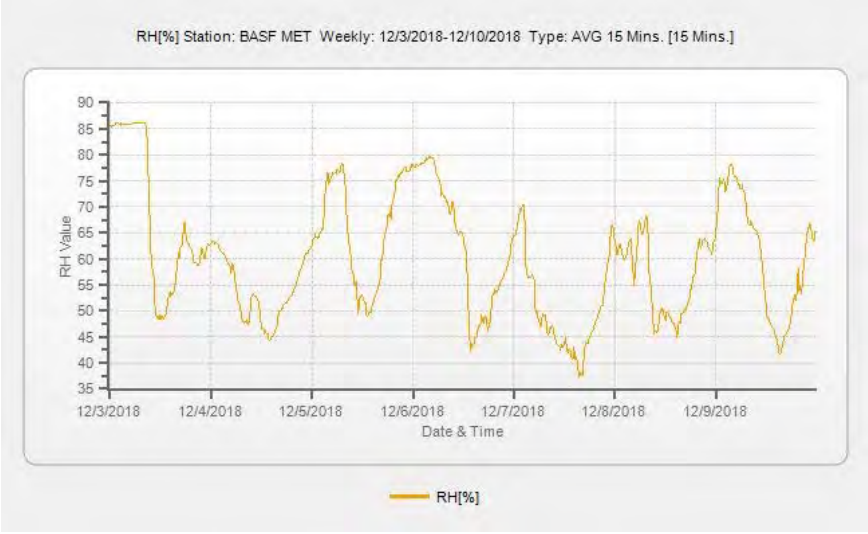


Figure 2: Site Map (12/3/18 – 12/8/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/10/18 – 12/16/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC concentrations remained below the Action Level. There were however, PM_{10} concentrations above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/10/18	0.1	53.0	0.1	66.6	0.1	61.5	0.1	54.1	0.1	52.8	0.3	29.3	0.0	40	0	No
Tue 12/11/18	0.1	223.1	0.1	160.9	0.1	75.3	0.3	260.0	0.3	230.7	0.7	90.3	0.0	42	2	No
Wed 12/12/18	0.1	68.8	0.1	78.7	0.1	71.9	0.1	65.9	0.1	65.9	0.7	41.3	0.0	62	1	No
Thu 12/13/18	0.1	62.9	0.1	73.1	0.1	78.0	0.1	124.4	0.1	85.4	0.4	36.3	0.0	34	1	No
Fri 12/14/18	0.1	53.4	0.1	67.3	0.1	64.9	0.1	122.2	0.1	70.3	0.1	43.3	0.0	21	2	No
Sat 12/15/18	0.1	66.7	0.1	71.6	0.1	60.0	0.1	61.4	0.1	56.9	0.2	53.9	0.0	24	0	No
Sun 12/16/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	223.1	0.1	160.9	0.1	78.0	0.3	260.0	0.3	230.7	0.7	90.3	--	--	--	--
Weekly Average	0.1	29.9	0.1	45.6	0.1	39.3	0.1	33.7	0.1	38.1	0.1	26.6	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	Tue 12/11/18	6:15AM	PAM-4	SE 0.6 mph	260.0	44.4	215.6	The elevated PM_{10} concentrations were due to offsite activities. The elevated concentrations were confirmed with a hand-held DustTrak. Slight odors were present with an asphalt/tarry smell (not associated with site activities). Site supervisor was notified.
		6:30AM	PAM-5	E 0.5 mph	230.7	53.1	177.6	
		6:30AM	PAM-1	E 0.5 mph	223.1	53.1	170.0	
		6:30AM	PAM-2	E 0.5 mph	160.9	53.1	107.8	
		8:30AM		SE 0.5 mph	151.7	66.9	84.8	
		8:45AM		SSE 0.5 mph	151.6	88.8	62.8	

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 12/10/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1221	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1232	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1242	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1248	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1254	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1260	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1262	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1268	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
Total PCBs Aroclor	µg/m^3	< 3.24	< 3.42	< 3.33
Sample Date: 12/11/18				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.36*	*< 0.36*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.24	< 3.24
Sample Date: 12/12/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.37*	*< 0.37*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.33	< 3.33

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 12/13/18				
Analyte	**Units**	**PAM-1**	**PAM-2**	**PAM-3**
AROCLOR-1016	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.37*	*< 0.37*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.33	< 3.33	< 3.51
Sample Date: 12/14/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1221	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1232	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1242	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1248	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1254	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1260	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1262	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
AROCLOR-1268	µg/m^3	*< 0.42*	*< 0.42*	*< 0.41*
Total PCBs Aroclor	µg/m^3	< 3.78	< 3.78	< 3.69
Sample Date: 12/15/18				
Analyte	**Units**	**PAM-1**	**PAM-2**	**PAM-3**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.39*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.60	< 3.51	< 3.51

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.46	3.56	3.60	3.55	3.47	3.54

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/10/18	lb/hr	<0.7	--	--	--	--	0.30	--	--	--
Tue 12/11/18	lb/hr	<0.7	--	--	--	--	--	0.38	--	--
Wed 12/12/18	lb/hr	<0.7	--	--	--	--	--	--	0.36	--
Thu 12/13/18	lb/hr	<0.7	--	--	--	--	--	--	--	0.34
Fri 12/14/18	lb/hr	<0.7	--	--	--	0.26	--	--	--	--
Sat 12/15/18	lb/hr	<0.7	--	--	--	0.22	--	--	--	--
Sun 12/16/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day, Monday through Saturday.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/10/18	lb/hr	<0.7	0.0707	NA[1]	0.0130	0.5668	0.0007	0.0031	0.0039	0.0050
Tue 12/11/18	lb/hr	<0.7	0.0008	NA[1]	0.0031	0.1134	0.0020	0.0045	0.0028	0.0043
Wed 12/12/18	lb/hr	<0.7	0.0016	0.0031	0.0021	0.0018	0.0020	0.0024	0.0165	0.0011
Thu 12/13/18	lb/hr	<0.7	0.0030[2]	0.0014[2]	0.0005	0.0019	0.0009	0.0033	0.0040	0.0019
Fri 12/14/18	lb/hr	<0.7	0.0012	0.0006	0.0020	0.0082	0.0040	0.0019	0.0022	0.0011
Sat 12/15/18	lb/hr	<0.7	NA[1]	0.0005	NA[1]	0.0004	NA[1]	NA[1]	NA[1]	NA[1]
Sun 12/16/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.
[2] Maximum stack velocity was used from the previous and following days due to an instrument malfunction on 12/13/18.

Table 10: Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/10/18	lb/hr	<1.3	0.139	NA[1]	0.140	0.139	0.114	0.171	0.184	0.151
Tue 12/11/18	lb/hr	<1.3	0.193	NA[1]	0.404	0.164	0.272	0.074	0.068	0.096
Wed 12/12/18	lb/hr	<1.3	0.235	0.374	0.533	0.239	0.399	0.113	0.109	0.139
Thu 12/13/18	lb/hr	<1.3	0.132[2]	0.159[2]	0.179	0.197	0.239	0.109	0.068	0.072
Fri 12/14/18	lb/hr	<1.3	0.308	0.143	0.238	0.063	0.303	0.257	0.203	0.218
Sat 12/15/18	lb/hr	<1.3	NA[1]	0.143	NA[1]	0.077	NA[1]	NA[1]	NA[1]	NA[1]
Sun 12/16/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

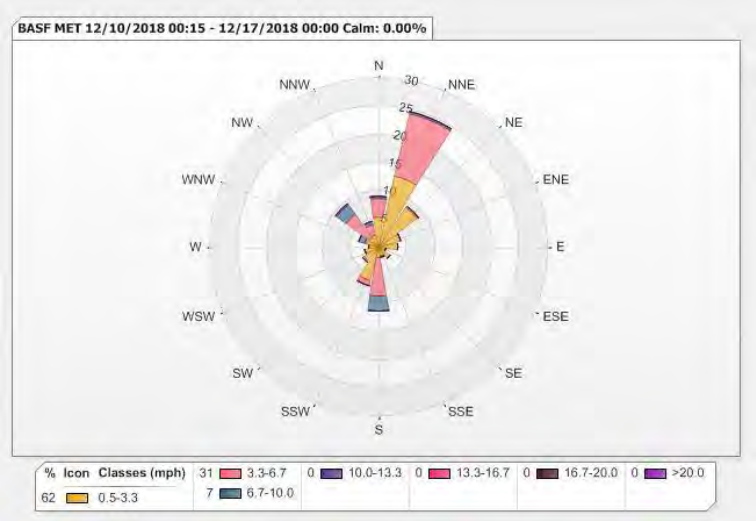
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

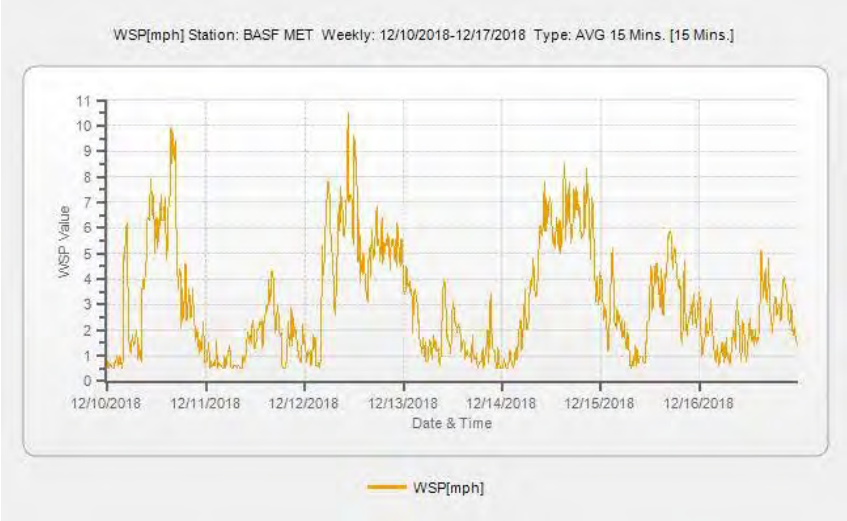
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.
[2] Maximum stack velocity was used from the previous and following days due to an instrument malfunction on 12/13/18.

Figure 1: Meteorological Summaries

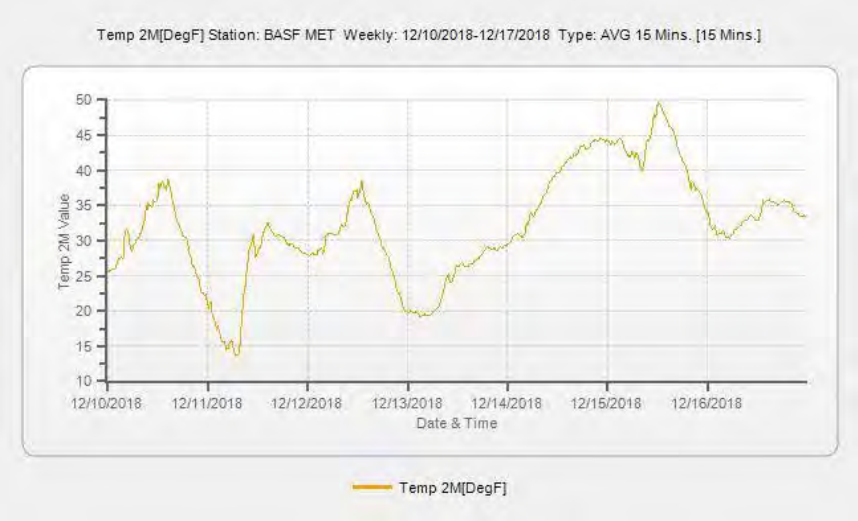
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:



Figure 2: Site Map (12/10/18 – 12/15/18)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **12/17/18 – 12/23/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are

compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period TVOC concentrations remained below the Action Level. There was however, a PM_{10} concentration above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and

- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/17/18	0.1	74.0	0.1[1]	95.8[2]	0.1	80.7[3]	0.1	78.3	0.1	52.7	0.2[4]	64.4[4]	0.0	35	2	No
Tue 12/18/18	0.1	20.4	0.1	57.3	0.1	16.0	0.1[5]	12.1[5]	0.1	13.9	ND[6]	82.0	0.0	11	0	No
Wed 12/19/18	0.1	35.4[7]	0.1	67.0	0.1	101.9	0.1	155.9	0.1	66.4	0.2	46.6	0.0	23	0	No
Thu 12/20/18	0.1	75.9	0.1	71.8	0.1	70.6	0.1	76.9	0.1	73.8	0.4	71.5	0.0	40	0	No
Fri 12/21/18	0.1	94.4	0.1	55.4	0.6	100.5	0.1	97.5	0.2	92.0	2.0	102.3	ND[8]	ND[8]	ND[8]	No
Sat 12/22/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/23/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	94.4	0.1	95.8	0.6	101.9	0.1	155.9	0.2	92.0	2.0	102.3	--	--	--	--
Weekly Average	0.1	33.7	0.1	29.0	0.1	32.3	0.1	32.6	0.1	28.6	0.1	37.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

[1] TVOC data was missing between 12/17/18 (5:15PM) and 12/18/18 (9:45AM) due to a battery failure.

[2] PM_{10} data was missing between 12/17/18 (5:15PM) and 12/18/18 (8:15AM) due to a battery failure.

[3] PM_{10} data was invalid between 12/17/18 (8:00PM) and 12/18/18 (1:15AM) due to an instrument malfunction.

[4] TVOC and PM_{10} data were missing between 12/17/18 (7:45PM) and 12/18/18 (7:45AM) due to a battery failure.

[5] TVOC and PM_{10} data were missing between 12/18/18 (3:00AM) and 12/18/18 (8:00AM) due to a battery failure.

[6] TVOC data was invalid between 12/18/18 (8:00AM) and 12/19/18 (8:00AM) due to an instrument malfunction.

[7] PM_{10} data was invalid between 12/19/18 (8:15AM) and 12/19/18 (3:30PM) due to an instrument malfunction.

[8] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
PM_{10}	Wed 12/19/18	8:15AM	PAM-4	SSE 1.1 mph	155.9	61.8	94.1	The elevated PM_{10} concentrations were due to offsite activities. The elevated concentrations were confirmed with a hand-held DustTrak. Slight odors were present with an asphalt/tarry smell (not associated with site activities). Site supervisor was notified.
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 12/17/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.42	< 3.42
Sample Date: 12/18/18				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1221	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1232	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1242	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1248	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1254	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1260	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1262	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
AROCLOR-1268	µg/m^3	*< 0.36*	*< 0.38*	*< 0.37*
Total PCBs Aroclor	µg/m^3	< 3.24	< 3.42	< 3.33
Sample Date: 12/19/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.38*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.42	< 3.42

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 12/20/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.38*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.42	< 3.42
Sample Date: 12/21/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.39*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.51	< 3.42

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.45	3.54	3.54	3.53	3.47	3.52

Definitions:

PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/17/18	lb/hr	<0.7	--	0.297	--	--	--	--	--	--
Tue 12/18/18	lb/hr	<0.7	--	0.270	--	--	--	--	--	--
Wed 12/19/18	lb/hr	<0.7	--	--	0.321[1]	--	--	--	--	--
Thu 12/20/18	lb/hr	<0.7	--	--	0.283	--	--	--	--	--
Fri 12/21/18	lb/hr	<0.7	0.260	--	--	--	--	--	--	--
Sat 12/22/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/23/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day.

[1] Maximum stack velocity was used from the previous and following days due to an instrument malfunction on12/19/18.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/17/18	lb/hr	<0.7	0.0016	0.0007	0.0006	0.0006	0.0003	0.0020	0.0011	0.0007
Tue 12/18/18	lb/hr	<0.7	0.0033	0.0129	0.0056	0.0030[1]	0.0014	0.0015[1]	0.0031[1]	0.0007[1]
Wed 12/19/18	lb/hr	<0.7	0.0073[2]	0.0024[2]	0.0022[2]	0.0022[2]	0.0008[2]	0.0020[2]	0.0008[2]	0.0006[2]
Thu 12/20/18	lb/hr	<0.7	0.0040	0.0013	0.0004	0.0005	0.0007	0.0013	0.0007	0.0004
Fri 12/21/18	lb/hr	<0.7	0.0005	NA[3]	0.0003	0.0005	0.0008	0.0011	0.0004	0.0005
Sat 12/22/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/23/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.

[1] Velocity from the previous day was used due to an instrument malfunction on 12/18/18.

[2] Maximum stack velocity was used from the previous and following days due to an instrument malfunction on12/19/18.

[3] AHS unit was not operational; no sampling conducted.

Table 10: Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/17/18	lb/hr	<1.3	0.330	0.040	0.059	0.044	0.061	0.353	0.097	0.178
Tue 12/18/18	lb/hr	<1.3	0.162	0.088	0.173	0.088[1]	0.143	0.135[1]	0.116[1]	0.135[1]
Wed 12/19/18	lb/hr	<1.3	0.077[2]	0.076[2]	0.104[2]	0.108[2]	0.077[2]	0.127[2]	0.066[2]	0.062[2]
Thu 12/20/18	lb/hr	<1.3	0.065	0.070	0.175	0.153	0.108	0.066	0.049	0.040
Fri 12/21/18	lb/hr	<1.3	0.034	NA[3]	0.055	0.040	0.057	0.025	0.010	0.024
Sat 12/22/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/23/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.

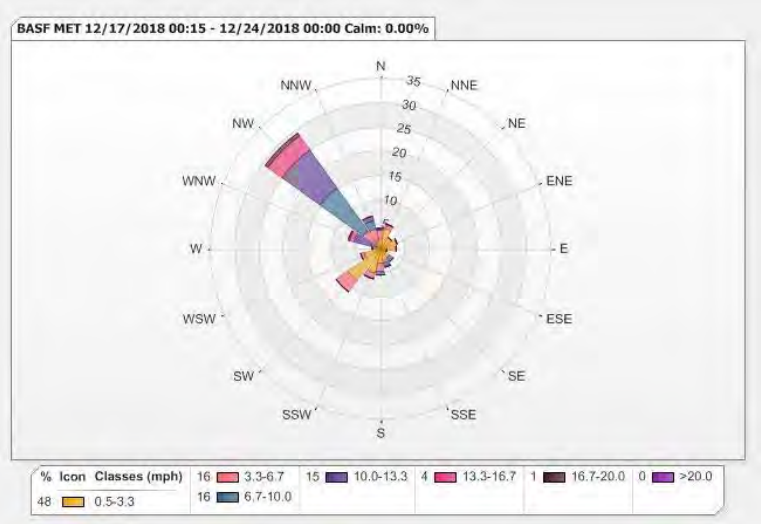
[1] Velocity from the previous day was used due to an instrument malfunction on 12/18/18.

[2] Maximum stack velocity was used from the previous and following days due to an instrument malfunction on12/19/18.

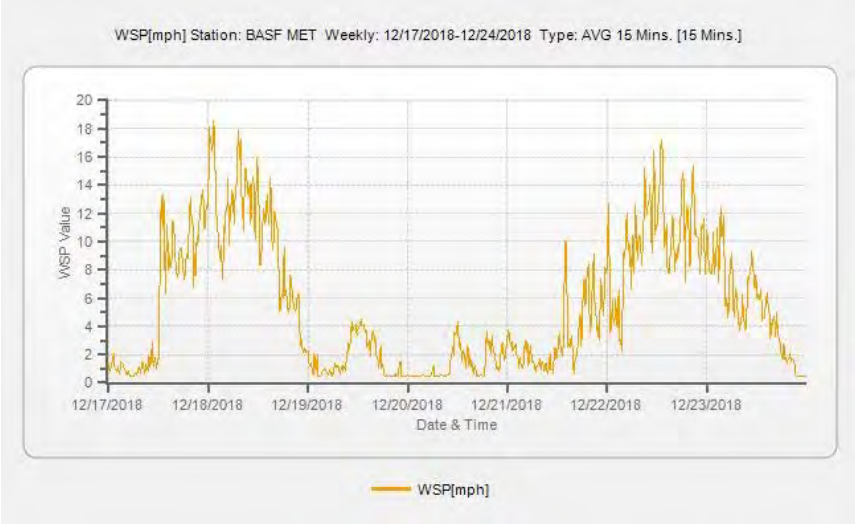
[3] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

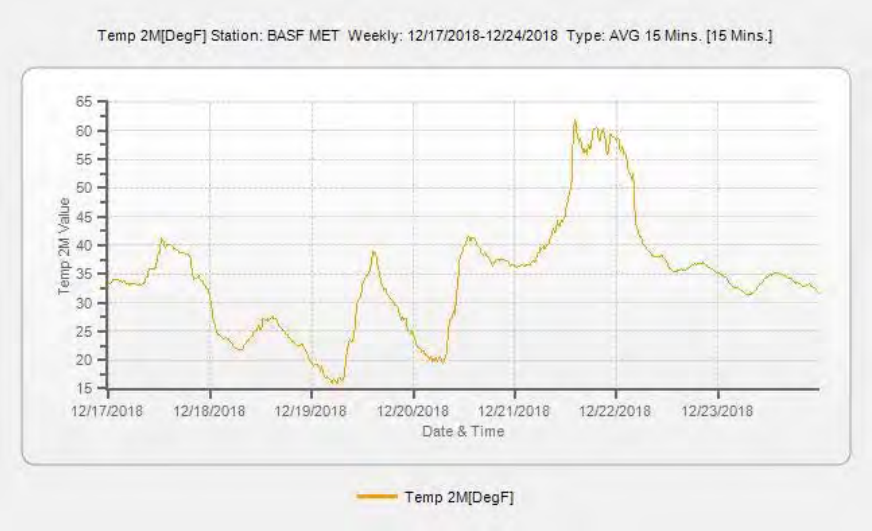
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

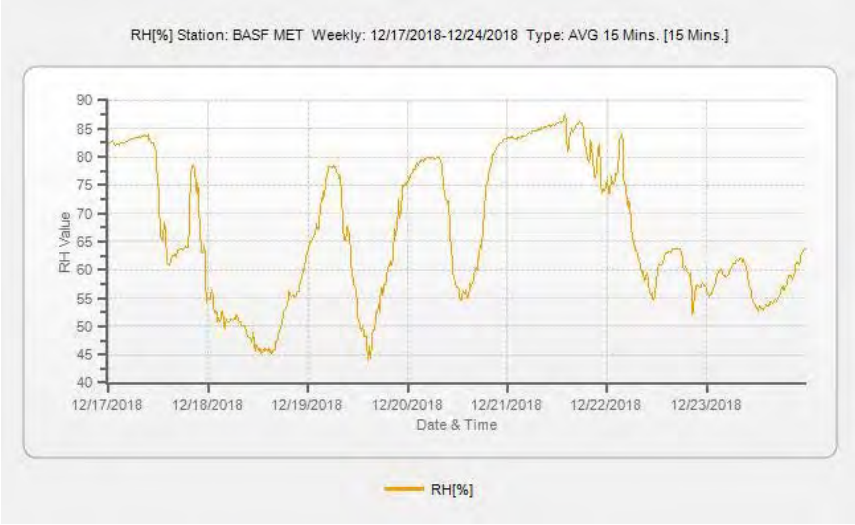


Figure 2: Site Map (12/17/18 – 12/21/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/24/18 – 12/30/18**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/24/18	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	No
Tue 12/25/18	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	No
Wed 12/26/18	0.1	35.8	0.1[2]	51.0	0.1	40.0	0.1	40.1	0.1	33.2	0.3	43.1	0.0	24	0	No
Thu 12/27/18	0.1	35.3	0.1[2]	46.9	0.1	39.2	0.2	39.2	0.1[3]	31.0[3]	0.1	38.2	0.0	16	0	No
Fri 12/28/18	0.1	26.9	0.1[2]	35.3	0.1	26.6	0.1	26.7	0.2	28.3	0.1	29.0	0.0	18	0	No
Sat 12/29/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/30/18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	35.8	0.1	51.0	0.1	40.0	0.2	40.1	0.2	33.2	0.3	43.1	--	--	--	--
Weekly Average	0.1	16.0	0.1	24.3	0.1	17.3	0.1	15.3	0.1	17.0	0.1	25.6	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.
- Continuous monitoring (24hrs/7days a week) started on November 19, 2018.

[1] Site was closed for Christmas holiday (no Site activities).

[2] TVOC data was invalid between 12/26/18 (5:00PM) and 12/27/18 (7:15AM), and 12/17/18 (9:15PM) and 12/28/18 (8:45AM) due to a power failure.

[3] TVOC and PM_{10} data was missing between 12/27/18 (12:30AM) and 12/27/18 (7:30AM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 12/26/18				
Analyte	**Units**	**PAM-2**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.41*	*< 0.40*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.69	< 3.60
Sample Date: 12/27/18				
Analyte	**Units**	**PAM-2**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.42*	*< 0.41*
Total PCBs Aroclor	µg/m^3	< 3.60	< 3.78	< 3.69
Sample Date: 12/28/18				
Analyte	**Units**	**PAM-2**	**PAM-3**	**PAM-4**
AROCLOR-1016	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.36*	*< 0.39*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.24	< 3.51	< 3.51

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.45	3.55	3.53	3.55	3.48	3.53

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/24/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/25/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/26/18	lb/hr	<0.7	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Thu 12/27/18	lb/hr	<0.7	0.333	--	--	--	--	--	--	--
Fri 12/28/18	lb/hr	<0.7	--	--	--	--	0.354	--	--	--
Sat 12/29/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/30/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day.

[1] Site was closed for Christmas holiday (no Site activities).

[2] Site returning to operational status after long holiday weekend. Process sampling was not conducted on this day.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/24/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/25/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/26/18	lb/hr	<0.7	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Thu 12/27/18	lb/hr	<0.7	0.0016	NA[3]	0.0008	0.0008	0.0005	0.0020	0.0008	0.0012
Fri 12/28/18	lb/hr	<0.7	0.0007	NA[3]	0.0005	0.0007	0.0004	0.0007	0.0004	0.0008
Sat 12/29/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/30/18	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.
[1] Site was closed for Christmas holiday (no Site activities).
[2] Site returning to operational status after long holiday weekend. Process sampling was not conducted on this day.
[3] AHS unit was not operational; no sampling conducted.

Table 10:Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/24/18	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/25/18	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/26/18	lb/hr	<1.3	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Thu 12/27/18	lb/hr	<1.3	0.047	NA[3]	0.000	0.000	0.000	0.021	0.010	0.017
Fri 12/28/18	lb/hr	<1.3	0.071	NA[3]	0.100	0.000	0.015	0.000	0.000	0.000
Sat 12/29/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Sun 12/30/18	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

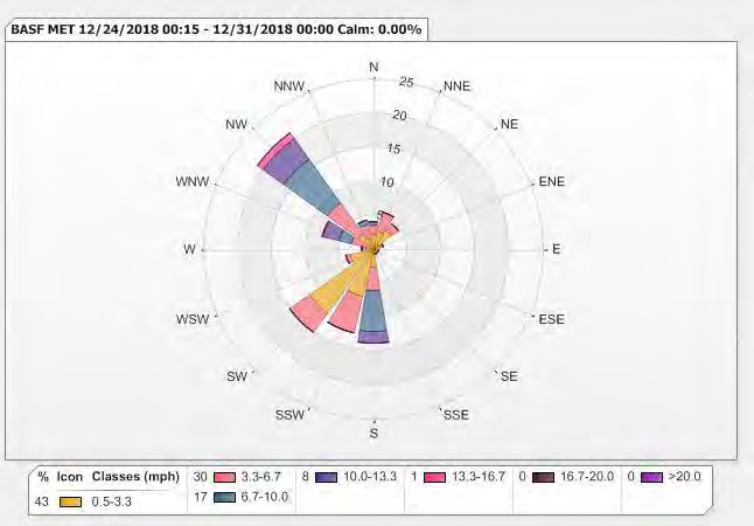
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

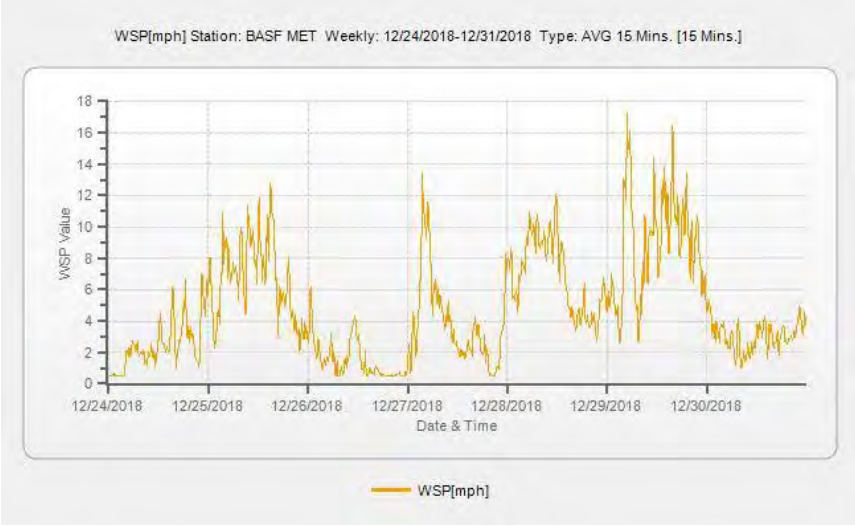
- Process sampling began on November 29, 2018.
[1] Site was closed for Christmas holiday (no Site activities).
[2] Site returning to operational status after long holiday weekend. Process sampling was not conducted on this day.
[3] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

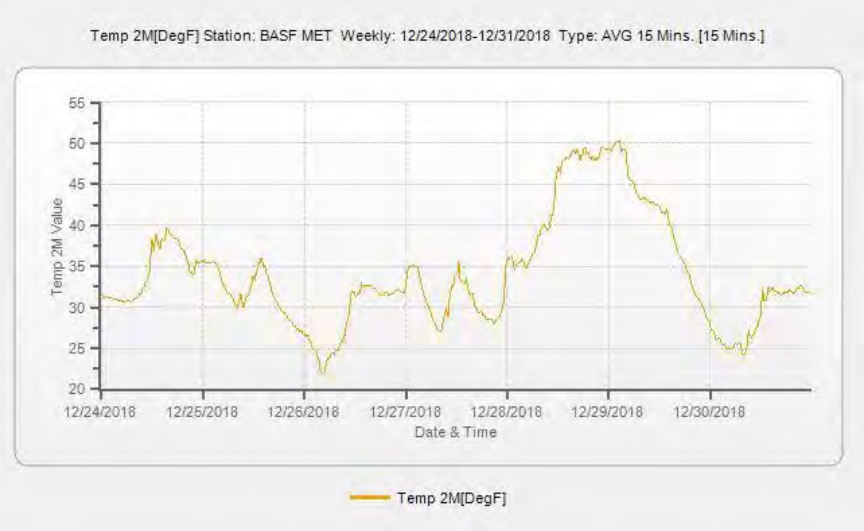
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

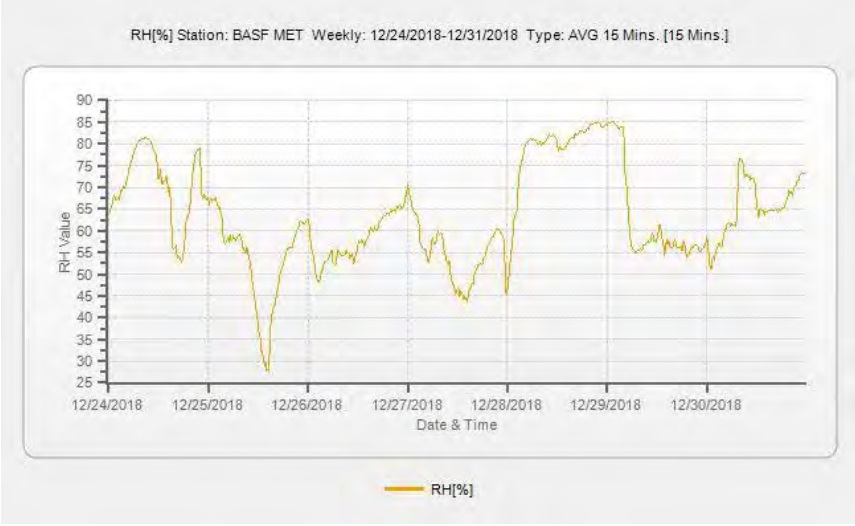


Figure 2: Site Map (12/24/18 – 12/28/18)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/31/18 – 1/6/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/31/18	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	No
Tue 1/1/19	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	No
Wed 1/2/19	0.1	21.9	0.1	35.1	0.1	27.2	0.1	25.8	0.1	21.2	0.1	52.5	0.0	18	0	No
Thu 1/3/19	0.1	28.5	0.2	45.6	0.1	32.6	0.1	25.9	0.1	26.1	0.1	41.9	0.1	50	0	No
Fri 1/4/19	0.1	28.6	0.3[2]	39.7[2]	0.1	29.8	0.1	31.5	0.1[3]	25.9[3]	0.1	36.3	0.2	31	0	No
Sat 1/5/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/6/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	28.6	0.3	45.6	0.1	32.6	0.1	31.5	0.1	26.1	0.1	52.5	--	--	--	--
Weekly Average	0.1	15.8	0.1	21.4	0.1	19.3	0.1	15.5	0.1	13.1	0.1	19.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Site was closed for New Year's Day holiday (no Site activities).

[2] TVOC and PM_{10} data was missing between 1/4/19 (3:00AM) and 1/4/19 (8:15AM) due to a battery failure.

[3] TVOC and PM_{10} data was missing between 1/4/19 (2:15AM) and 1/4/19 (8:00AM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 1/2/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1221	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1232	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1242	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1248	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1254	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1260	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1262	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
AROCLOR-1268	µg/m^3	*< 0.37*	*< 0.39*	*< 0.37*
Total PCBs Aroclor	µg/m^3	< 3.33	< 3.51	< 3.33
Sample Date: 1/3/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.39*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.51	< 3.42
Sample Date: 1/4/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.38*	ND[1]
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.42	ND[1]

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Sample was not analyzed due to an instrument malfunction.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.44	3.55	3.53	3.53	3.48	3.51

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/31/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 1/1/19	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 1/2/19	lb/hr	<0.7	--	--	--	0.360	--	--	--	--
Thu 1/3/19	lb/hr	<0.7	--	--	--	--	--	0.355	--	--
Fri 1/4/19	lb/hr	<0.7	--	--	--	--	--	--	0.362	--
Sat 1/5/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/6/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day.

[1] Site was closed for New Year's Day holiday (no Site activities).

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/31/18	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 1/1/19	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 1/2/19	lb/hr	<0.7	0.0013	0.0011	0.0005	0.0006	0.0016	0.0008	0.0015	0.0010
Thu 1/3/19	lb/hr	<0.7	0.0009	0.0021	0.0017	0.0004	0.0018	0.0009	0.0014	0.0009
Fri 1/4/19	lb/hr	<0.7	0.0004	0.0004	0.0004	0.0009	0.0005	0.0007	0.0005	0.0006
Sat 1/5/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/6/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018.
[1] Site was closed for New Year's Day holiday (no Site activities).

Table 10: Process Sampling VOC Emissions Summary

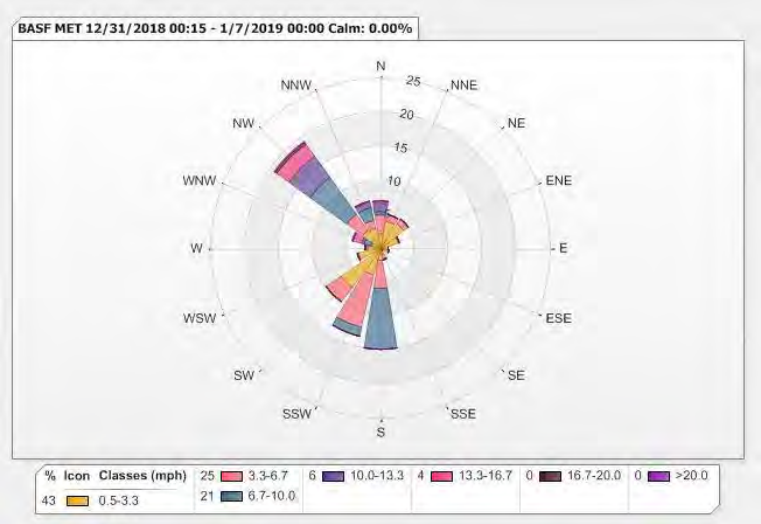
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/31/18	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 1/1/19	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 1/2/19	lb/hr	<1.3	0.014	0.000	0.000	0.000	0.036	0.000	0.000	0.000
Thu 1/3/19	lb/hr	<1.3	0.036	0.025	0.009	0.020	0.028	0.018	0.000	0.014
Fri 1/4/19	lb/hr	<1.3	0.039	0.013	0.002	0.000	0.000	0.001	0.000	0.007
Sat 1/5/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/6/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018.
[1] Site was closed for New Year's Day holiday (no Site activities).

Figure 1: Meteorological Summaries

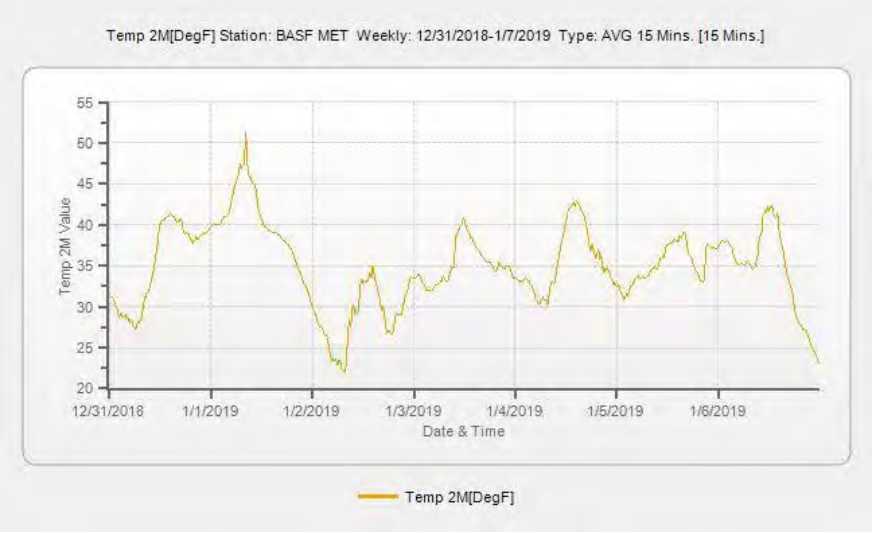
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

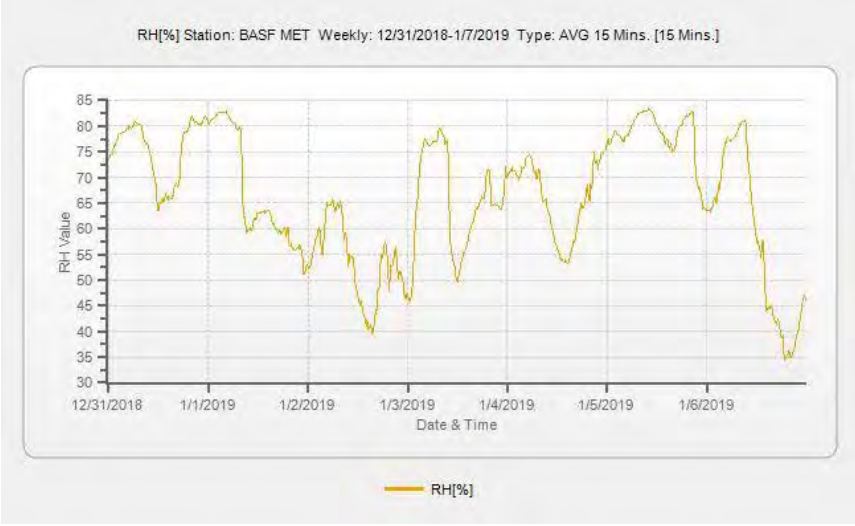


Figure 2: Site Map (12/31/18 – 1/4/19)



Weekly CAMP Monitoring Report # 2
OU-1 of the BASF Rensselaer Facility
36 Riverside Ave, Rensselaer, NY

INTRODUCTION

Presented below are results of ambient air monitoring performed during upland site preparation activities at BASF's former facility at 36 Riverside Avenue, Rensselaer, New York. The upland site preparation activities are part of the Hudson River Operible Unit 2 (OU2) sediment remediation.

During upland site preparation activities, AECOM is performing the air monitoring in accordance with the General Community Air Monitoring Plan for OU1 (CAMP) presented in Appendix F of the Site Management Plan (SMP) for OU-1 prepared by Roux Associates (May 7, 2004).

PROJECT ACTIVITIES

For the week ending Friday June 29, 2018, main activities included installing sheet pile deadmen and soil removal along the trench line and sheet fabrication at the welding station. The tieback platform excavation began on Wednesday June 27. There were light rain showers on Wednesday. On Thursday June 28th at 2:35 pm thunder and lightning forced all work to stop until 4 pm. A street sweeper was working on Riverside Avenue on Friday morning.

MONITORING LOCATIONS AND DURATION

Daily location of Particulate monitoring stations was determined based on wind direction established from a meteorological station located on-site. These included:

- A station located upwind of site activities (Station AMS-01)
- A station located downwind of site activities (Station AMS-03)
- A station located in the north east site corner adjacent to the Albany Molecular parking area (Station AMS-02).

One VOC monitoring station was installed at the downwind perimeter of the working area during working hours.

MONITORING RESULTS

In accordance with Sections 2.2 and 2.3 of the CAMP, corrective measures are implemented when the downwind PM-10 particulate level is 100 µg/m3 greater than background (upwind perimeter) for a 15-minute period, if airborne dust is observed leaving the work area, or if the average ambient air concentration of total organic vapors at the downwind perimeter of the work area exceeds 5 parts per million (ppm) above background for a 15-minute period.

Monday and Tuesday the wind direction was towards the South. It was to the north on Wednesday and Thursday and returned to south early afternoon of Friday. Monitoring locations were adjusted as the wind direction changed so that AMS 03 was downwind from the work and AMS-01 was upwind from the work. The PM-10 and VOCs levels were well below action levels during the monitoring period.

AECOM

06/25/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
6/25/2018	6:35:34	20	6:57:10	16	6:56:14	20
6/25/2018	6:50:34	13	7:12:10	10	7:11:14	10
6/25/2018	7:05:34	11	7:27:10	7	7:26:14	9
6/25/2018	7:20:34	13	7:42:10	10	7:41:14	11
6/25/2018	7:35:34	15	7:57:10	9	7:56:14	12
6/25/2018	7:50:34	48	8:12:10	14	8:11:14	13
6/25/2018	8:05:34	25	8:27:10	7	8:26:14	15
6/25/2018	8:20:34	14	8:42:10	8	8:41:14	11
6/25/2018	8:35:34	13	8:57:10	7	8:56:14	10
6/25/2018	8:50:34	12	9:12:10	5	9:11:14	9
6/25/2018	9:05:34	13	9:27:10	7	9:26:14	10
6/25/2018	9:20:34	13	9:42:10	8	9:41:14	10
6/25/2018	9:35:34	13	9:57:10	3	9:56:14	10
6/25/2018	9:50:34	13	10:12:10	6	10:11:14	10
6/25/2018	10:05:34	13	10:27:10	3	10:26:14	11
6/25/2018	10:20:34	13	10:42:10	1	10:41:14	11
6/25/2018	10:35:34	14	10:57:10	3	10:56:14	11
6/25/2018	10:50:34	14	11:12:10	1	11:11:14	11
6/25/2018	11:05:34	14	11:27:10	0	11:26:14	11
6/25/2018	11:20:34	14	11:42:10	0	11:41:14	12
6/25/2018	11:35:34	15	11:57:10	1	11:56:14	12
6/25/2018	11:50:34	14	12:12:10	0	12:11:14	11
6/25/2018	12:05:34	13	12:27:10	0	12:26:14	10
6/25/2018	12:20:34	13	12:42:10	1	12:41:14	10
6/25/2018	12:35:34	14	12:57:10	0	12:56:14	10
6/25/2018	12:50:34	13	13:12:10	2	13:11:14	10
6/25/2018	13:05:34	13	13:27:10	7	13:26:14	11
6/25/2018	13:20:34	14	13:42:10	3	13:41:14	11
6/25/2018	13:35:34	14	13:57:10	7	13:56:14	11
6/25/2018	13:50:34	14	14:12:10	8	14:11:14	11
6/25/2018	14:05:34	14	14:27:10	8	14:26:14	11
6/25/2018	14:20:34	15	14:42:10	5	14:41:14	12
6/25/2018	14:35:34	15	14:57:10	6	14:56:14	11
6/25/2018	14:50:34	15	15:12:10	6	15:11:14	11
6/25/2018	15:05:34	15	15:27:10	8	15:26:14	12
6/25/2018	15:20:34	15	15:42:10	18	15:41:14	12
6/25/2018	15:35:34	16	15:57:10	45	15:56:14	12
6/25/2018	15:50:34	16	16:12:10	25	16:11:14	12
6/25/2018	16:05:34	16	16:27:10	19	16:26:14	12
6/25/2018	16:20:34	16	16:42:10	9	16:41:14	12
6/25/2018	16:35:34	16	16:57:10	8	16:56:14	13
6/25/2018	16:50:34	16	17:12:10	4	17:11:14	13
6/25/2018	17:05:34	17	17:27:10	3	17:26:14	13

06/26/2018, Particulate Monitoring Data –
OU-1 at the BASF Rensselaer Facility

	Upwind		Downwind		Building	
Date	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
6/26/2018	7:40:16	31	7:35:34	28	7:43:16	23
6/26/2018	7:55:16	21	7:50:34	27	7:58:16	11
6/26/2018	8:10:16	12	8:05:34	12	8:13:16	10
6/26/2018	8:25:16	9	8:20:34	15	8:28:16	8
6/26/2018	8:40:16	10	8:35:34	10	8:43:16	8
6/26/2018	8:55:16	11	8:50:34	8	8:58:16	9
6/26/2018	9:10:16	10	9:05:34	7	9:13:16	8
6/26/2018	9:25:16	11	9:20:34	6	9:28:16	10
6/26/2018	9:40:16	13	9:35:34	6	9:43:16	10
6/26/2018	9:55:16	13	9:50:34	5	9:58:16	10
6/26/2018	10:10:16	12	10:05:34	5	10:13:16	10
6/26/2018	10:25:16	12	10:20:34	4	10:28:16	9
6/26/2018	10:40:16	12	10:35:34	2	10:43:16	10
6/26/2018	10:55:16	14	10:50:34	4	10:58:16	10
6/26/2018	11:10:16	13	11:05:34	2	11:13:16	8
6/26/2018	11:25:16	12	11:20:34	9	11:28:16	9
6/26/2018	11:40:16	13	11:35:34	2	11:43:16	9
6/26/2018	11:55:16	15	11:50:34	1	11:58:16	11
6/26/2018	12:10:16	16	12:05:34	1	12:13:16	11
6/26/2018	12:25:16	16	12:20:34	0	12:28:16	11
6/26/2018	12:40:16	16	12:35:34	0	12:43:16	11
6/26/2018	12:55:16	17	12:50:34	0	12:58:16	12
6/26/2018	13:10:16	17	13:05:34	0	13:13:16	12
6/26/2018	13:25:16	16	13:20:34	0	13:28:16	17
6/26/2018	13:40:16	15	13:35:34	0	13:43:16	12
6/26/2018	13:55:16	16	13:50:34	0	13:58:16	21
6/26/2018	14:10:16	16	14:05:34	0	14:13:16	13
6/26/2018	14:25:16	16	14:20:34	0	14:28:16	12
6/26/2018	14:40:16	16	14:35:34	0	14:43:16	14
6/26/2018	14:55:16	15	14:50:34	0	14:58:16	39
6/26/2018	15:10:16	15	15:05:34	0	15:13:16	11
6/26/2018	15:25:16	15	15:20:34	0	15:28:16	24
6/26/2018	15:40:16	15	15:35:34	0	15:43:16	14
6/26/2018	15:55:16	16	15:50:34	0	15:58:16	13
6/26/2018	16:10:16	15	16:05:34	0	16:13:16	25
6/26/2018	16:25:16	16	16:20:34	0	16:28:16	19
6/26/2018	16:40:16	16	16:35:34	0	16:43:16	12
6/26/2018	16:55:16	16	16:50:34	0	16:58:16	11
6/26/2018	17:10:16	16	17:05:34	0		

6/27/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
6/27/2018	7:33:45	40	7:32:40	59	7:32:10	40
6/27/2018	7:48:45	24	7:47:40	30	7:47:10	20
6/27/2018	8:03:45	20	8:03:40	28	8:02:10	16
6/27/2018	8:18:45	22	8:17:40	50	8:17:10	20
6/27/2018	8:33:45	35	8:32:40	44	8:32:10	32
6/27/2018	8:48:45	37	8:47:40	32	8:47:10	29
6/27/2018	9:03:45	29	9:03:40	25	9:02:10	24
6/27/2018	9:18:45	23	9:17:40	23	9:17:10	20
6/27/2018	9:33:45	19	9:32:40	16	9:32:10	17
6/27/2018	9:48:45	22	9:47:40	24	9:47:10	22
6/27/2018	10:03:45	28	10:03:40	23	10:02:10	19
6/27/2018	10:18:45	23	10:17:40	21	10:17:10	19
6/27/2018	10:33:45	25	10:32:40	25	10:32:10	26
6/27/2018	10:48:45	28	10:47:40	21	10:47:10	24
6/27/2018	11:03:45	24	11:03:40	23	11:02:10	20
6/27/2018	11:18:45	34	11:17:40	66	11:17:10	25
6/27/2018	11:33:45	36	11:32:40	39	11:32:10	24
6/27/2018	11:48:45	28	11:47:40	50	11:47:10	22
6/27/2018	12:03:45	24	12:03:40	19	12:02:10	19
6/27/2018	12:18:45	24	12:17:40	19	12:17:10	18
6/27/2018	12:33:45	21	12:33:40	15	12:32:10	16
6/27/2018	12:48:45	26	12:47:40	20	12:47:10	19
6/27/2018	13:03:45	23	13:03:40	24	13:02:10	19
6/27/2018	13:18:45	27	13:17:40	30	13:17:10	21
6/27/2018	13:33:45	36	13:33:40	49	13:32:10	24
6/27/2018	13:48:45	40	13:47:40	56	13:47:10	38
6/27/2018	14:03:45	38	14:03:40	33	14:02:10	22
6/27/2018	14:18:45	24	14:17:40	27	14:17:10	18
6/27/2018	14:33:45	18	14:33:40	21	14:32:10	15
6/27/2018	14:48:45	18	14:47:40	26	14:47:10	15
6/27/2018	15:03:45	19	15:03:40	27	15:02:10	16
6/27/2018	15:18:45	18	15:17:40	24	15:17:10	15
6/27/2018	15:33:45	21	15:33:40	20	15:32:10	16
6/27/2018	15:48:45	21	15:47:40	19	15:47:10	16
6/27/2018	16:03:45	18	16:03:40	19	16:02:10	15
6/27/2018	16:18:45	18	16:17:40	20	16:17:10	15
6/27/2018	16:33:45	22	16:33:40	23	16:32:10	20
			16:47:40	17	16:47:10	17

06/28/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
6/28/2018	7:31:27	22	7:37:08	27	7:34:15	17
6/28/2018	7:46:27	10	7:52:08	11	7:49:15	14
6/28/2018	8:01:27	20	8:07:08	22	8:04:15	21
6/28/2018	8:16:27	27	8:22:08	12	8:19:15	15
6/28/2018	8:31:27	9	8:37:08	8	8:34:15	11
6/28/2018	8:46:27	13	8:52:08	7	8:49:15	61
6/28/2018	9:01:27	13	9:07:08	10	9:04:15	14
6/28/2018	9:16:27	12	9:22:08	14	9:19:15	14
6/28/2018	9:31:27	12	9:37:08	6	9:34:15	13
6/28/2018	9:46:27	14	9:52:08	7	9:49:15	25
6/28/2018	10:01:27	15	10:07:08	15	10:04:15	11
6/28/2018	10:16:27	17	10:22:08	9	10:19:15	28
6/28/2018	10:31:27	17	10:37:08	8	10:34:15	17
6/28/2018	10:46:27	14	10:52:08	9	10:49:15	14
6/28/2018	11:01:27	14	11:07:08	4	11:04:15	25
6/28/2018	11:16:27	15	11:22:08	5	11:19:15	12
6/28/2018	11:31:27	19	11:37:08	9	11:34:15	13
6/28/2018	11:46:27	23	11:52:08	5	11:49:15	15
6/28/2018	12:01:27	14	12:07:08	1	12:04:15	11
6/28/2018	12:16:27	12	12:22:08	1	12:19:15	10
6/28/2018	12:31:27	13	12:37:08	1	12:34:15	11
6/28/2018	12:46:27	15	12:52:08	1	12:49:15	20
6/28/2018	13:01:27	14	13:07:08	3	13:04:15	36
6/28/2018	13:16:27	14	13:22:08	6	13:19:15	12
6/28/2018	13:31:27	14	13:37:08	2	13:34:15	17
6/28/2018	13:46:27	14	13:52:08	1	13:49:15	14
6/28/2018	14:01:27	14	14:07:08	2	14:04:15	21
6/28/2018	14:16:27	16	14:22:08	3	14:19:15	13
6/28/2018	14:31:27	16	14:37:08	3	14:34:15	13
6/28/2018	14:46:27	17	14:52:08	10	14:49:15	17
6/28/2018	15:01:27	25	15:07:08	13	15:04:15	21
6/28/2018	15:16:27	21	15:22:08	13	15:19:15	18
6/28/2018	15:31:27	26	15:37:08	11	15:34:15	18
6/28/2018	15:46:27	13	15:52:08	0	15:49:15	8
6/28/2018	16:01:27	9	16:07:08	0	16:04:15	7
6/28/2018	16:16:27	10	16:22:08	0	16:19:15	8
6/28/2018	16:31:27	12	16:37:08	6	16:34:15	16
6/28/2018	16:46:27	25	16:52:08	15	16:49:15	31
6/28/2018	17:01:27	22	17:07:08	22	17:04:15	18
6/28/2018	17:16:27	28	17:22:08	12	17:19:15	36
6/28/2018	17:31:27	43	17:37:08	19	17:34:15	29
6/28/2018	17:46:27	29	17:52:08	13	17:49:15	26
6/28/2018	18:01:27	24	18:07:08	9	18:04:15	15
6/28/2018	18:16:27	29	18:22:08	9	18:19:15	15

06/29/2018, Particulate Monitoring Data
OU-1 at the BASF Rensselaer Facility

Date	Upwind		Downwind		Building	
	Time	AMS-01 (ug/m3)	Time	AMS-03 (ug/m3)	Time	AMS-02 (ug/m3)
6/29/2018	7:35:15	81	7:39:09	53	7:36:14	31
6/29/2018	7:50:15	58	7:54:09	51	7:51:14	25
6/29/2018	8:05:15	37	8:09:09	45	8:06:14	37
6/29/2018	8:20:15	45	8:24:09	46	8:21:14	37
6/29/2018	8:35:15	37	8:39:09	27	8:36:14	30
6/29/2018	8:50:15	34	8:54:09	27	8:51:14	51
6/29/2018	9:05:15	36	9:09:09	26	9:06:14	30
6/29/2018	9:20:15	34	9:24:09	22	9:21:14	31
6/29/2018	9:35:15	41	9:39:09	24	9:36:14	37
6/29/2018	9:50:15	36	9:54:09	17	9:51:14	26
6/29/2018	10:05:15	34	10:09:09	17	10:06:14	23
6/29/2018	10:20:15	30	10:24:09	13	10:21:14	22
6/29/2018	10:35:15	29	10:39:09	12	10:36:14	22
6/29/2018	10:50:15	31	10:54:09	17	10:51:14	23
6/29/2018	11:05:15	29	11:09:09	12	11:06:14	22
6/29/2018	11:20:15	31	11:24:09	8	11:21:14	21
6/29/2018	11:35:15	31	11:39:09	16	11:36:14	21
6/29/2018	11:50:15	36	11:54:09	32	11:51:14	28
6/29/2018	12:05:15	26	12:09:09	10	12:06:14	23
6/29/2018	12:20:15	25	12:24:09	9	12:21:14	22
6/29/2018	12:35:15	25	12:39:09	10	12:36:14	22
6/29/2018	12:50:15	26	12:54:09	14	12:51:14	27
6/29/2018	13:05:15	28	13:09:09	32	13:06:14	32
6/29/2018	13:20:15	28	13:24:09	20	13:21:14	28
6/29/2018	13:35:15	29	13:39:09	43	13:36:14	36
6/29/2018	13:50:15	29	13:54:09	66	13:51:14	33
6/29/2018	14:05:15	29	14:09:09	13	14:06:14	26
6/29/2018	14:20:15	28	14:24:09	15	14:21:14	23
6/29/2018	14:35:15	29	14:39:09	43	14:36:14	30
6/29/2018	14:50:15	28	14:54:09	78	14:51:14	48
6/29/2018	15:05:15	30	15:09:09	33	15:06:14	51
6/29/2018	15:20:15	32	15:24:09	15	15:21:14	28
6/29/2018	15:35:15	33	15:39:09	16	15:36:14	30
6/29/2018	15:50:15	33				

All PID Measurements were taken by hand

Date	Time	Reading
6/25/2018	0940	0.0
6/25/2018	1100	0.0
6/25/2018	1220	0.0
6/25/2018	1320	0.0
6/25/2018	1500	0.0
6/25/2018	1630	0.0
6/26/2018	0840	0.0
6/26/2018	1045	0.0
6/26/2018	1250	0.0
6/26/2018	1400	0.0
6/26/2018	1500	0.0
6/26/2018	1615	0.0
6/27/2018	0905	0.0
6/27/2018	1110	0.0
6/27/2018	1300	0.0
6/27/2018	1420	0.0
6/27/2018	1515	0.0
6/27/2018	1630	0.0
6/28/2018	0820	0.0
6/28/2018	1000	0.0
6/28/2018	1130	0.0
6/28/2018	1300	0.0
6/28/2018	1430	0.0
6/28/2018	1615	0.0
6/28/2018	1715	0.0

AECOM Imagine it. Delivered.

AECOM
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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**1/7/19 – 1/13/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring

PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 1/7/19	0.3	10.1	0.1	35.9	0.1	38.8	0.8	34.2	0.2	13.9	0.1	19.1	0.1	13	0	No
Tue 1/8/19	0.3	32.7	0.1	39.2	0.1	1.5[1]	0.9	69.5	0.2	30.8	0.1	37.0	0.1	10	0	No
Wed 1/9/19	0.1	28.9	0.1	33.9	0.4	3.8[1]	0.1	27.8	0.1[2]	26.7	0.3	38.5	0.1	15	0	No
Thu 1/10/19	0.1	9.5	0.7	30.3	0.5	21.6	0.1	13.4	0.1[2]	21.0	0.2	22.1	0.1	12	0	No
Fri 1/11/19	0.1	9.8	0.6	29.2	0.5	12.9	0.1	18.2	0.2[2]	45.4	0.4	22.6	0.1	20	0	Yes
Sat 1/12/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/13/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.3	32.7	0.7	39.2	0.5	38.8	0.9	69.5	0.2	45.4	0.4	38.5	--	--	--	--
Weekly Average	0.1	7.0	0.2	13.9	0.2	3.0	0.2	10.4	0.1	11.9	0.1	15.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data was invalid between 1/8/19 (7:15AM) and 1/9/19 (12:15PM) due to an instrument malfunction.

[2] TVOC data was invalid between 1/9/19 (9:15PM) and 1/10/19 (8:30AM), and 1/11/19 (2:45AM) and 1/11/19 (8:15AM) due to an instrument malfunction.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 1/7/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1221	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1232	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1242	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1248	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1254	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1260	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1262	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
AROCLOR-1268	µg/m^3	*< 0.38*	*< 0.41*	*< 0.39*
Total PCBs Aroclor	µg/m^3	< 3.42	< 3.69	< 3.51
Sample Date: 1/8/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.42*	*< 0.45*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.78	< 4.05
Sample Date: 1/9/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1221	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1232	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1242	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1248	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1254	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1260	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1262	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
AROCLOR-1268	µg/m^3	*< 0.46*	*< 0.48*	*< 0.43*
Total PCBs Aroclor	µg/m^3	< 4.14	< 4.32	< 3.87

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 1/10/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1221	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1232	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1242	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1248	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1254	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1260	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1262	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
AROCLOR-1268	µg/m^3	*< 0.47*	*< 0.46*	*< 0.45*
Total PCBs Aroclor	µg/m^3	< 4.23	< 4.14	< 4.05
Sample Date: 1/11/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1221	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1232	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1242	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1248	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1254	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1260	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1262	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
AROCLOR-1268	µg/m^3	*< 0.41*	*< 0.41*	*ND*[1]
Total PCBs Aroclor	µg/m^3	< 3.69	< 3.69	*ND*[1]

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Sample was not analyzed due to damaged sample media.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.60	3.54	3.58

Definitions:

PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/7/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.380
Tue 1/8/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.348
Wed 1/9/19	lb/hr	<0.7	--	--	--	--	--	--	0.360	--
Thu 1/10/19	lb/hr	<0.7	--	--	--	--	--	0.379	--	--
Fri 1/11/19	lb/hr	<0.7	--	--	--	--	0.420	--	--	--
Sat 1/12/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/13/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/7/19	lb/hr	<0.7	0.0008	0.0060	0.0003	NA[1]	0.0006	0.0002	0.0003	0.0006
Tue 1/8/19	lb/hr	<0.7	0.0004	0.0003	0.0002	0.0007	0.0002	0.0005	0.0006	0.0007
Wed 1/9/19	lb/hr	<0.7	0.0003	0.0000	0.0003	0.0002	0.0001	0.0001	0.0000	0.0003
Thu 1/10/19	lb/hr	<0.7	0.0001	0.0001	0.0002	0.0001	0.0015	0.0006	0.0002	0.0026
Fri 1/11/19	lb/hr	<0.7	0.0003	0.0005	0.0006	0.0001	0.0005	0.0003	0.0003	0.0009
Sat 1/12/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/13/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.

Table 10:Process Sampling VOC Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/7/19	lb/hr	<1.3	0.011	0.000	0.012	NA[1]	0.000	0.003	0.002	0.003
Tue 1/8/19	lb/hr	<1.3	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Wed 1/9/19	lb/hr	<1.3	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Thu 1/10/19	lb/hr	<1.3	0.044	0.014	0.020	0.018	0.005	0.000	0.000	0.006
Fri 1/11/19	lb/hr	<1.3	0.007	0.000	0.002	0.000	0.000	0.004	0.013	0.026
Sat 1/12/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/13/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

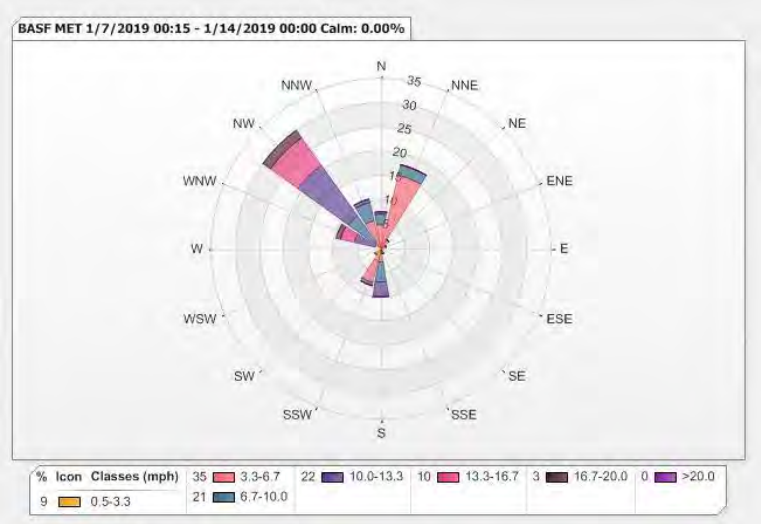
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

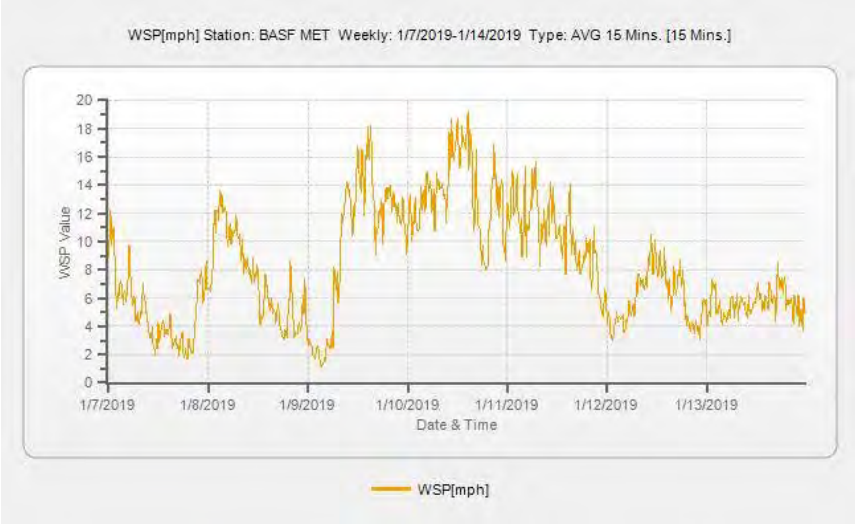
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

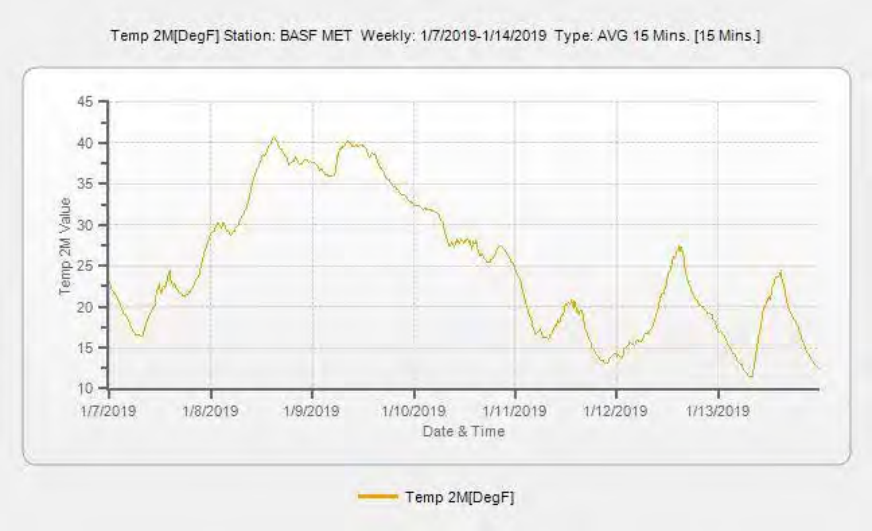
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

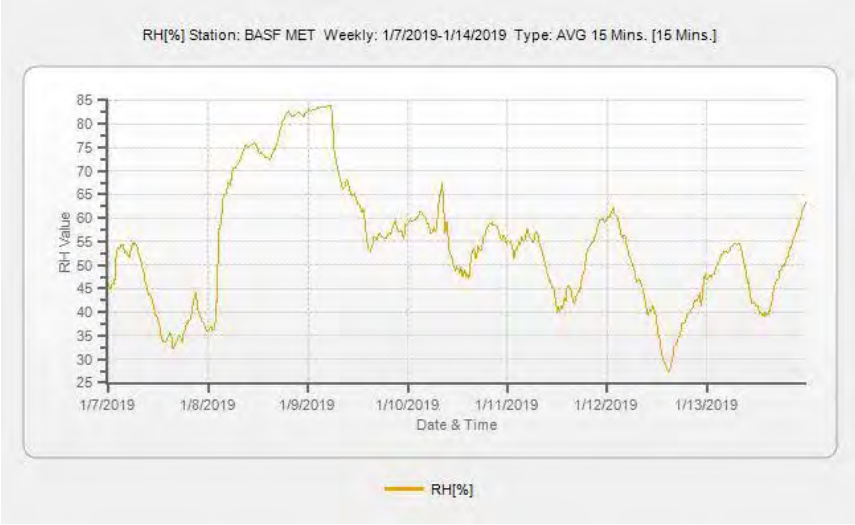


Figure 2: Site Map (1/7/19 – 1/13/19)



AECOM Imagine it. Delivered.

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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **1/14/19 – 1/20/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The monitoring program consists of the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
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- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind), as needed, during Toxic Substances Control Act (TSCA) sediment removal operations, and active dredging and sediment processing activities. Sampling is estimated to take place on a daily basis (Monday – Friday) during the initial operations and once per week thereafter.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Periodic real-time monitoring for TVOC and PM_{10} conducted at each of the eight (8) carbon units on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter; and
- Integrated 8-hour sampling for PCBs conducted at one (1) carbon unit on a daily basis (Monday – Friday) during the initial sediment processing operations and weekly thereafter.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. The project-to-date average 8-hour integrated fenceline PCB results are

compared to an Acceptable Ambient Concentration (AAC) developed for the Site. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during TSCA sediment removal operations and processing activities which began on November 19, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment processing within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Process Sampling PCB Emissions Summary;
- **Table 9**: Process Sampling PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and

- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 1/14/19	0.6[1]	56.3	0.6	66.8	0.7	33.7	0.6	71.6	0.8	38.9	1.0	46.1	0.1	20	0	No
Tue 1/15/19	0.2[1]	70.2	0.1	94.8	1.4	63.9	0.3	75.5	0.8	68.7	1.0	82.6	0.0	53	0	No
Wed 1/16/19	0.2	65.6	0.1	85.9	1.1	100.6	0.2	70.3	0.8	71.7	1.0	133.9	0.0	24	0	No
Thu 1/17/19	0.1	36.6	0.1	43.1	0.1	25.1	0.2	32.2	0.4	32.6	0.8	32.5	0.0	20	0	No
Fri 1/18/19	0.1[1]	36.2	0.1	38.4	0.1	25.4	0.6	30.7	0.4	29.4	0.9	66.7	0.0	22	0	No
Sat 1/19/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/20/19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.6	70.2	0.6	94.8	1.4	100.6	0.6	75.5	0.8	71.7	1.0	133.9	--	--	--	--
Weekly Average	0.1	29.0	0.1	38.1	0.3	25.2	0.2	28.3	0.3	29.8	0.5	35.8	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] TVOC data was invalid between 1/14/19 (4:45PM) and 1/15/19 (9:45AM), and 1/18/19 (1:30AM) and 1/18/19 (9:00AM) due to an instrument malfunction.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 1/14/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1221	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1232	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1242	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1248	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1254	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1260	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1262	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
AROCLOR-1268	µg/m^3	*< 0.39*	*< 0.41*	*< 0.42*
Total PCBs Aroclor	µg/m^3	< 3.51	< 3.69	< 3.78
Sample Date: 1/15/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1221	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1232	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1242	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1248	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1254	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1260	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1262	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
AROCLOR-1268	µg/m^3	*< 0.41*	*< 0.43*	*< 0.48*
Total PCBs Aroclor	µg/m^3	< 3.69	< 3.87	< 4.32
Sample Date: 1/16/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1221	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1232	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1242	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1248	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1254	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1260	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1262	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
AROCLOR-1268	µg/m^3	*< 0.40*	*< 0.41*	*< 0.40*
Total PCBs Aroclor	µg/m^3	< 3.60	< 3.69	< 3.60

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 6: Fenceline PCB Sample Results, continued

Sample Date: 1/17/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1221	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1232	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1242	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1248	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1254	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1260	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1262	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
AROCLOR-1268	µg/m^3	*< 0.35*	*< 0.33*	*< 0.33*
Total PCBs Aroclor	µg/m^3	< 3.15	< 2.97	< 2.97
Sample Date: 1/18/19				
Analyte	**Units**	**PAM-1**	**PAM-4**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1221	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1232	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1242	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1248	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1254	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1260	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1262	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
AROCLOR-1268	µg/m^3	*< 0.37*	*< 0.39*	*< 0.38*
Total PCBs Aroclor	µg/m^3	< 3.33	< 3.51	< 3.42

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:

PAM – Portable Air Monitoring Station
µg/m^3 – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/14/19	lb/hr	<0.7	0.367	--	--	--	--	--	--	--
Tue 1/15/19	lb/hr	<0.7	--	--	0.358	--	--	--	--	--
Wed 1/16/19	lb/hr	<0.7	--	--	--	--	--	0.354	--	--
Thu 1/17/19	lb/hr	<0.7	--	--	--	--	--	--	0.325	--
Fri 1/18/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.310
Sat 1/19/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/20/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:

AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per day.

Table 9: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/14/19	lb/hr	<0.7	0.0009	NA[1]	0.0017	NA[1]	NA[1]	0.0023	0.0007	0.0015
Tue 1/15/19	lb/hr	<0.7	0.0007	NA[1]	0.0010	NA[1]	NA[1]	0.0009	0.0015	0.0021
Wed 1/16/19	lb/hr	<0.7	0.0011	NA[1]	0.0008	NA[1]	NA[1]	0.0009	0.0006	0.0013
Thu 1/17/19	lb/hr	<0.7	0.0004	NA[1]	0.0008	NA[1]	NA[1]	0.0005	0.0022	NA[1]
Fri 1/18/19	lb/hr	<0.7	0.0004	NA[1]	0.0005	NA[1]	NA[1]	0.0006	0.0004	0.0018
Sat 1/19/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/20/19	lb/hr	<0.7	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.

Table 10: Process Sampling VOC Emissions Summary

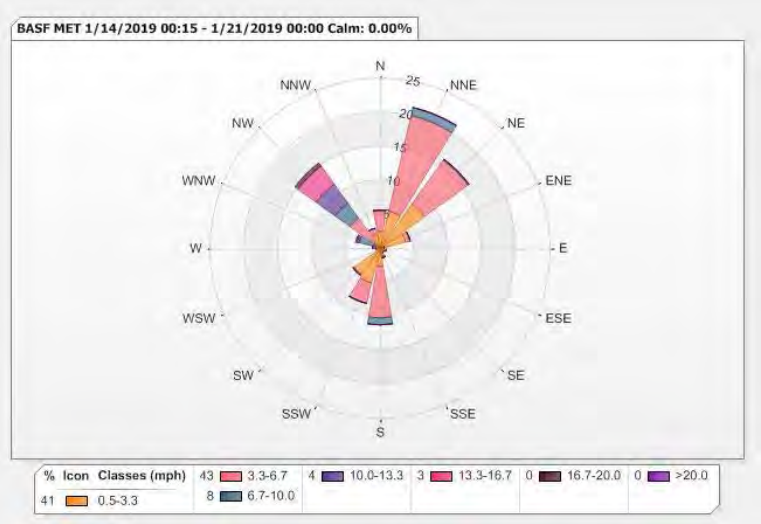
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 1/14/19	lb/hr	<1.3	0.036	NA[1]	0.027	NA[1]	NA[1]	0.042	0.041	0.057
Tue 1/15/19	lb/hr	<1.3	0.012	NA[1]	0.048	NA[1]	NA[1]	0.027	0.021	0.021
Wed 1/16/19	lb/hr	<1.3	0.053	NA[1]	0.024	NA[1]	NA[1]	0.001	0.013	0.030
Thu 1/17/19	lb/hr	<1.3	0.017	NA[1]	0.005	NA[1]	NA[1]	0.014	0.000	NA[1]
Fri 1/18/19	lb/hr	<1.3	0.051	NA[1]	0.046	NA[1]	NA[1]	0.050	0.000	0.011
Sat 1/19/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA
Sun 1/20/19	lb/hr	<1.3	NA	NA	NA	NA	NA	NA	NA	NA

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

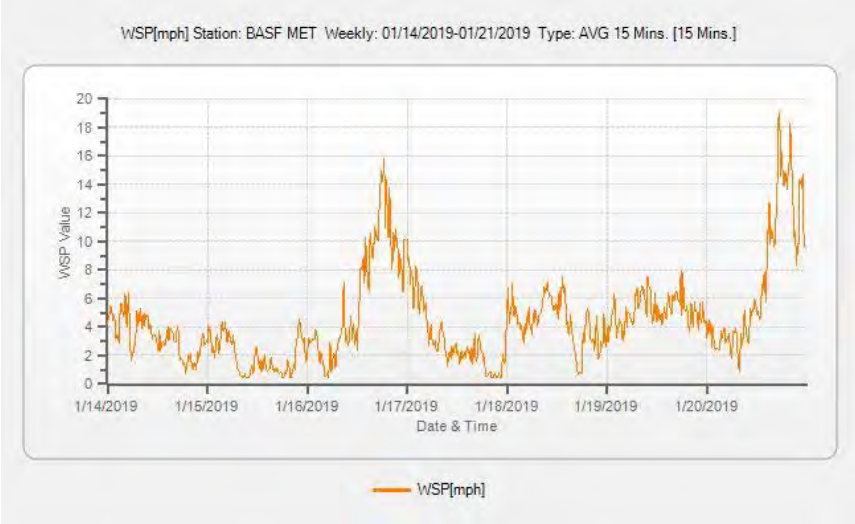
Notes:
- Process sampling began on November 29, 2018.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

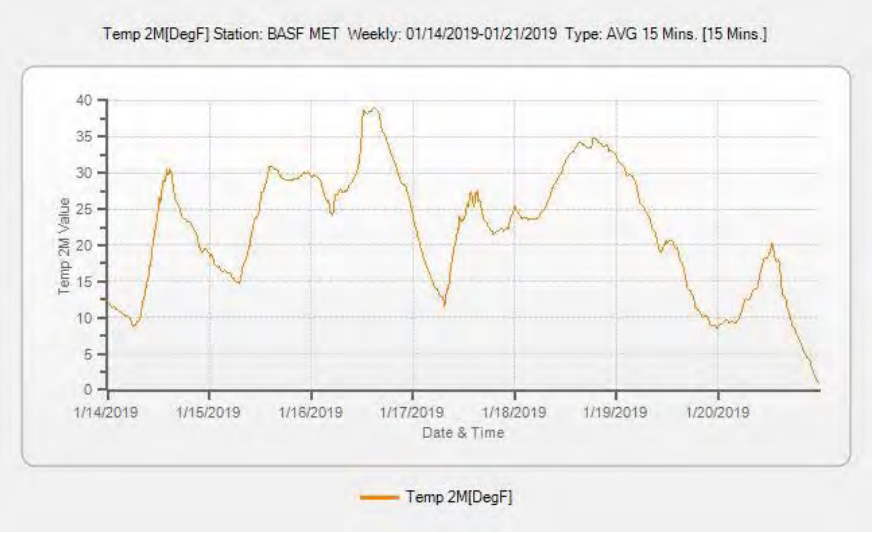
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

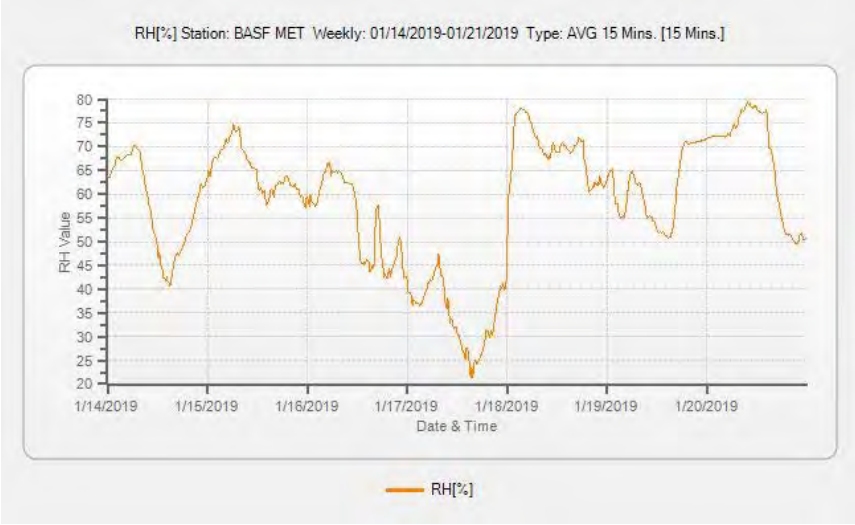


Figure 2: Site Map (1/14/19 – 1/18/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**1/21/19 – 1/27/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 1/21/19	NA[1]	NA[1]	NA[1]	NA[1]
Tue 1/22/19	NA[2]	NA[2]	NA[2]	NA[2]
Wed 1/23/19	0.0	10	0	No
Thu 1/24/19	0.0	3	0	No
Fri 1/25/19	0.0	21	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 1/21/19	NA[1]	NA[1]	NA[1]	NA[1]
Tue 1/22/19	NA[2]	NA[2]	NA[2]	NA[2]
Wed 1/23/19	0.0	10	0	No
Thu 1/24/19	0.0	3	0	No
Fri 1/25/19	0.0	21	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Site was closed for Martin Luther King Junior holiday (no Site activities).

[2] Hand-held monitoring was not conducted due to minimal Site activities (snow removal).

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Tue 1/22/19	lb/hr	<0.7	0.292	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 1/22/19	lb/hr	<0.7	0.0005	NA[1]	0.0008	NA[1]	NA[1]	NA[1]	NA[1]	0.0006

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

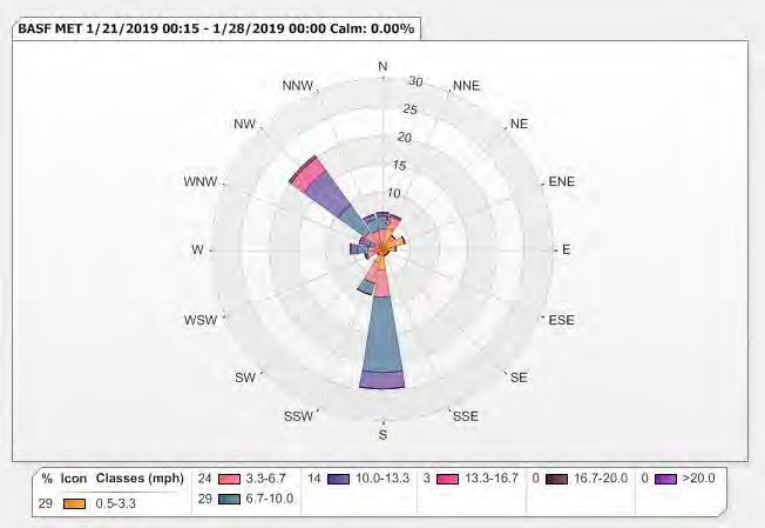
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 1/22/19	lb/hr	<1.3	0.005	NA[1]	0.000	NA[1]	NA[1]	NA[1]	NA[1]	0.149

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

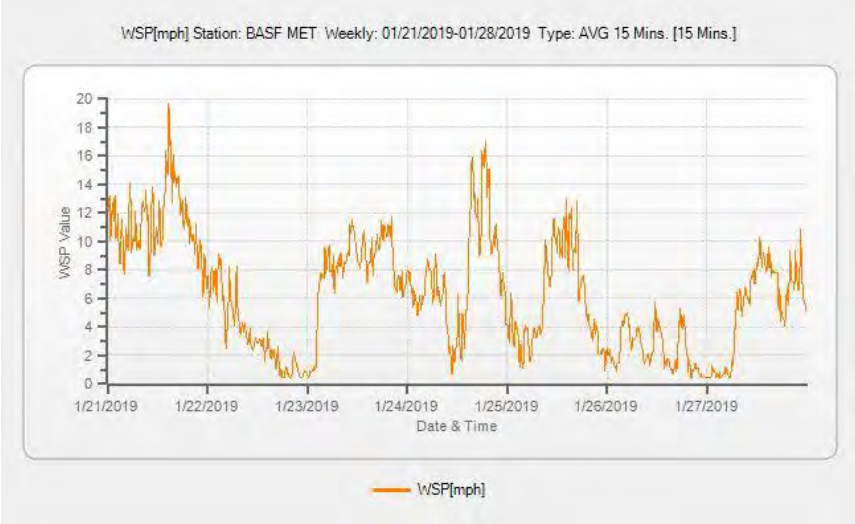
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

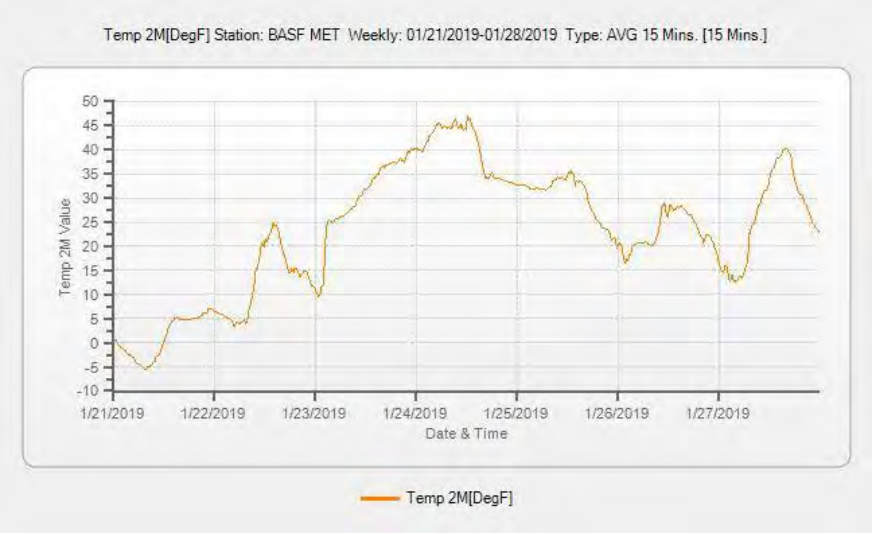
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

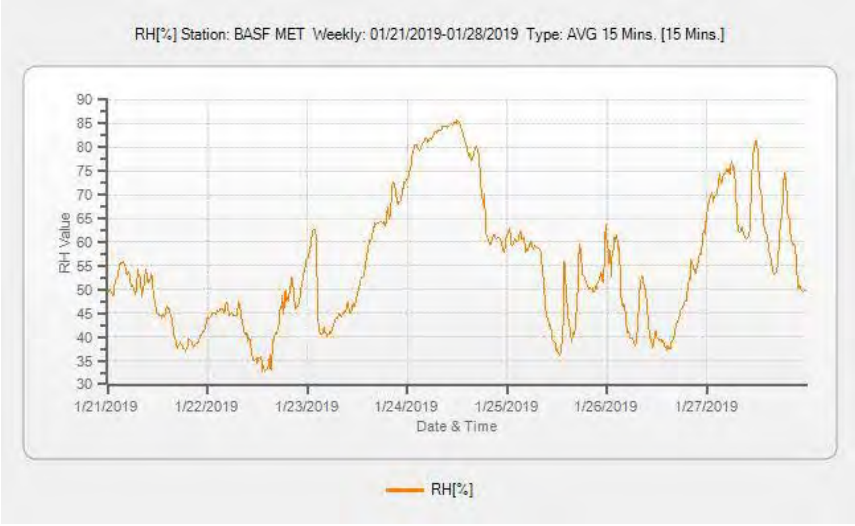


Figure 2: Site Map (1/21/19 – 1/25/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**1/28/19 – 2/3/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 1/28/19	0.0	30	0	No
Tue 1/29/19	0.0	30	0	No
Wed 1/30/19	0.0	40	0	No
Thu 1/31/19	0.0	21	0	No
Fri 2/1/19	0.0	63	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 1/28/19	0.0	30	0	No
Tue 1/29/19	0.0	45	0	No
Wed 1/30/19	0.0	53	0	No
Thu 1/31/19	0.0	30	0	No
Fri 2/1/19	0.1	50	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Wed 1/30/19	lb/hr	<0.7	--	--	--	0.328	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 1/30/19	lb/hr	<0.7	0.0025	NA[1]	NA[1]	0.0006	NA[1]	0.0037	0.0045	0.0041

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

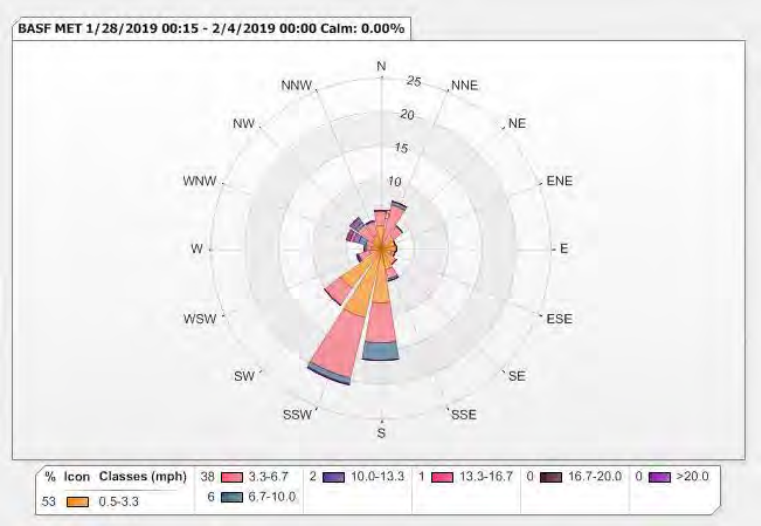
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 1/30/19	lb/hr	<1.3	0.199	NA[1]	NA[1]	0.000	NA[1]	0.001	0.030	0.110

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

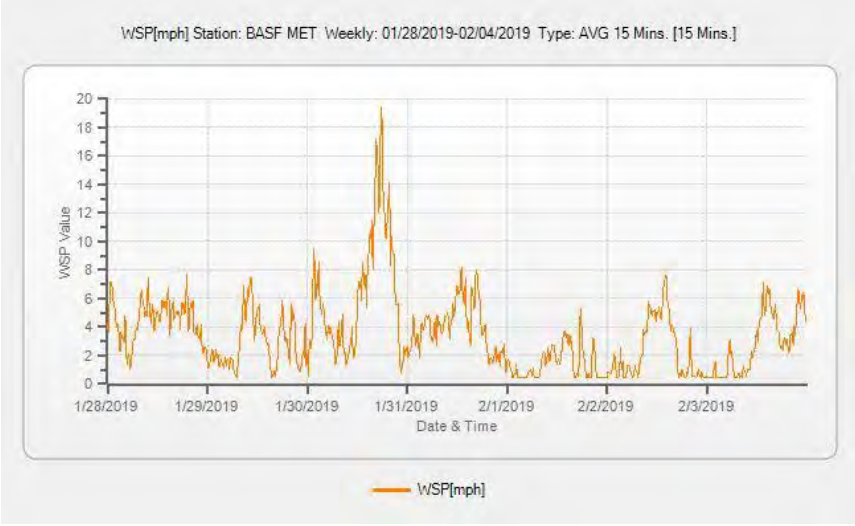
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

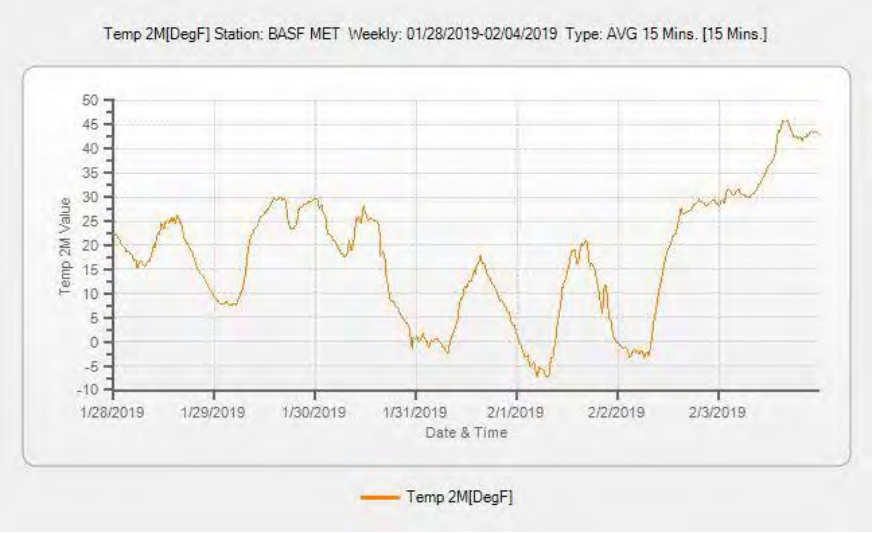
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

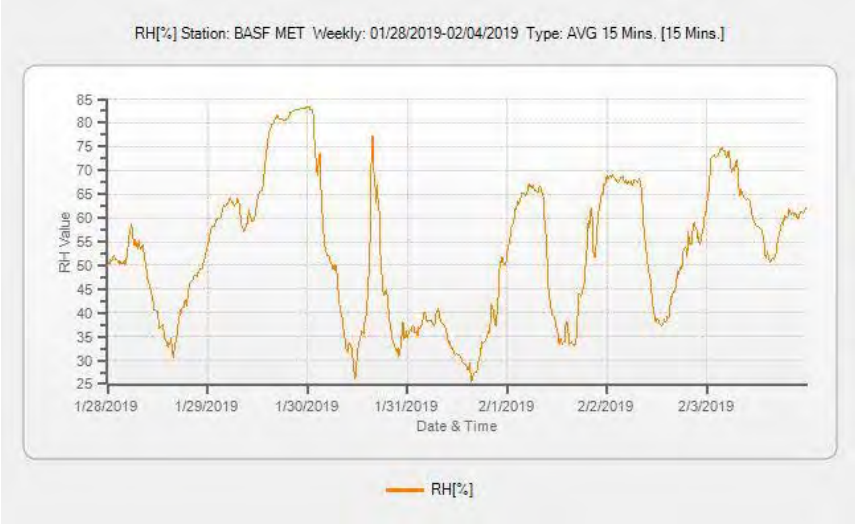


Figure 2: Site Map (1/28/19 – 2/3/19)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **2/4/19 – 2/10/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/4/19	0.1	63	0	No
Tue 2/5/19	0.0	78	0	No
Wed 2/6/19	0.3	18	1	No
Thu 2/7/19	0.0	80	0	No
Fri 2/8/19	0.1	15	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/4/19	0.8	57	5	No
Tue 2/5/19	1.3	72	5	No
Wed 2/6/19	0.0	22	0	No
Thu 2/7/19	0.3	80	0	No
Fri 2/8/19	0.0	10	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 2/5/19	lb/hr	<0.7	--	--	--	--	--	0.310	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 2/5/19	lb/hr	<0.7	0.0008	NA[1]	0.0004	0.0004	NA[1]	0.0005	0.0005	0.0009

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

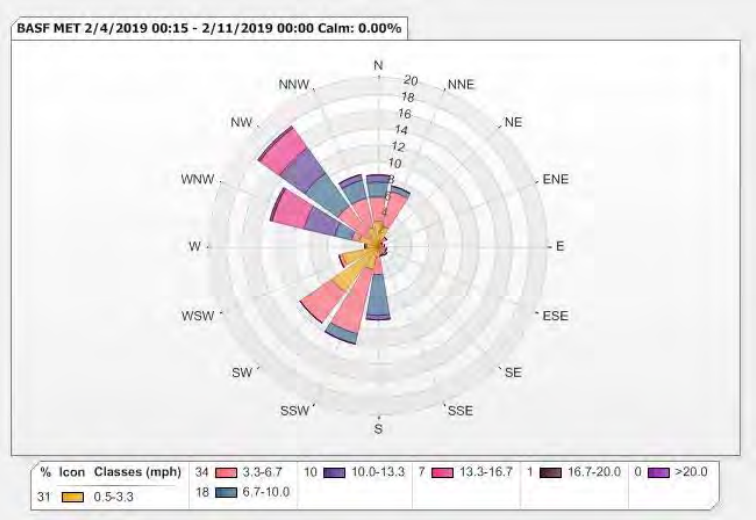
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 2/5/19	lb/hr	<1.3	0.048	NA[1]	0.006	0.037	NA[1]	0.000	0.000	0.000

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

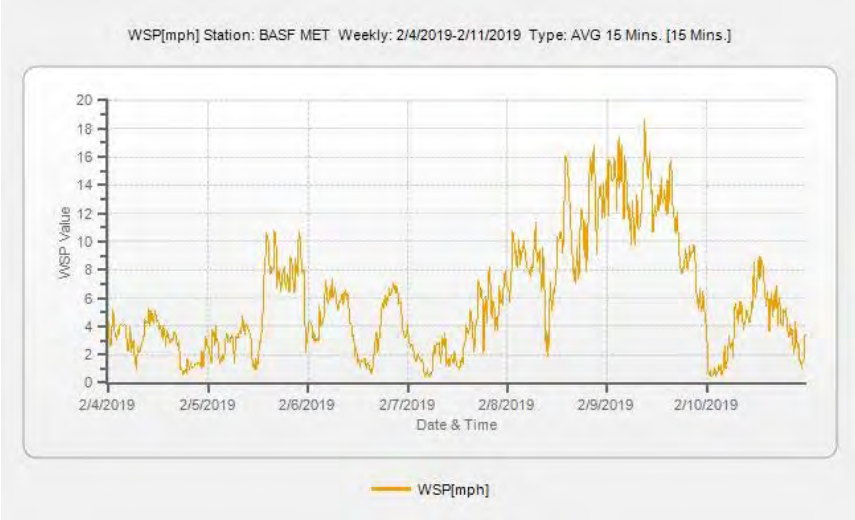
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

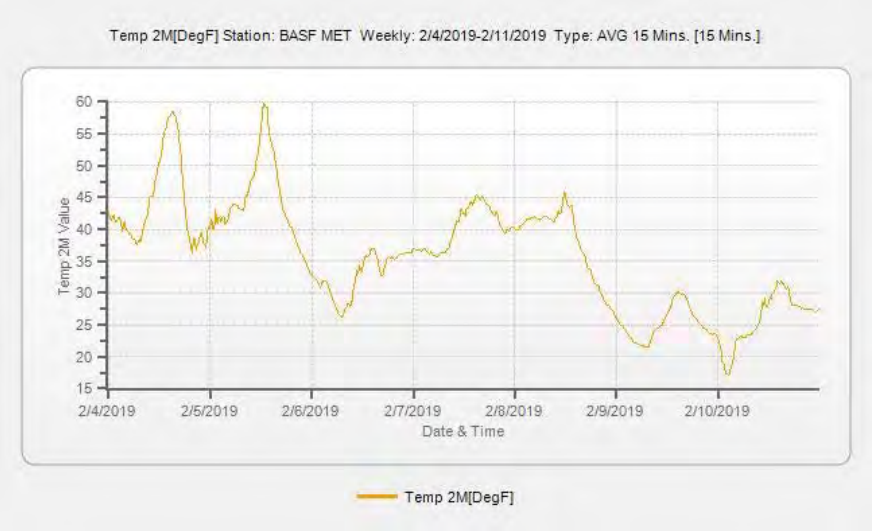
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

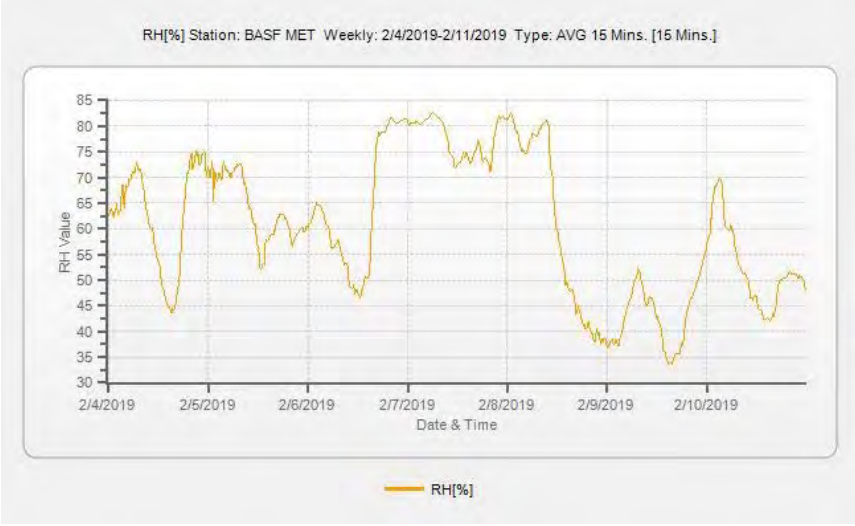


Figure 2: Site Map (2/4/19 – 2/8/19)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **2/11/19 – 2/17/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/11/19	0.0	33	0	No
Tue 2/12/19	0.0	22	0	No
Wed 2/13/19	NA[1]	NA[1]	NA[1]	NA[1]
Thu 2/14/19	0.0	16	0	No
Fri 2/15/19	0.0	27	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/11/19	0.1	18	3	No
Tue 2/12/19	0.1	17	0	No
Wed 2/13/19	NA[1]	NA[1]	NA[1]	NA[1]
Thu 2/14/19	0.0	12	0	No
Fri 2/15/19	3.6	37	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Site was closed for snow removal (no other site activities).

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/14/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.339

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/14/19	lb/hr	<0.7	0.0001	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.0001

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

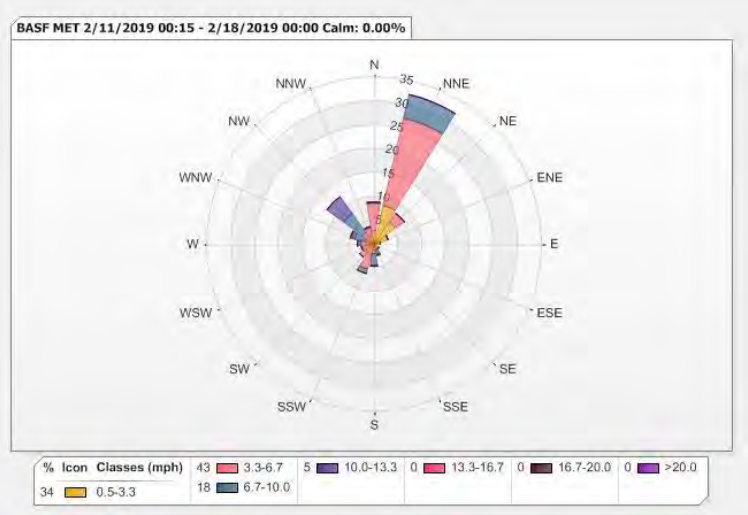
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/14/19	lb/hr	<1.3	0.004	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.000

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

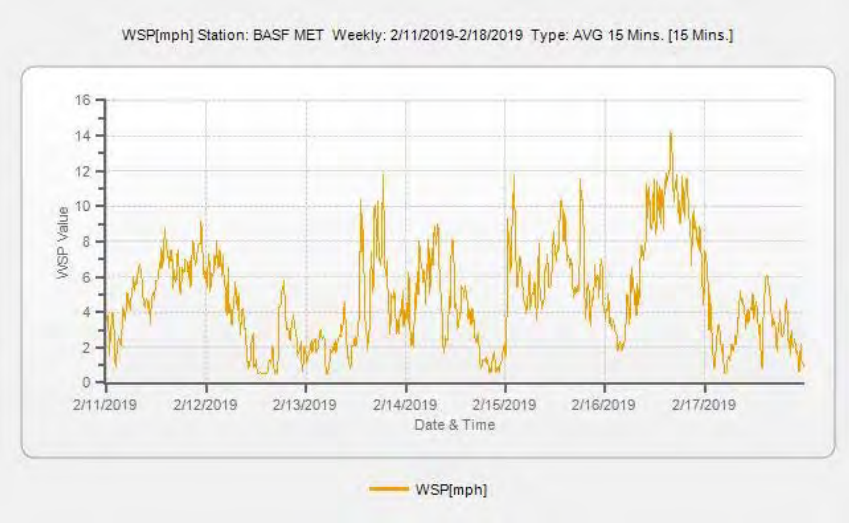
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

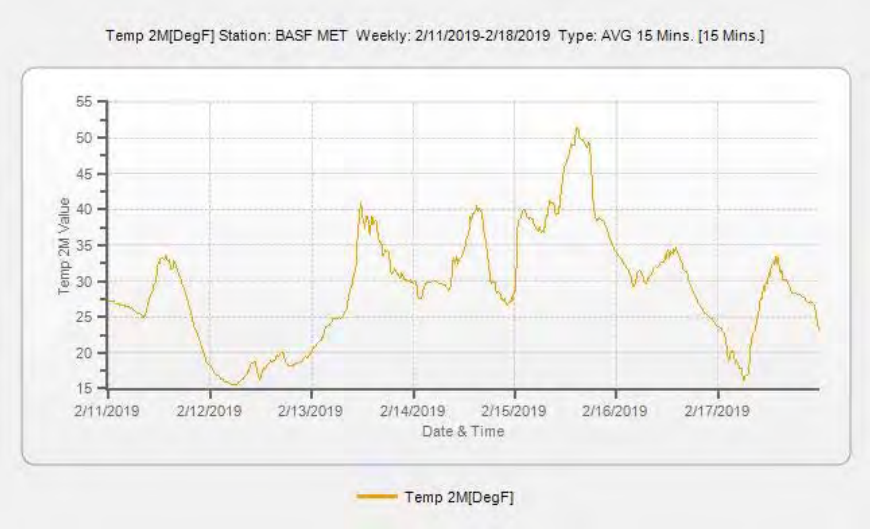
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

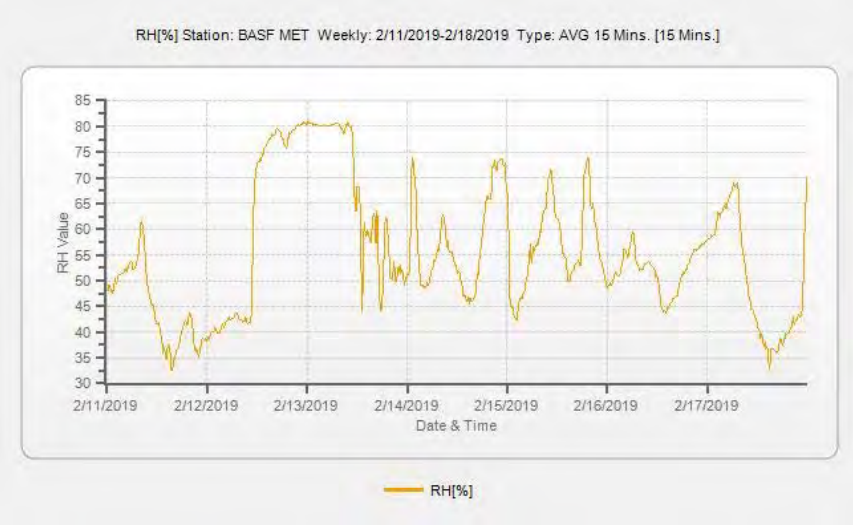


Figure 2: Site Map (2/11/19 – 2/15/19)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **2/18/19 – 2/24/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/18/19	0.0	43	0	No
Tue 2/19/19	0.0	16	0	No
Wed 2/20/19	0.0	24	0	No
Thu 2/21/19	0.0	27	0	No
Fri 2/22/19	0.0	16	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 2/18/19	0.0	26	0	No
Tue 2/19/19	0.0	25	0	No
Wed 2/20/19	0.0	22	0	No
Thu 2/21/19	3.6	37	0	No
Fri 2/22/19	0.0	14	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/21/19	lb/hr	<0.7	--	--	--	--	--	0.319	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/21/19	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.0001	0.0004	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

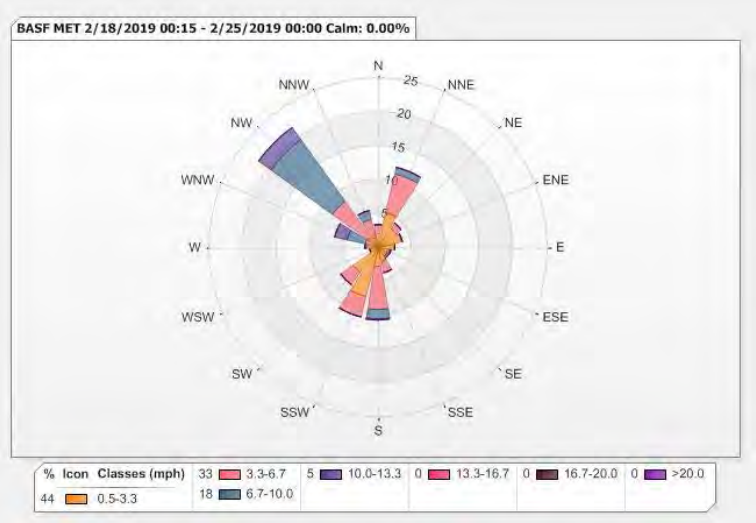
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 2/21/19	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.000	0.000	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

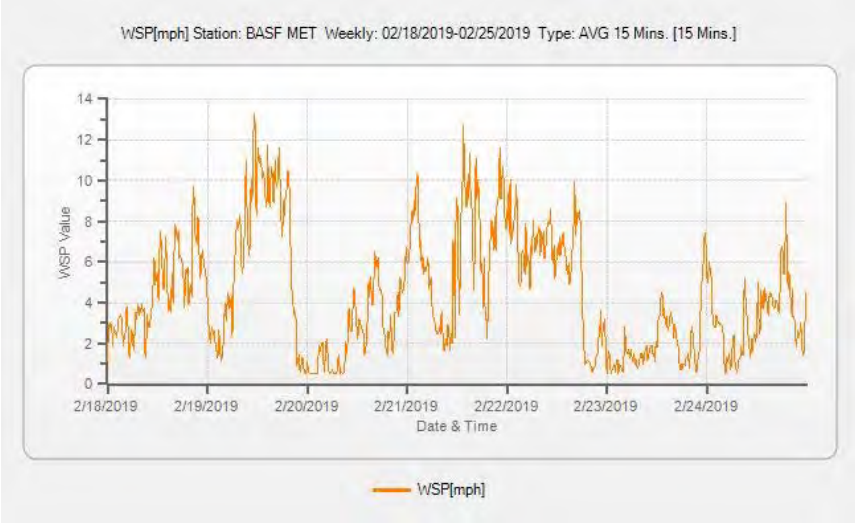
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

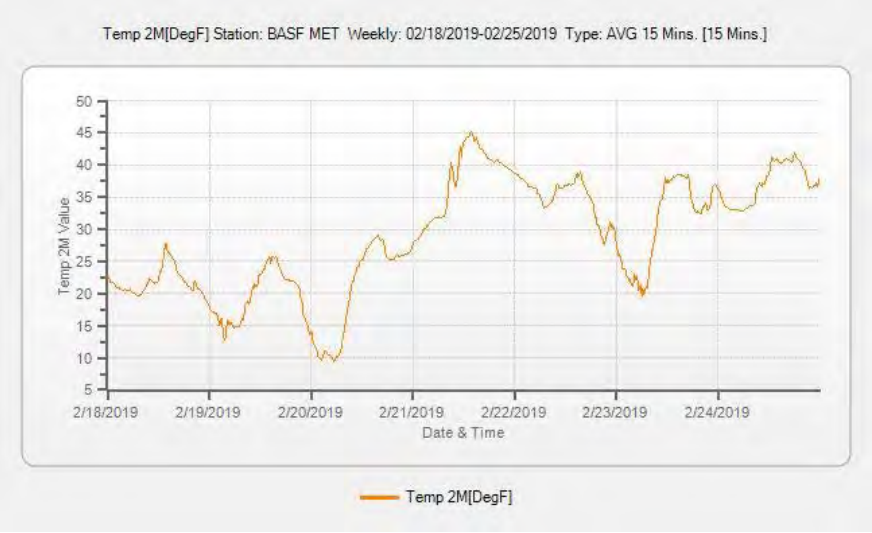
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

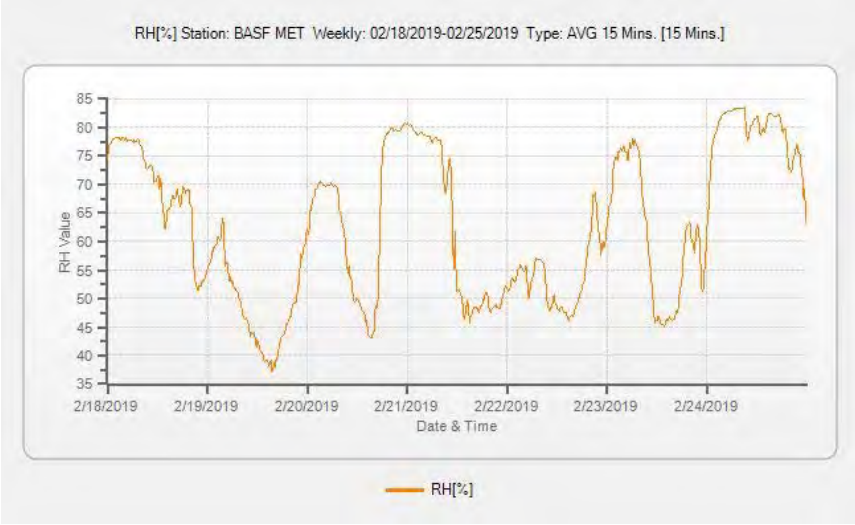


Figure 2: Site Map (2/18/19 – 2/22/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**2/25/19 – 3/3/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 2/25/19	0.0	12	0	No
Tue 2/26/19	0.0	30	1	No
Wed 2/27/19	0.0	14	0	No
Thu 2/28/19	0.0	19	0	No
Fri 3/1/19	0.0	24	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 2/25/19	0.1	13	0	No
Tue 2/26/19	0.0	65	1	No
Wed 2/27/19	0.0	11	0	No
Thu 2/28/19	0.0	19	0	No
Fri 3/1/19	0.0	19	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Mon 2/25/19	lb/hr	<0.7	--	--	--	--	0.326	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 2/25/19	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	0.0002	0.0001	NA[1]	NA[1]	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

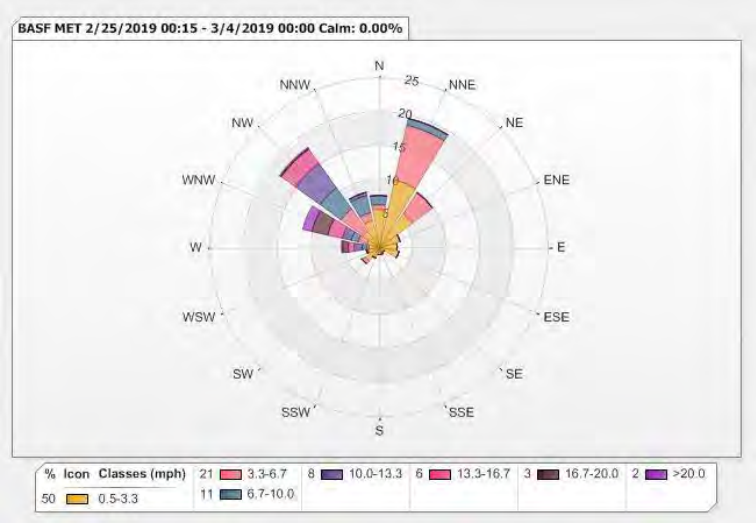
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 2/25/19	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	0.000	0.000	NA[1]	NA[1]	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

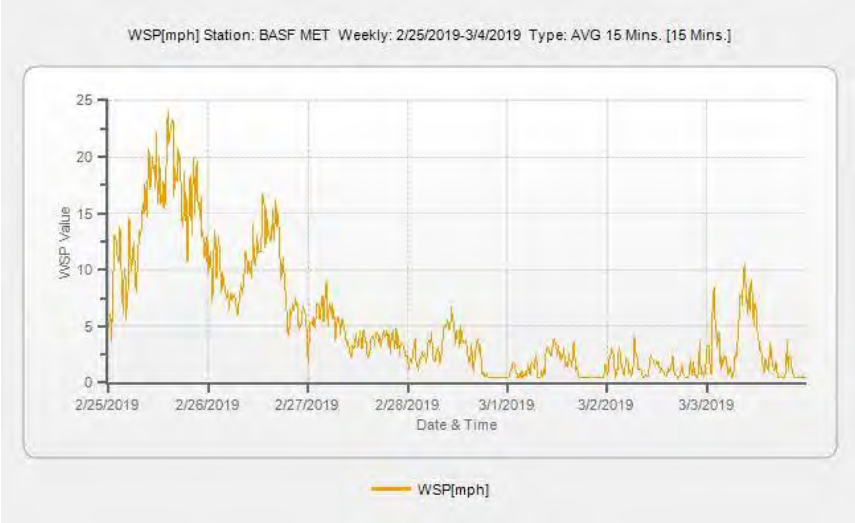
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

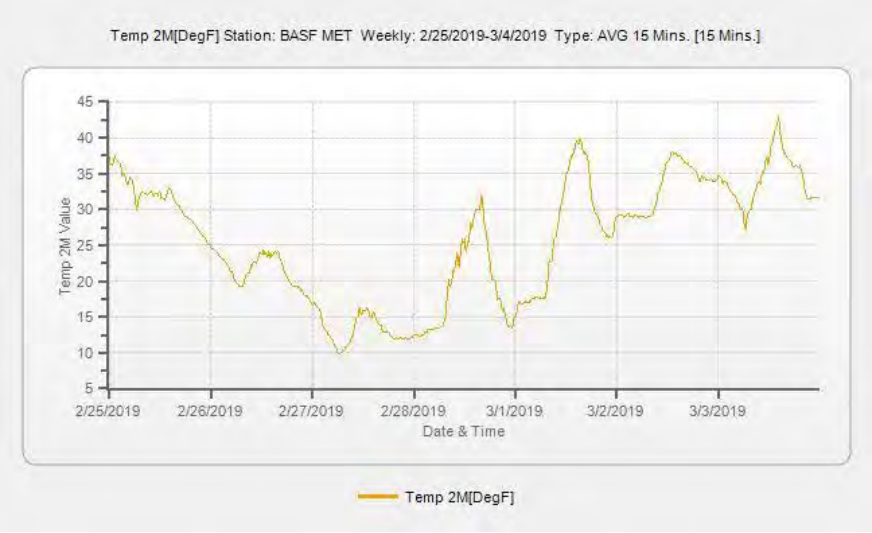
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

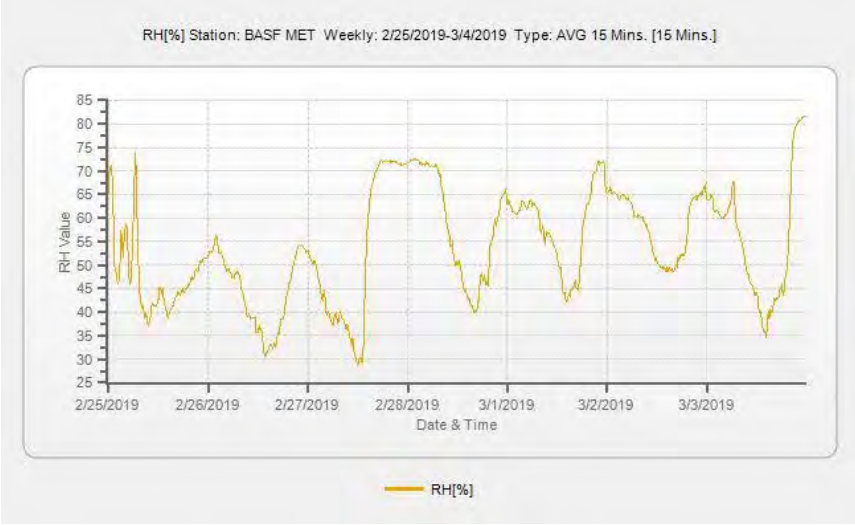


Figure 2: Site Map (2/25/19 – 3/1/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**3/4/19 – 3/10/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/4/19	0.1	8	0	No
Tue 3/5/19	0.0	22	0	No
Wed 3/6/19	0.0	21	0	No
Thu 3/7/19	0.0	13	0	No
Fri 3/8/19	0.1	19	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/4/19	0.0	5	0	No
Tue 3/5/19	0.0	50	0	No
Wed 3/6/19	0.0	23	0	No
Thu 3/7/19	0.0	10	0	No
Fri 3/8/19	0.1	17	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 3/5/19	lb/hr	<0.7	--	--	--	--	--	--	0.352	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 3/5/19	lb/hr	<0.7	0.0004	0.0007	0.0005	0.0002	0.0003	0.0005	0.0003	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

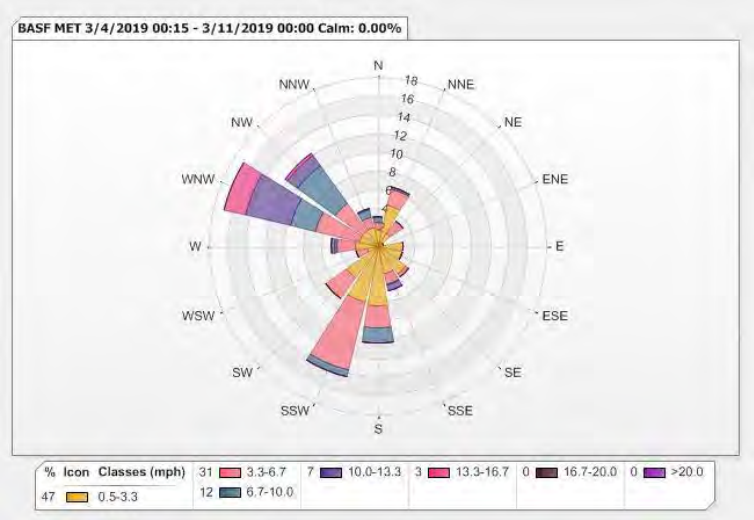
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 3/5/19	lb/hr	<1.3	0.047	0.303	0.216	0.158	0.194	0.133	0.118	0.081

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

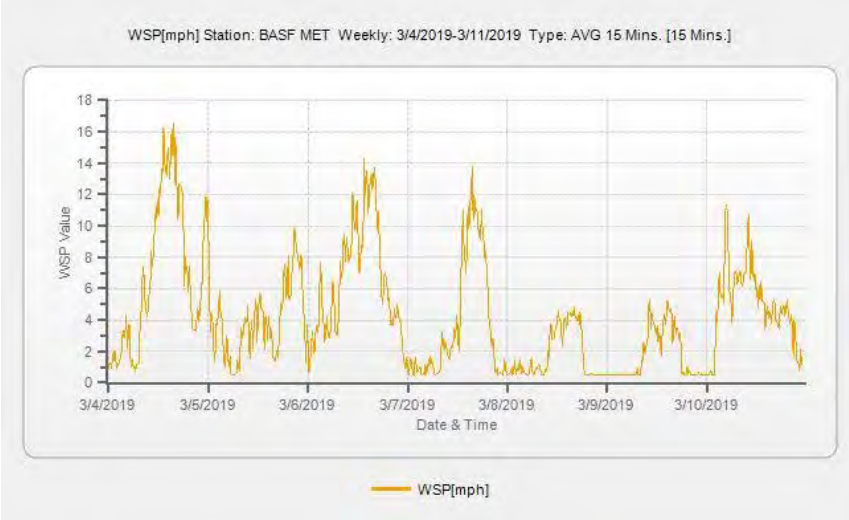
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

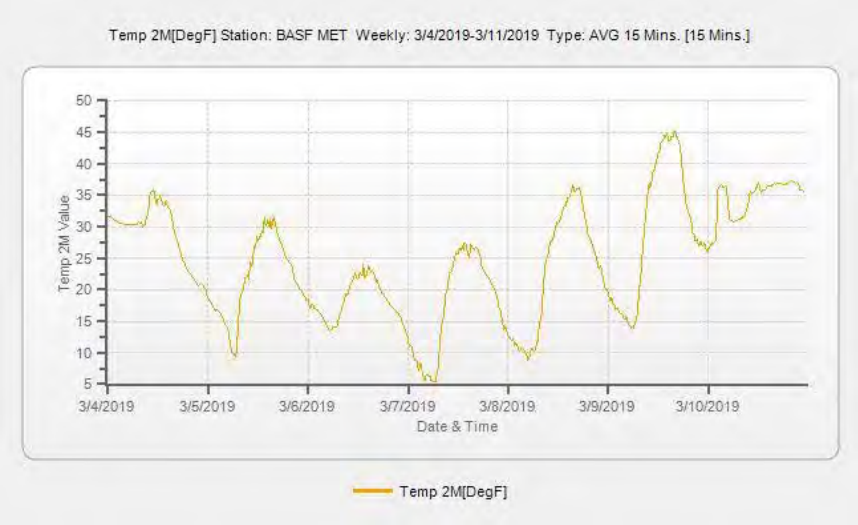
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

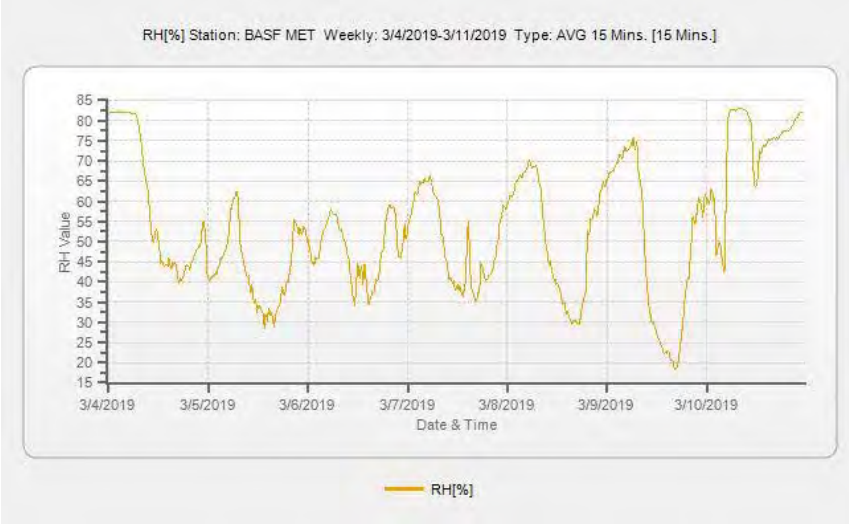


Figure 2: Site Map (3/4/19 – 3/8/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**3/11/19 – 3/17/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/11/19	0.0	8	0	No
Tue 3/12/19	0.0	8	0	No
Wed 3/13/19	0.0	43	0	No
Thu 3/14/19	0.0	37	0	No
Fri 3/15/19	ND[1]	ND[1]	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/11/19	0.0	14	0	No
Tue 3/12/19	0.0	40	0	No
Wed 3/13/19	0.0	42	0	No
Thu 3/14/19	0.0	40	0	No
Fri 3/15/19	ND[1]	ND[1]	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Wed 3/13/19	lb/hr	<0.7	0.354	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 3/13/19	lb/hr	<0.7	0.0010	0.0011	0.0006	0.0004	0.0004	0.0006	0.0004	0.0027

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

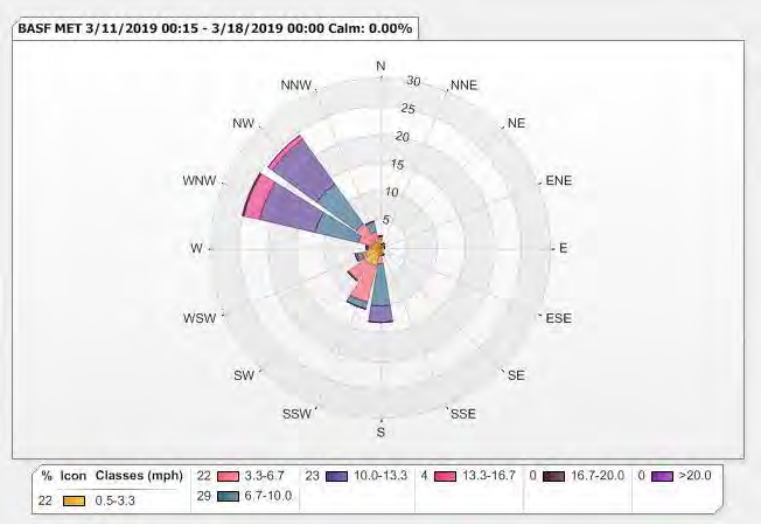
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 3/13/19	lb/hr	<1.3	0.074	0.000	0.009	0.003	0.000	0.000	0.000	0.000

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

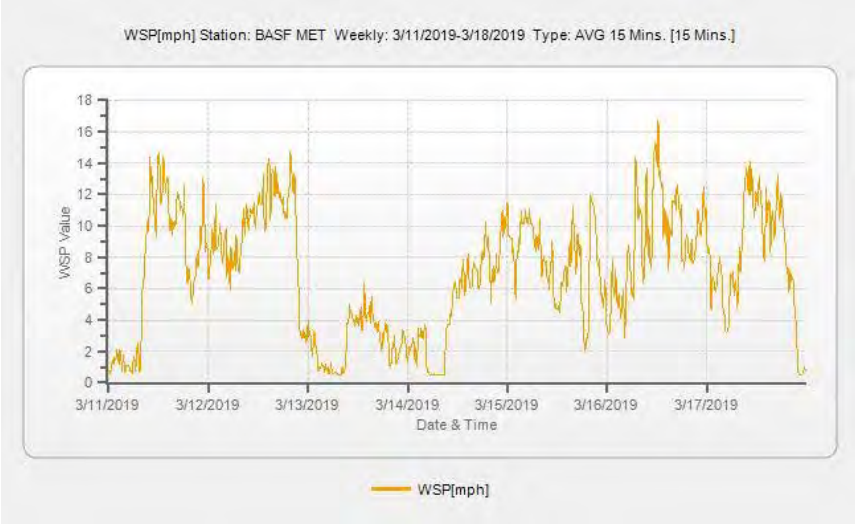
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

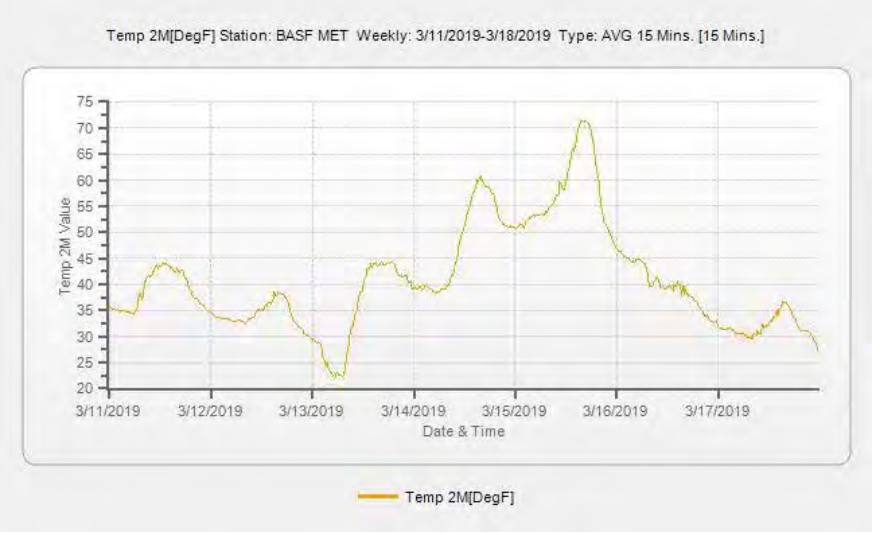
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

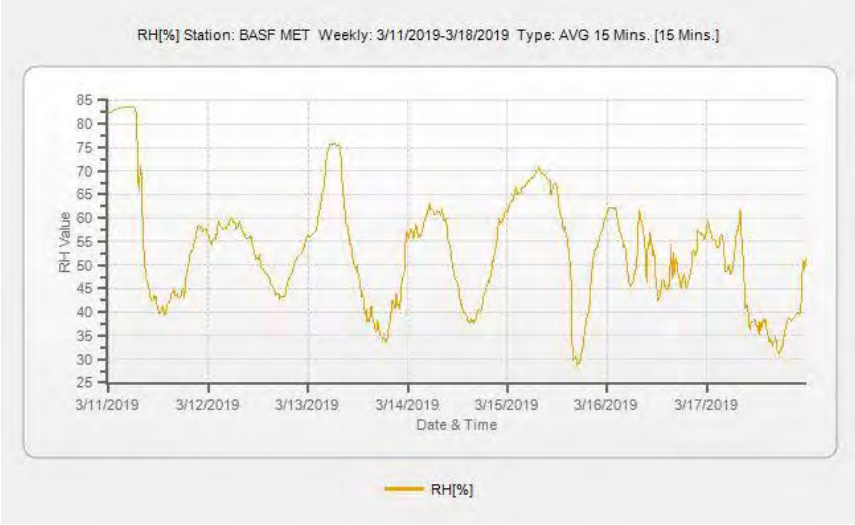


Figure 2: Site Map (3/11/19 – 3/15/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**3/18/19 – 3/24/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/18/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 3/19/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 3/20/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 3/21/19	0.1	18	0	No
Fri 3/22/19	0.0	10	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/18/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 3/19/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 3/20/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 3/21/19	1.0	27	2	No
Fri 3/22/19	0.0	10	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 3/21/19	lb/hr	<0.7	--	0.324	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 3/21/19	lb/hr	<0.7	0.0002	0.0001	0.0002	0.0008	NA[1]	0.0001	0.0002	0.0003

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

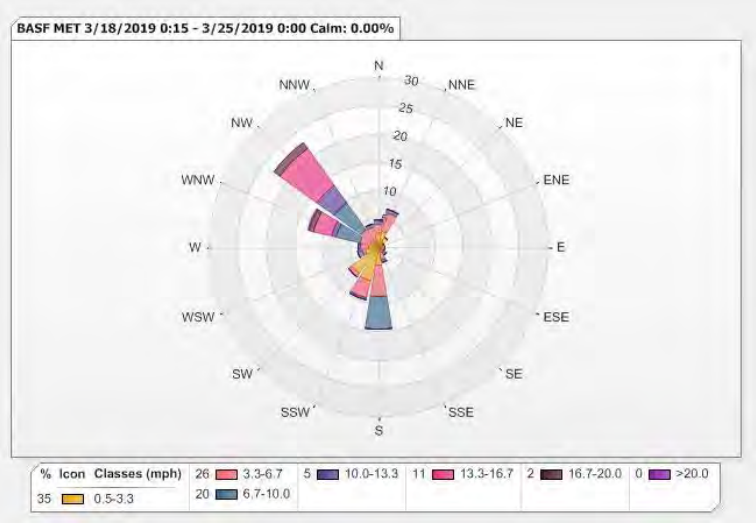
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 3/21/19	lb/hr	<1.3	0.135	0.019	0.052	0.000	NA[1]	0.008	0.000	0.092

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

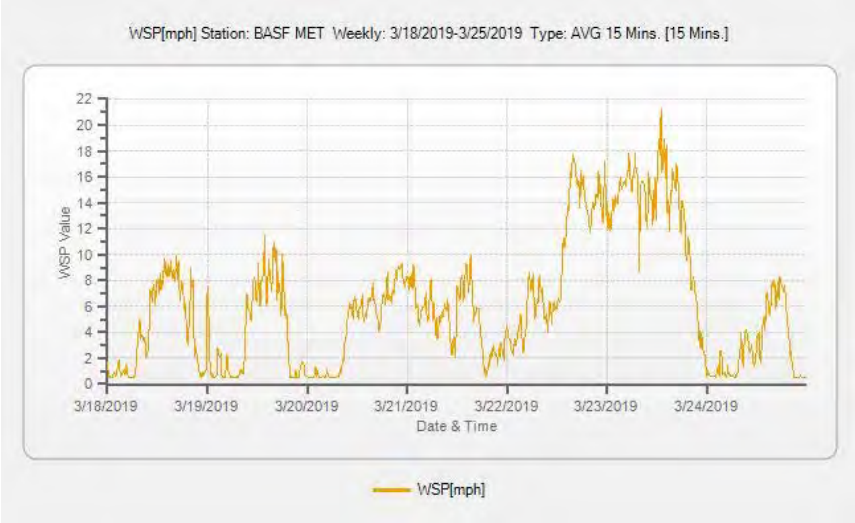
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

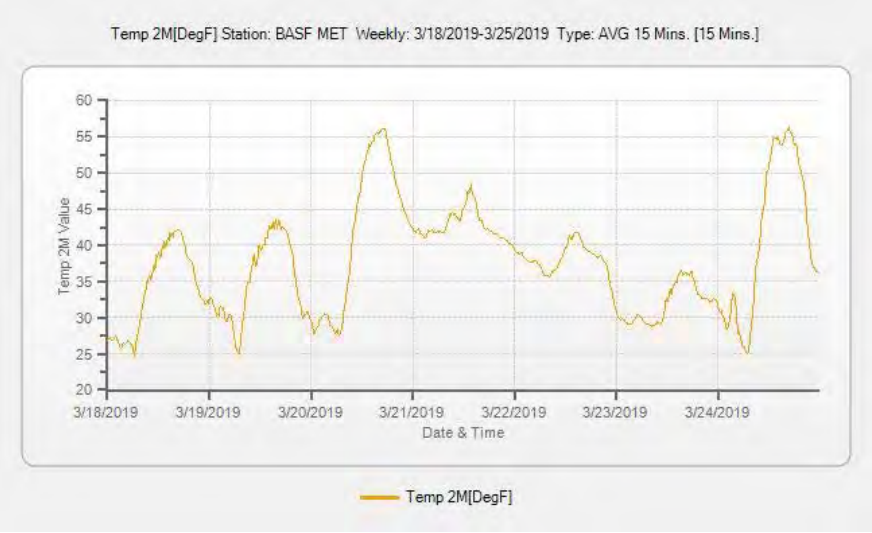
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

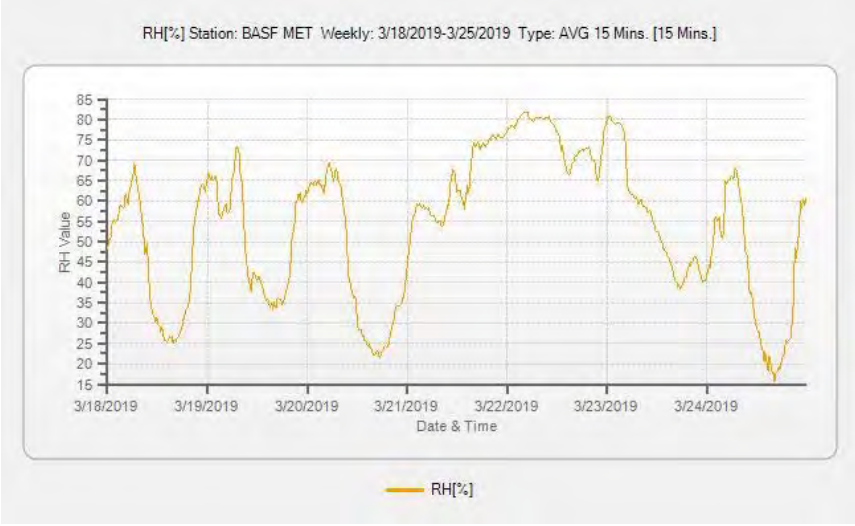


Figure 2: Site Map (3/18/19 – 3/22/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**3/25/19 – 3/31/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates with the exception of the VOC emission rate calculated for AHS-8.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/25/19	0.0	35	0	No
Tue 3/26/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 3/27/19	0.0	45	0	No
Thu 3/28/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 3/29/19	0.0	15	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 3/25/19	0.0	18	0	No
Tue 3/26/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 3/27/19	0.0	44	0	No
Thu 3/28/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 3/29/19	0.0	16	0	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Wed 3/27/19	lb/hr	<0.7	--	--	--	0.342	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 3/27/19	lb/hr	<0.7	0.0003	0.0004	0.0002	0.0002	NA[1]	0.0001	0.0001	0.0004

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

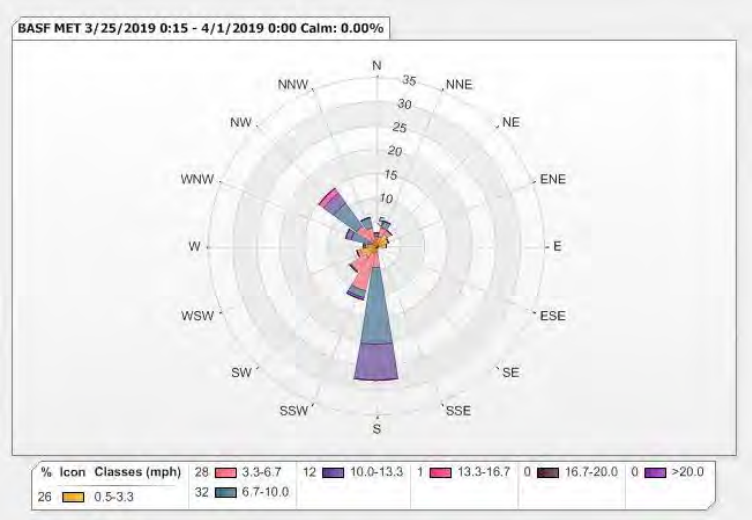
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 3/27/19	lb/hr	<1.3	0.504	0.341	0.497	0.361	NA[1]	0.475	0.585	1.772

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

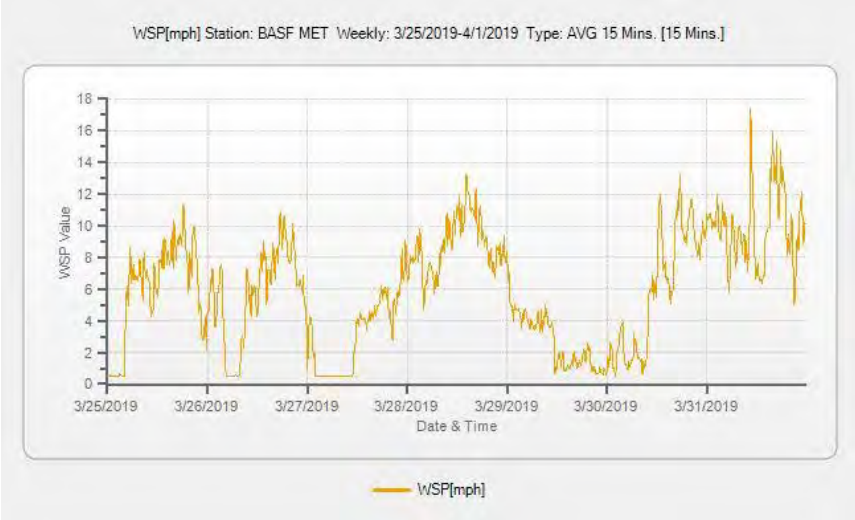
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

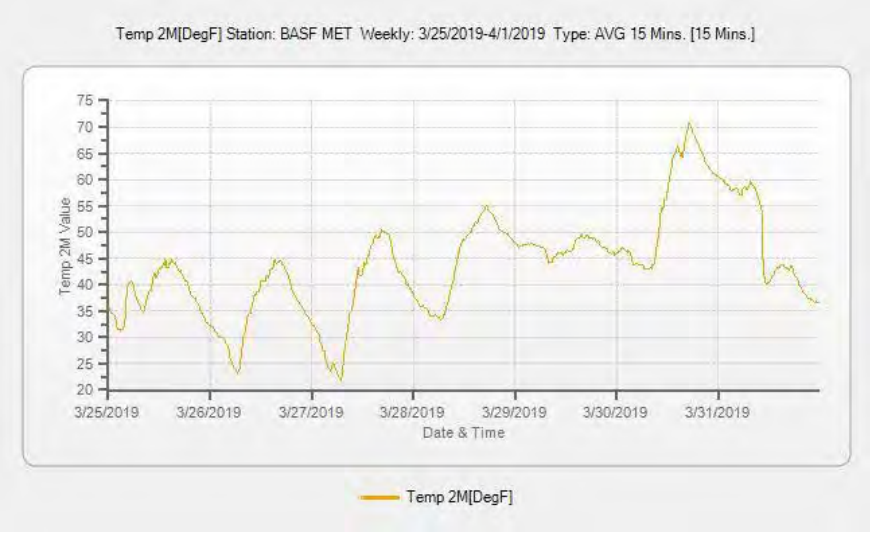
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

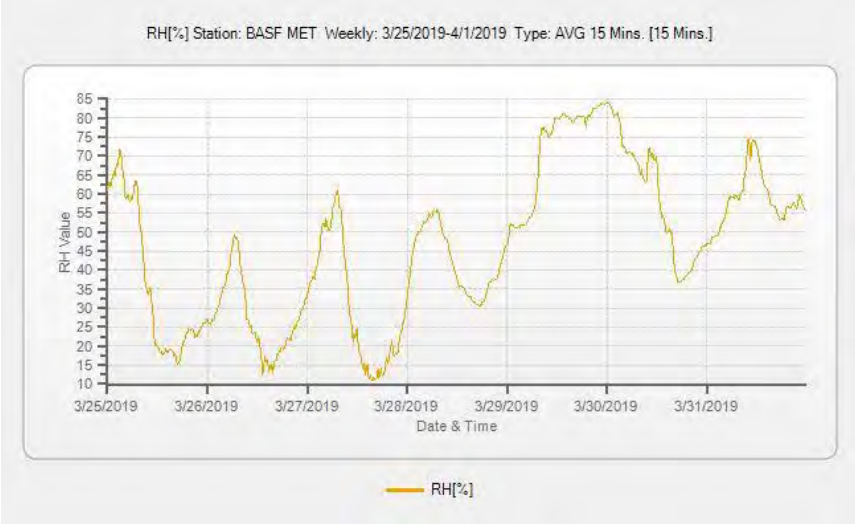


Figure 2: Site Map (3/25/19 – 3/29/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**4/1/19 – 4/7/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/1/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 4/2/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 4/3/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 4/4/19	0.0	20	1	No
Fri 4/5/19	0.0	98	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/1/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 4/2/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 4/3/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 4/4/19	0.0	11	1	No
Fri 4/5/19	0.0	33	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 4/4/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.351

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/4/19	lb/hr	<0.7	NA[1]	NA[1]	NA[1]	NA[1]	0.0002	0.0003	0.0001	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

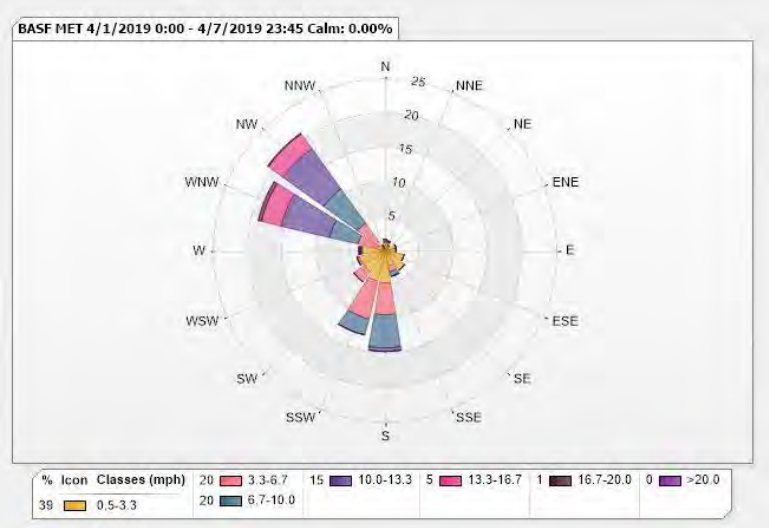
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/4/19	lb/hr	<1.3	NA[1]	NA[1]	NA[1]	NA[1]	0.038	0.197	0.400	0.422

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

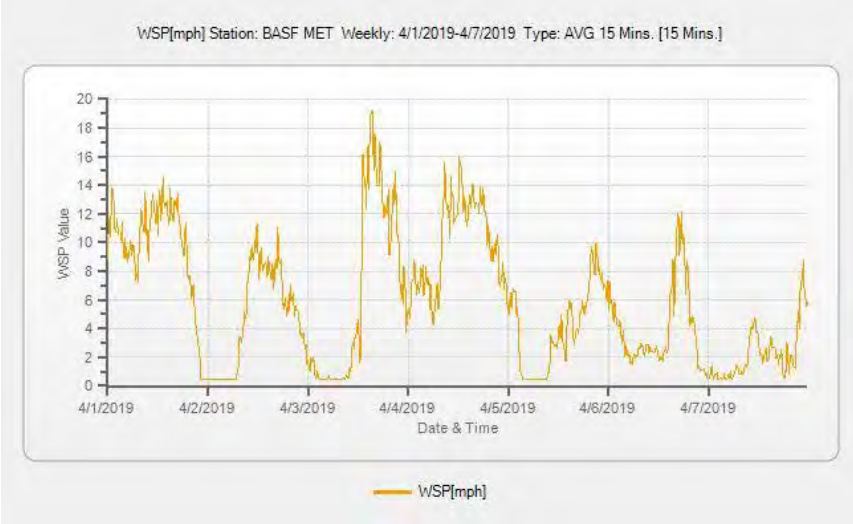
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

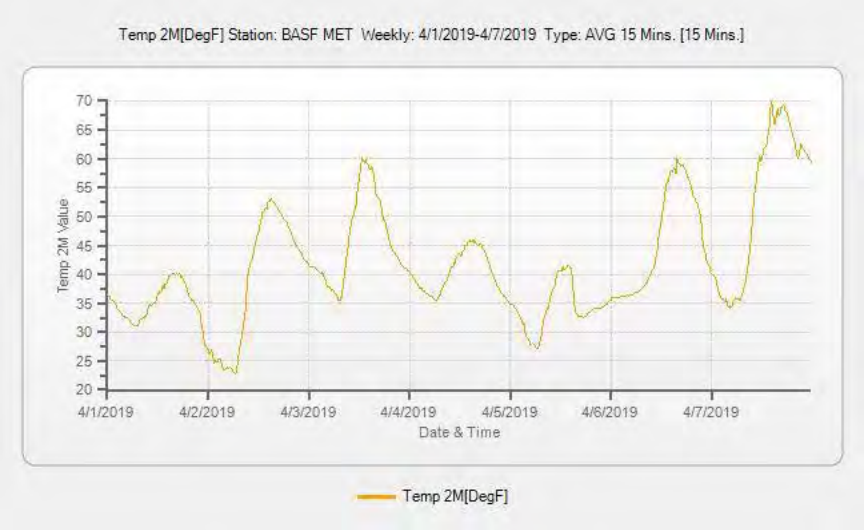
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

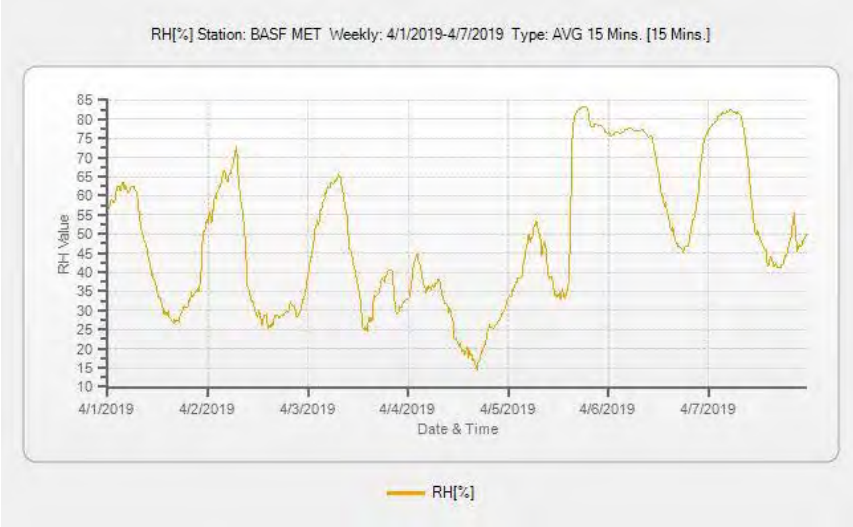


Figure 2: Site Map (4/1/19 – 4/5/19)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **4/8/19 – 4/14/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/8/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 4/9/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 4/10/19	0.1	8	1	No
Thu 4/11/19	0.0	13	ND[1]	ND[1]
Fri 4/12/19	0.0	34	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/8/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 4/9/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 4/10/19	0.1	7	1	No
Thu 4/11/19	0.0	53	ND[1]	ND[1]
Fri 4/12/19	0.0	30	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 4/10/19	lb/hr	<0.7	--	--	0.324	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 4/10/19	lb/hr	<0.7	0.0007	0.0002	0.0001	0.0001	0.0012	0.0003	0.0005	0.0007

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

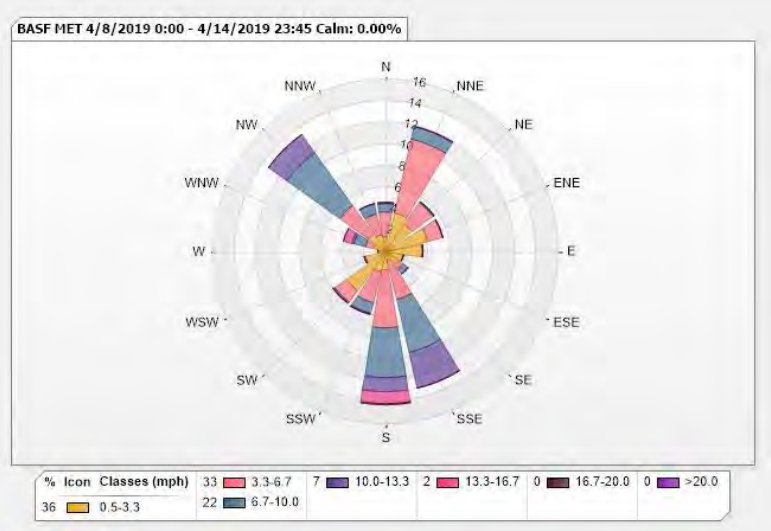
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 4/10/19	lb/hr	<1.3	0.037	0.000	0.000	0.000	0.000	0.000	0.013	0.066

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

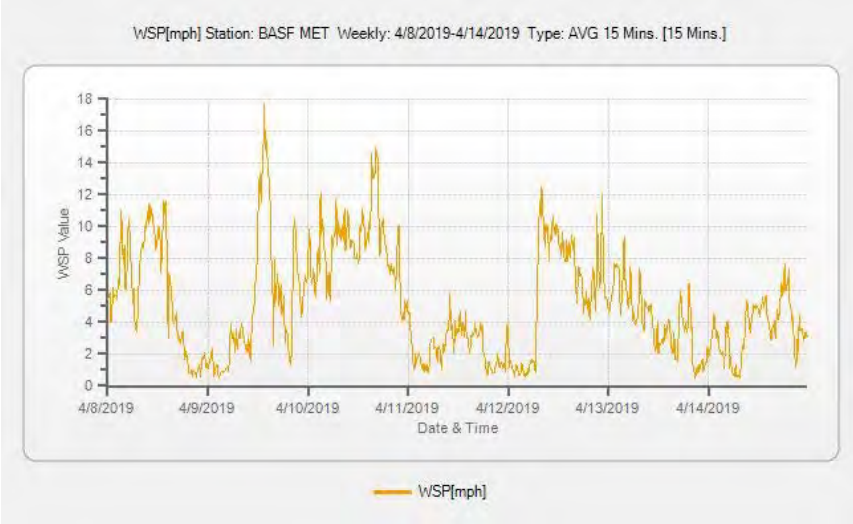
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

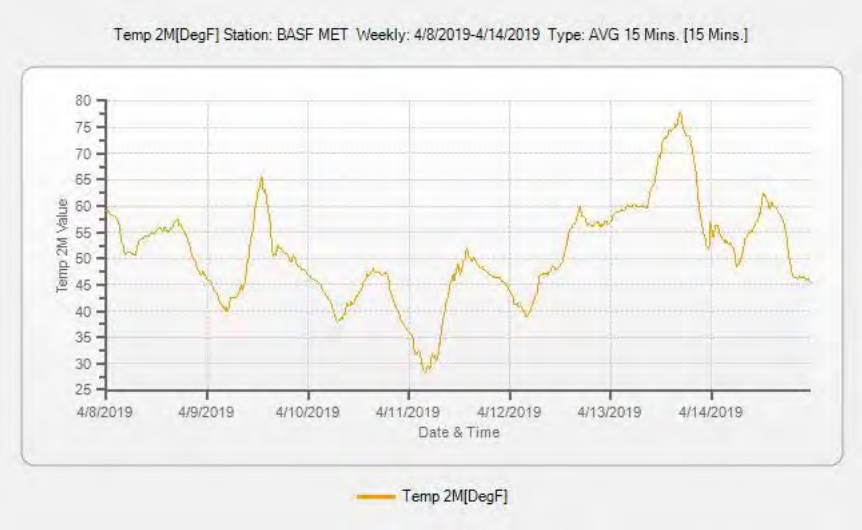
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

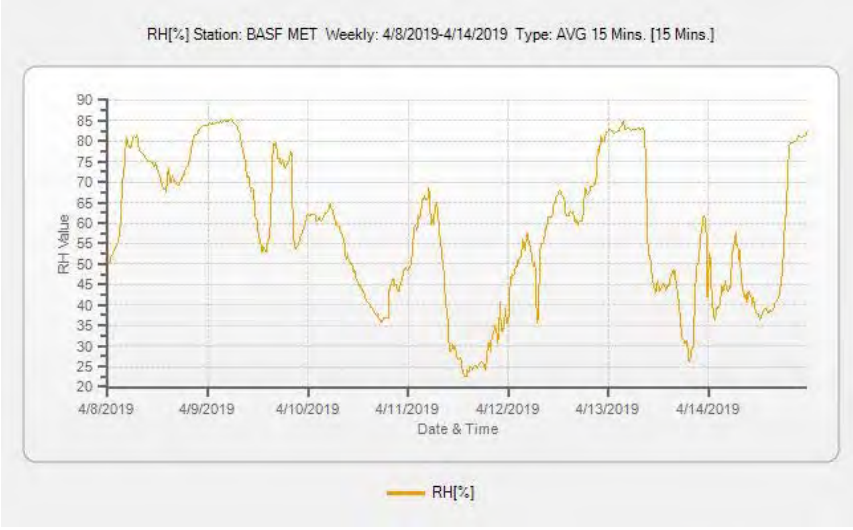


Figure 2: Site Map (4/8/19 – 4/12/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**4/15/19 – 4/21/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/15/19	0.4	11	2	No
Tue 4/16/19	0.0	7	0	No
Wed 4/17/19	0.0	51	0	No
Thu 4/18/19	0.2	23	1	No
Fri 4/19/19	0.0	50	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/15/19	1.3	12	3	No
Tue 4/16/19	1.7	13	3	No
Wed 4/17/19	0.0	55	3	No
Thu 4/18/19	2.6	16	3	No
Fri 4/19/19	0.4	45	1	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 4/18/19	lb/hr	<0.7	--	--	--	0.274	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/18/19	lb/hr	<0.7	0.0001	0.0009	NA[1]	0.0001	0.0003	0.0002	0.0001	0.0006

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

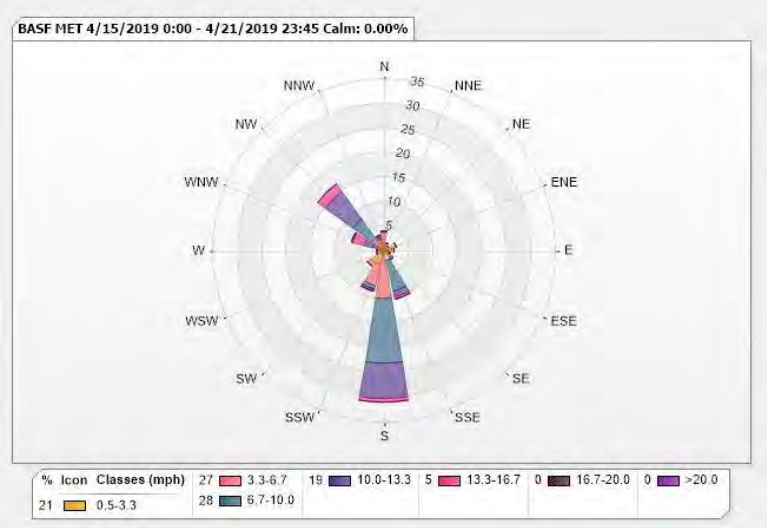
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/18/19	lb/hr	<1.3	1.087	0.253	NA[1]	0.221	0.316	0.369	1.052	0.955

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

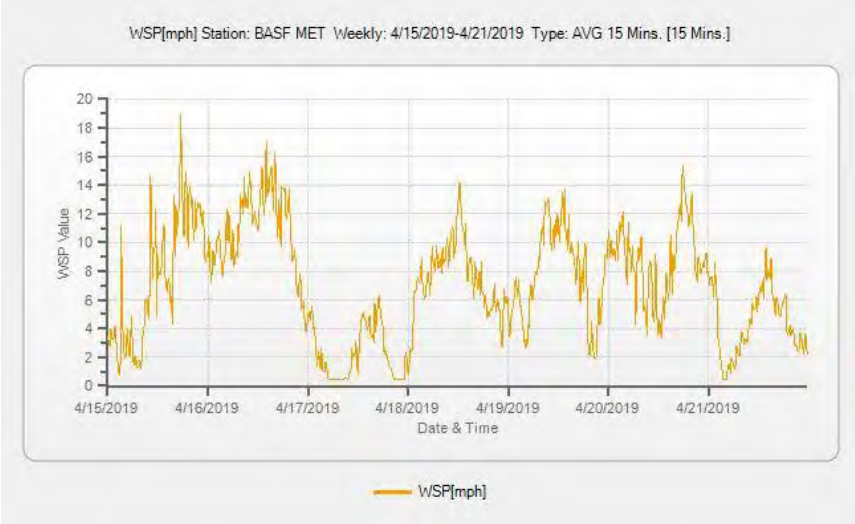
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

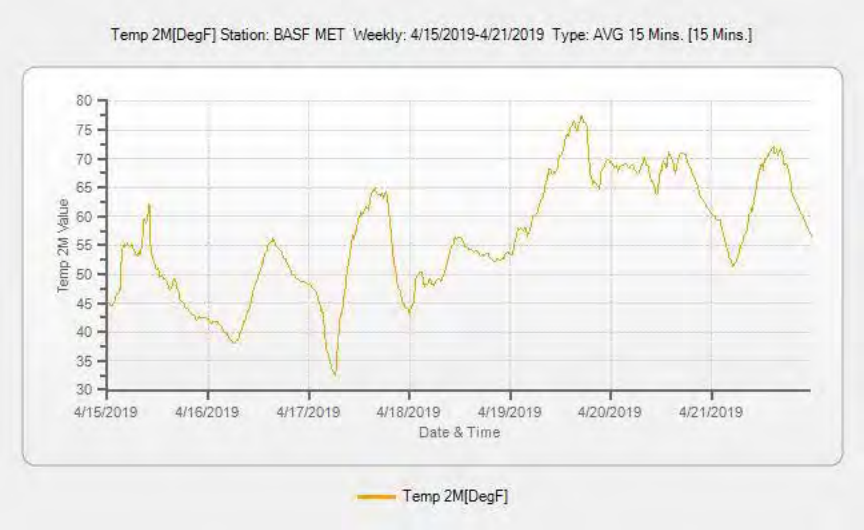
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

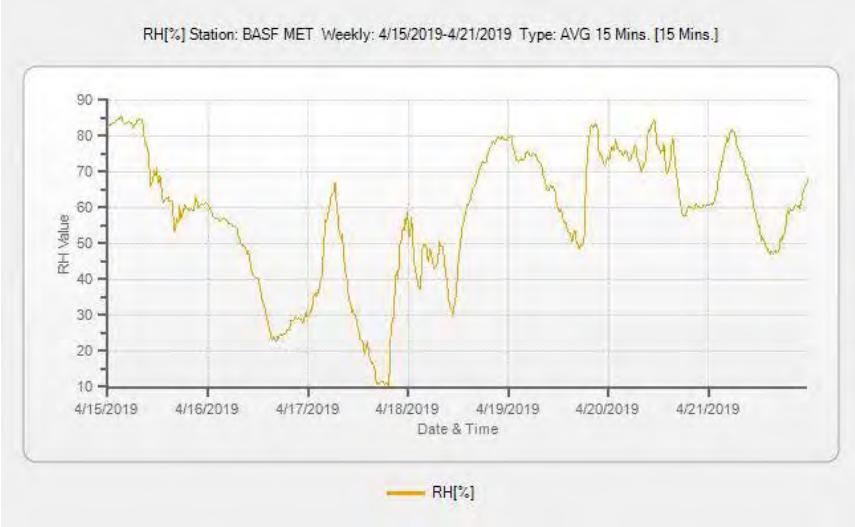


Figure 2: Site Map (4/15/19 – 4/19/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**4/22/19 – 4/28/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/22/19	0.0	21	0	No
Tue 4/23/19	0.0	21	0	No
Wed 4/24/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 4/25/19	0.1	65	0	No
Fri 4/26/19	0.0	5	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/22/19	1.6	23	2	No
Tue 4/23/19	5.0	20	5	No
Wed 4/24/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 4/25/19	1.0	59	3	No
Fri 4/26/19	0.0	5	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 4**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 4/25/19	lb/hr	<0.7	--	--	--	--	--	--	0.354	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/25/19	lb/hr	<0.7	0.0004	0.0003	NA[1]	0.0001	0.0001	0.0003	0.0003	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

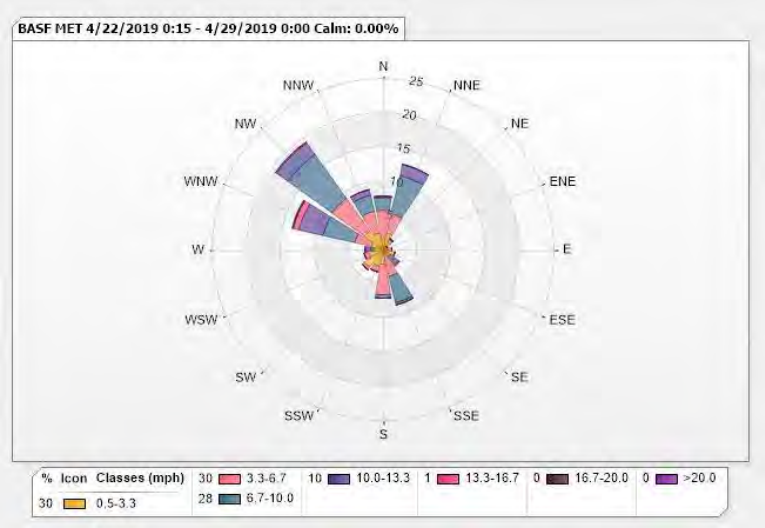
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 4/25/19	lb/hr	<1.3	0.135	0.008	NA[1]	0.010	0.012	0.016	0.032	0.065

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

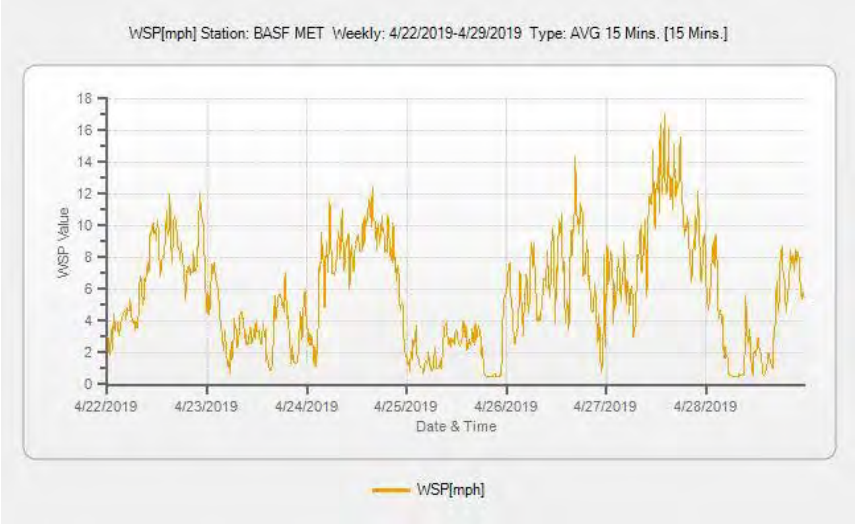
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

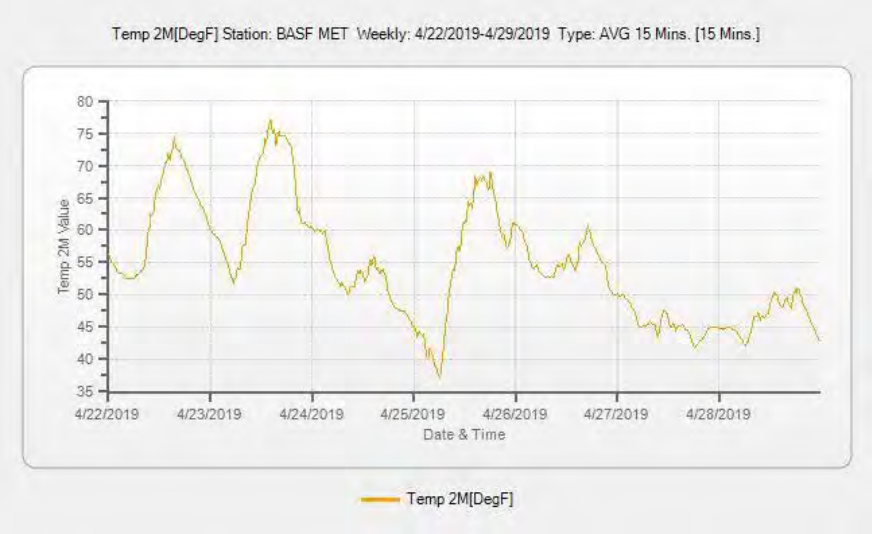
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

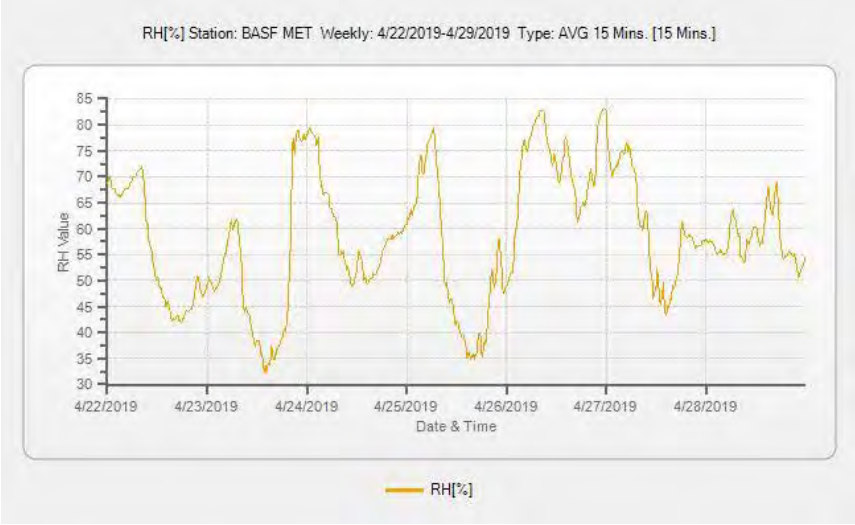


Figure 2: Site Map (4/22/19 – 4/26/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**4/29/19 – 5/5/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/29/19	0.0	20	0	No
Tue 4/30/19	0.0	24	ND[1]	ND[1]
Wed 5/1/19	0.0	14	ND[1]	ND[1]
Thu 5/2/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 5/3/19	ND[1]	ND[1]	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 4/29/19	0.2	22	1	No
Tue 4/30/19	0.0	23	ND[1]	ND[1]
Wed 5/1/19	0.0	12	ND[1]	ND[1]
Thu 5/2/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 5/3/19	ND[1]	ND[1]	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Mon 4/29/19	lb/hr	<0.7	--	0.316	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 4/29/19	lb/hr	<0.7	0.0003	0.0002	NA[1]	0.0000	0.0001	0.0000	0.0003	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

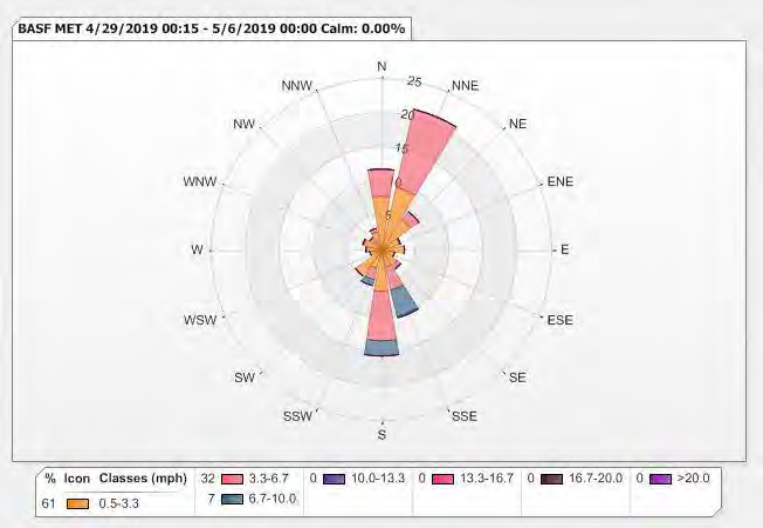
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 4/29/19	lb/hr	<1.3	0.328	0.019	NA[1]	0.023	0.015	0.046	0.066	0.119

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

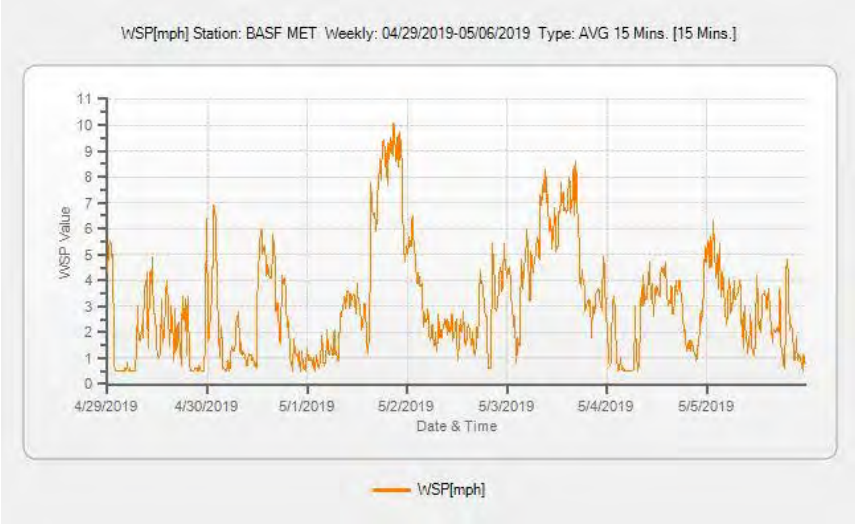
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

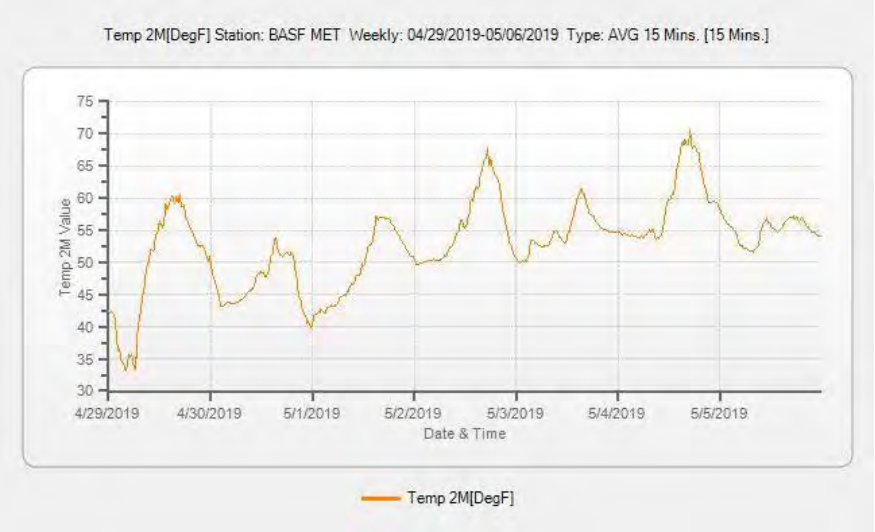
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

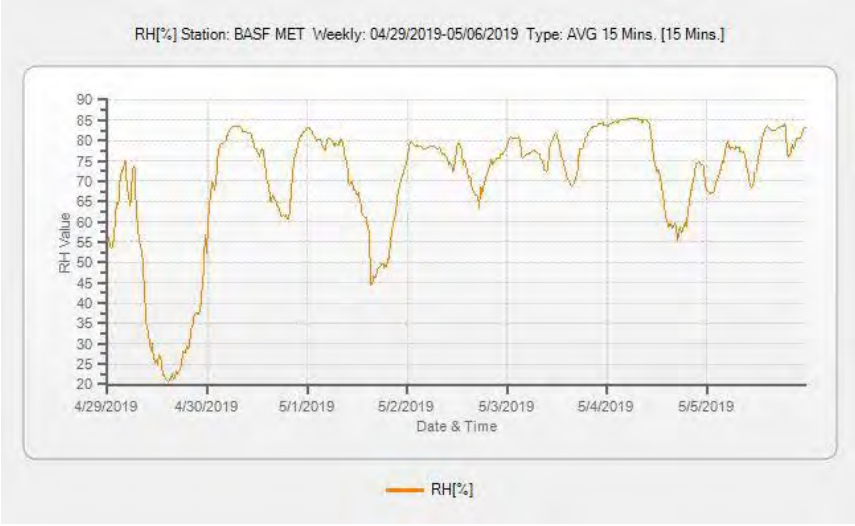


Figure 2: Site Map (4/29/19 – 5/3/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**5/6/19 – 5/12/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/6/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/7/19	0.0	40	0	No
Wed 5/8/19	0.3	44	ND[1]	ND[1]
Thu 5/9/19	0.0	80	ND[1]	ND[1]
Fri 5/10/19	0.0	21	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/6/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/7/19	0.3	51	1	No
Wed 5/8/19	1.8	14	ND[1]	ND[1]
Thu 5/9/19	2.8	58	ND[1]	ND[1]
Fri 5/10/19	2.0	54	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 5/7/19	lb/hr	<0.7	--	--	--	--	0.245	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 5/7/19	lb/hr	<0.7	0.0002	0.0002	NA[1]	0.0002	0.0002	0.0002	0.0003	0.0003

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

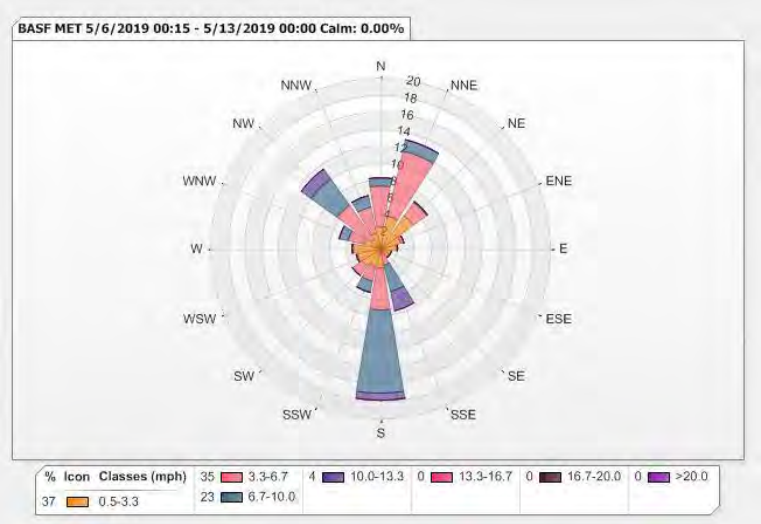
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 5/7/19	lb/hr	<1.3	0.637	0.000	NA[1]	0.000	0.000	0.000	0.000	0.118

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

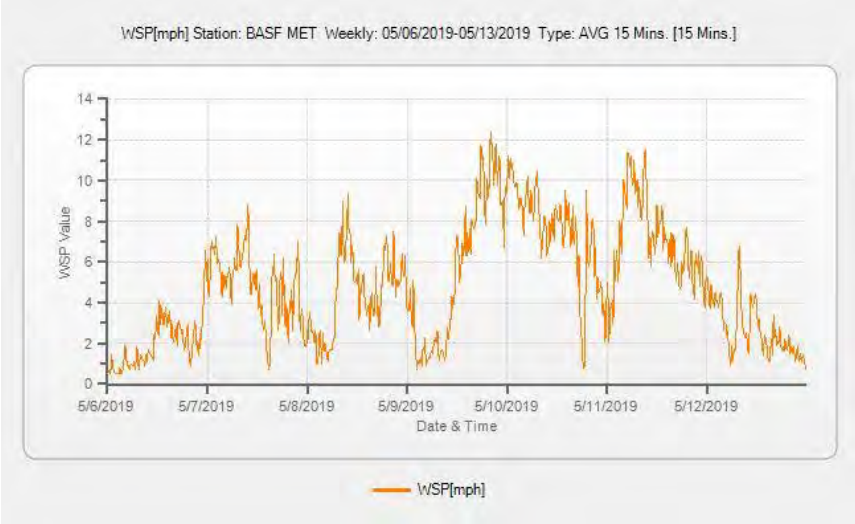
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

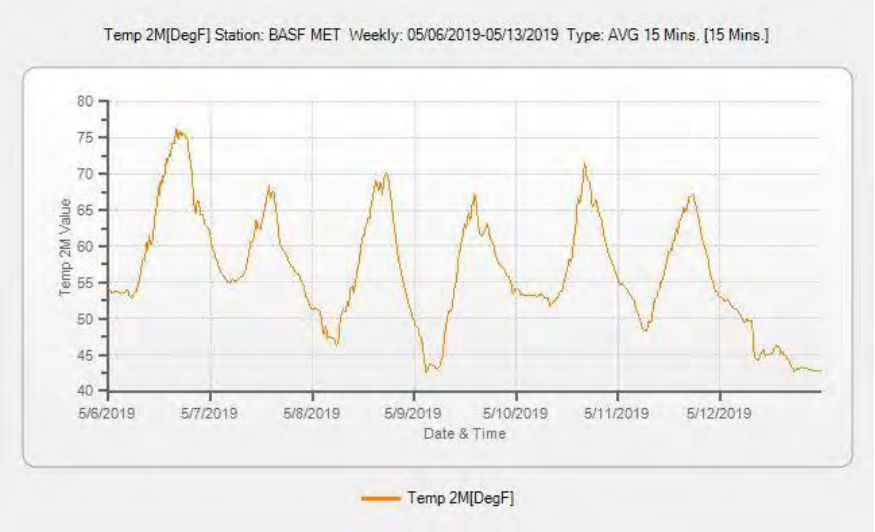
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

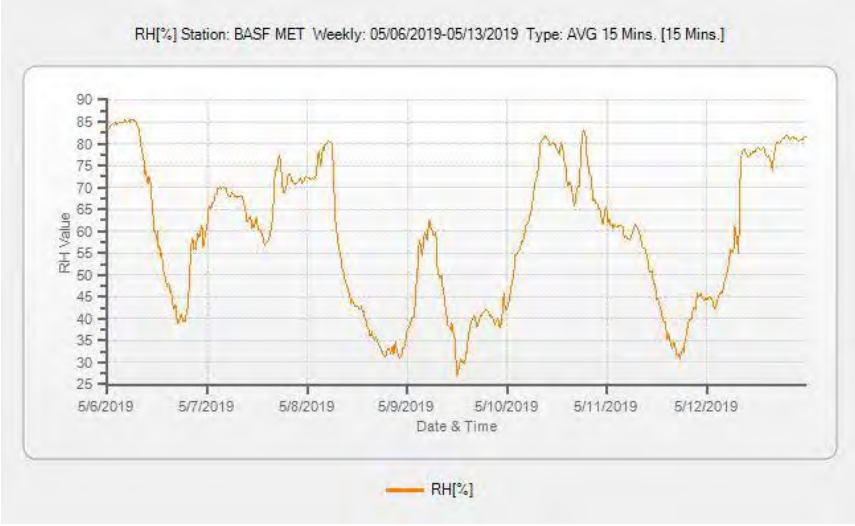


Figure 2: Site Map (5/6/19 – 5/10/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**5/13/19 – 5/19/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/13/19	1.4	34	ND[1]	ND[1]
Tue 5/14/19	0.0	9	ND[1]	ND[1]
Wed 5/15/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 5/16/19	0.3	16	1	No
Fri 5/17/19	ND[1]	ND[1]	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/13/19	0.8	20	ND[1]	ND[1]
Tue 5/14/19	0.3	13	ND[1]	ND[1]
Wed 5/15/19	ND[1]	ND[1]	ND[1]	ND[1]
Thu 5/16/19	0.1	16	0	No
Fri 5/17/19	ND[1]	ND[1]	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Thu 5/16/19	lb/hr	<0.7	0.309	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 5/16/19	lb/hr	<0.7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0003

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

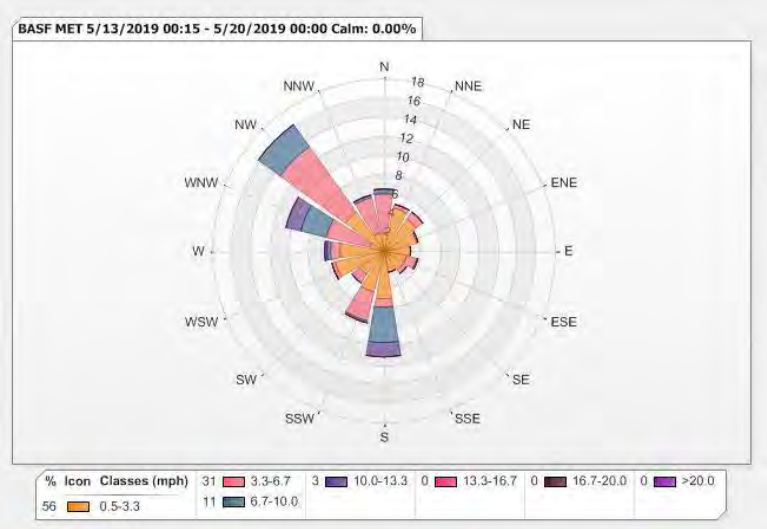
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Thu 5/16/19	lb/hr	<1.3	1.012	0.000	0.116	0.000	0.027	0.158	0.270	1.005

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

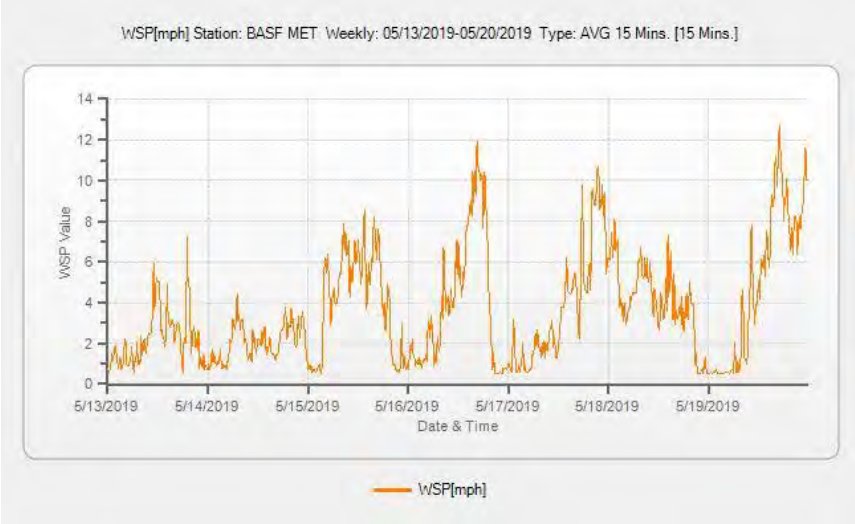
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

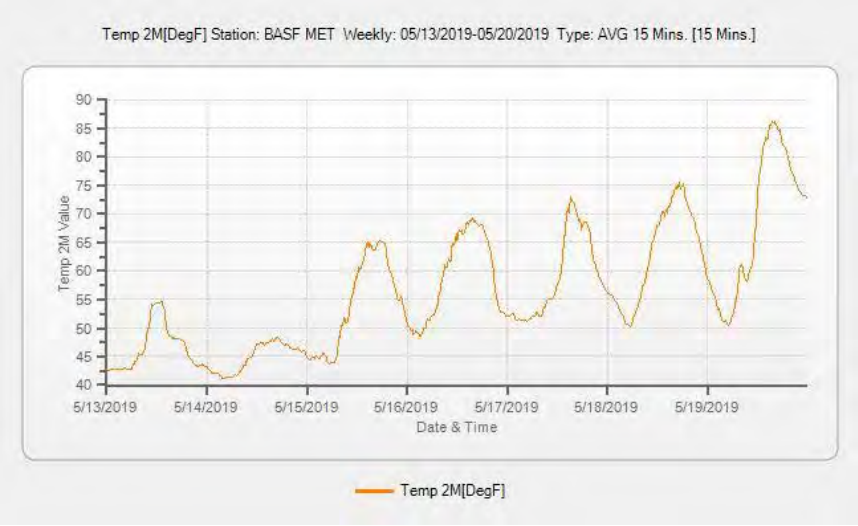
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

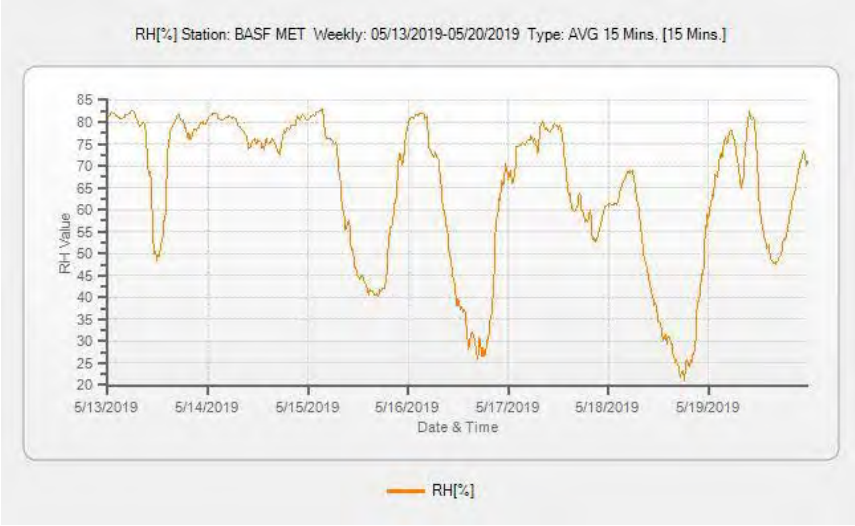


Figure 2: Site Map (5/13/19 – 5/17/19)



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Weekly Community Air Monitoring Summary

Client: **BASF**

Location: **Rensselaer, New York**

Period: **5/20/19 – 5/26/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10} and VOC emission rates calculated for the AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/20/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/21/19	3.0	16	3	No
Wed 5/22/19	0.0	10	ND[1]	ND[1]
Thu 5/23/19	0.4	108	ND[1]	ND[1]
Fri 5/24/19	ND[1]	ND[1]	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/20/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/21/19	0.4	15	0	No
Wed 5/22/19	8.0	30	ND[1]	ND[1]
Thu 5/23/19	3.0	87	ND[1]	ND[1]
Fri 5/24/19	ND[1]	ND[1]	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 5/21/19	lb/hr	<0.7	--	--	0.323	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 5/21/19	lb/hr	<0.7	0.0002	0.0001	0.0000	0.0000	0.0001	0.0002	0.0004	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

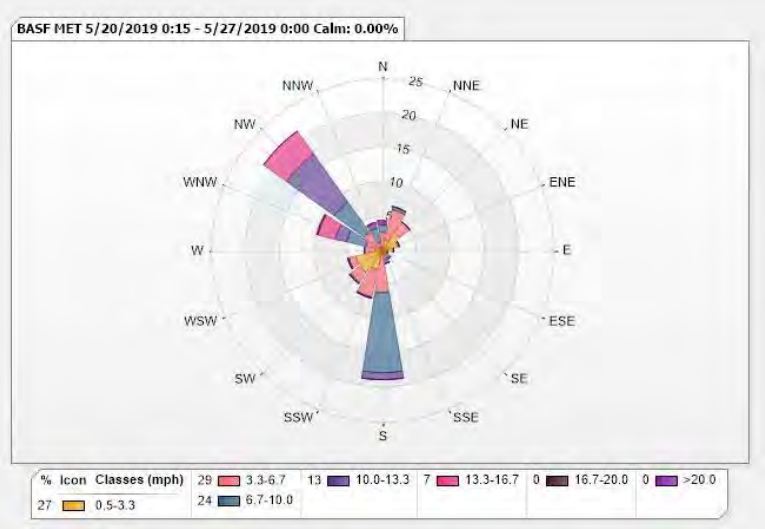
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Tue 5/21/19	lb/hr	<1.3	0.923	0.057	0.123	0.000	0.000	0.099	0.116	0.396

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

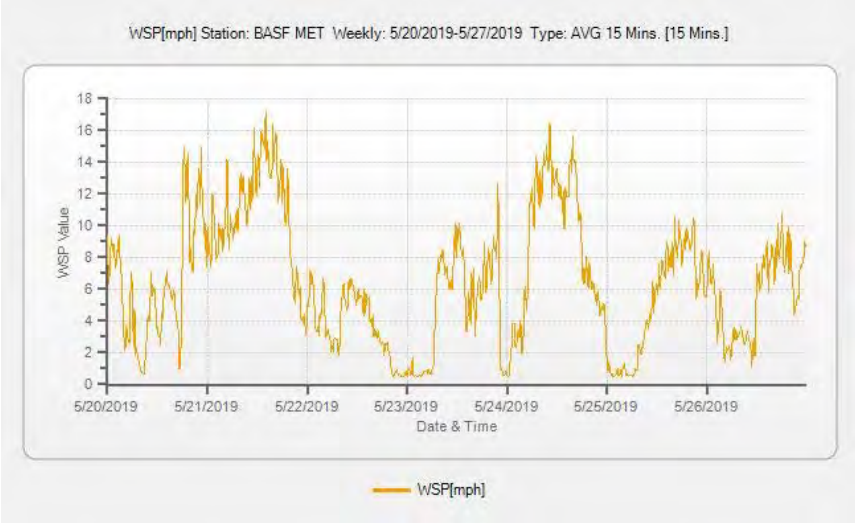
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

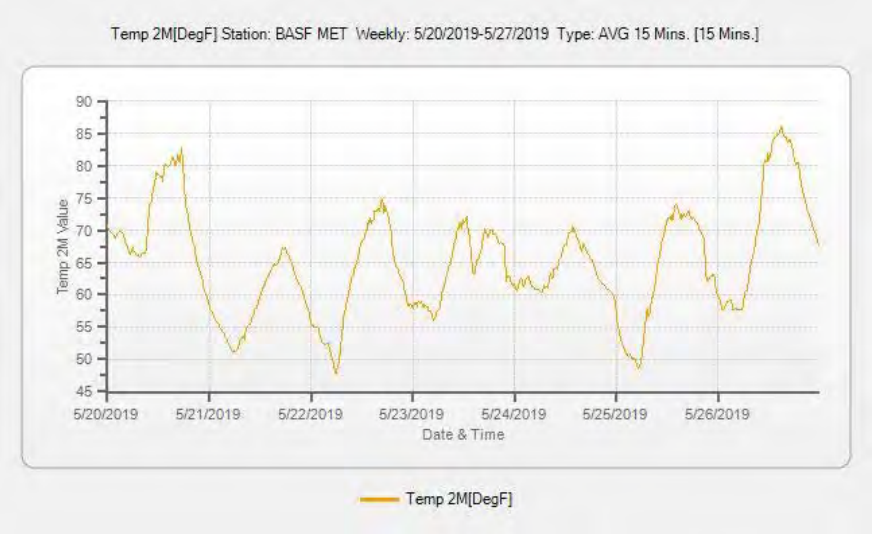
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

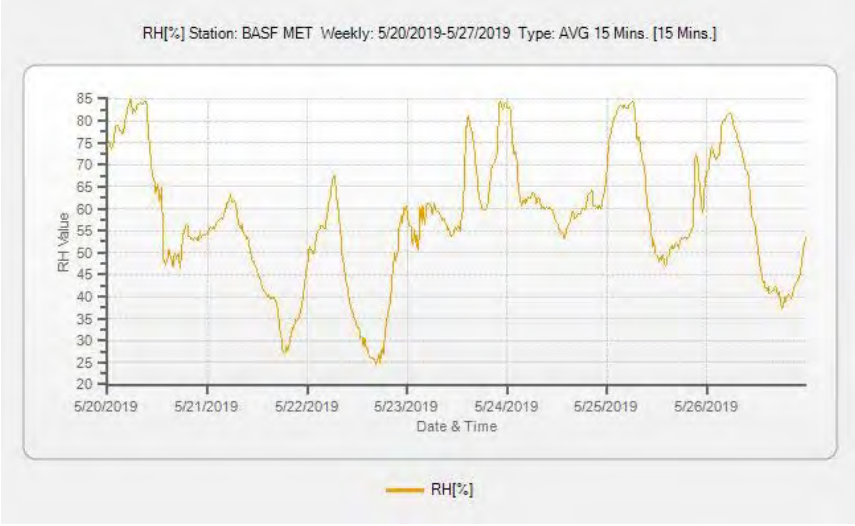


Figure 2: Site Map (5/20/19 – 5/24/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**5/27/19 – 6/2/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the fenceline TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates. The VOC emission rates remained below the target emission rate with the exception of AHS-8.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/27/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/28/19	0.1	29	0	No
Wed 5/29/19	0.0	13	0	No
Thu 5/30/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 5/31/19	0.0	37	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 5/27/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 5/28/19	7.1	71	5	No
Wed 5/29/19	15.5	66	8	No
Thu 5/30/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 5/31/19	18.1	71	8	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 5/29/19	lb/hr	<0.7	--	--	--	--	--	0.278	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 5/29/19	lb/hr	<0.7	0.0005	0.0002	0.0007	0.0004	0.0008	0.0083	0.0010	0.0014

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

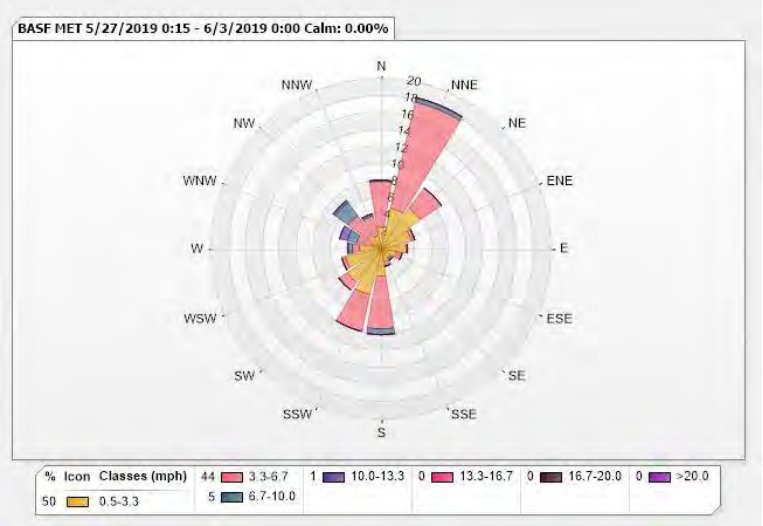
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 5/29/19	lb/hr	<1.3	1.162	0.236	0.298	0.422	0.779	0.723	0.695	1.501

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

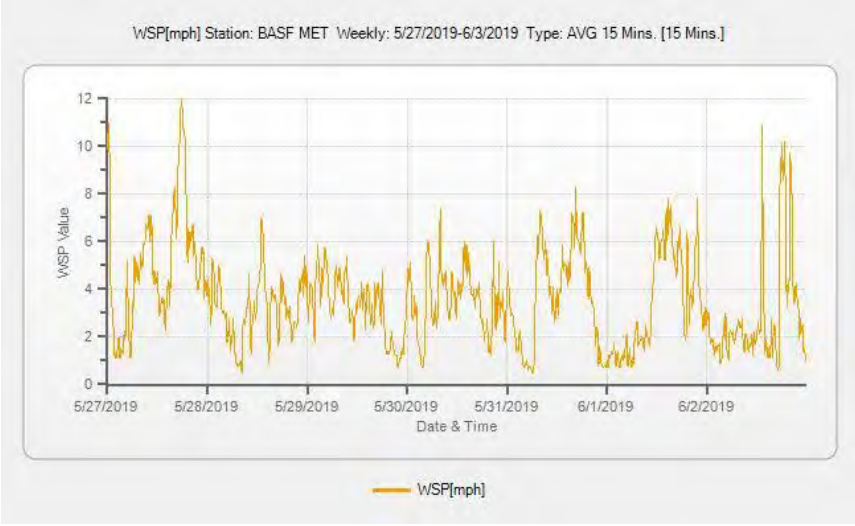
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

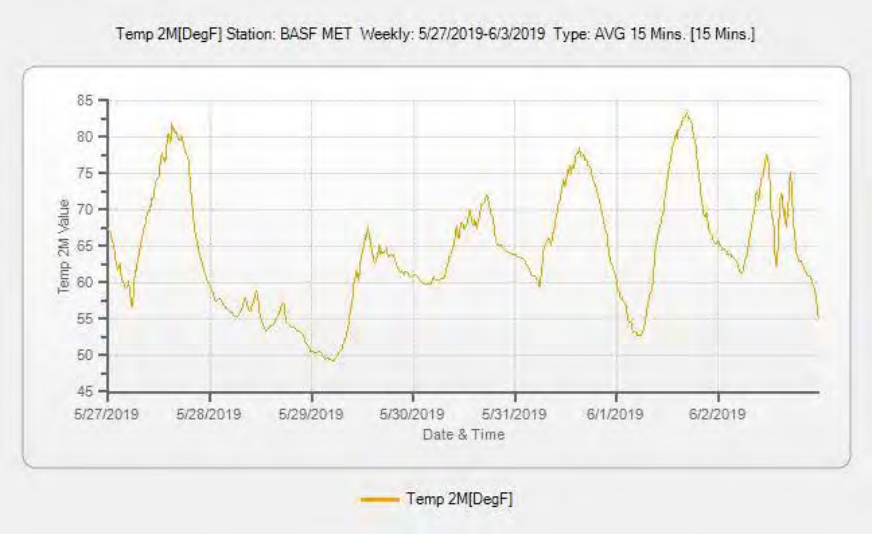
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

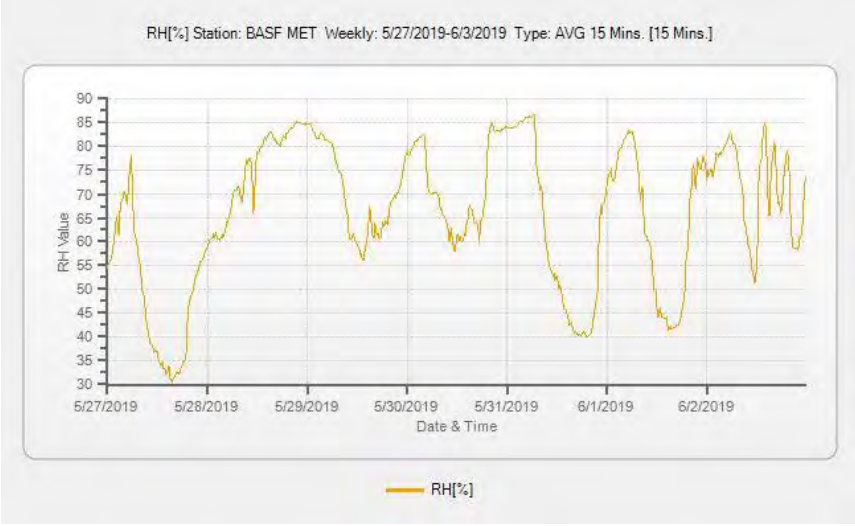


Figure 2: Site Map (5/27/19 – 5/31/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**6/3/19 – 6/9/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates. The VOC emission rates remained below the target emission rate with the exception of AHS-1.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/3/19	0.0	37	0	No
Tue 6/4/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 6/5/19	0.0	72	ND[1]	ND[1]
Thu 6/6/19	0.0	6	ND[1]	ND[1]
Fri 6/7/19	0.0	26	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/3/19	18.1	71	8	No
Tue 6/4/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 6/5/19	1.1	34	ND[1]	ND[1]
Thu 6/6/19	0.1	8	ND[1]	ND[1]
Fri 6/7/19	0.0	22	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Mon 6/3/19	lb/hr	<0.7	--	--	--	0.246	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/3/19	lb/hr	<0.7	0.0001	0.0002	0.0001	0.0001	0.0003	0.0001	0.0002	0.0002

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

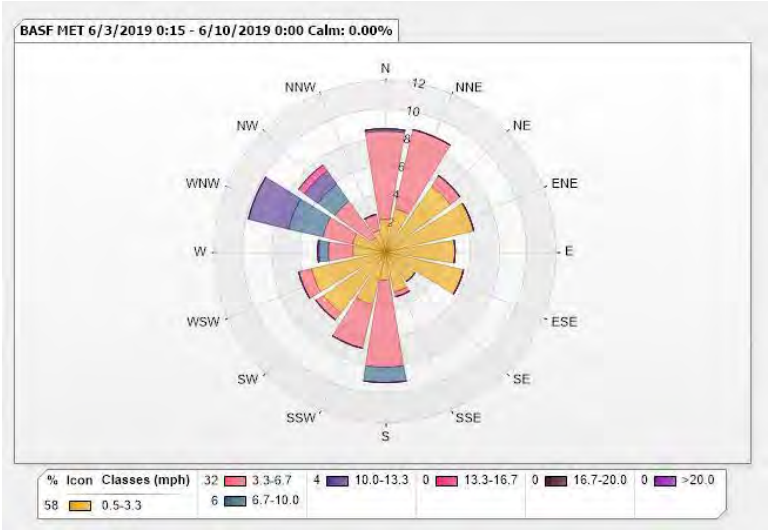
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/3/19	lb/hr	<1.3	1.724	0.125	0.099	0.000	0.000	0.000	0.111	0.270

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

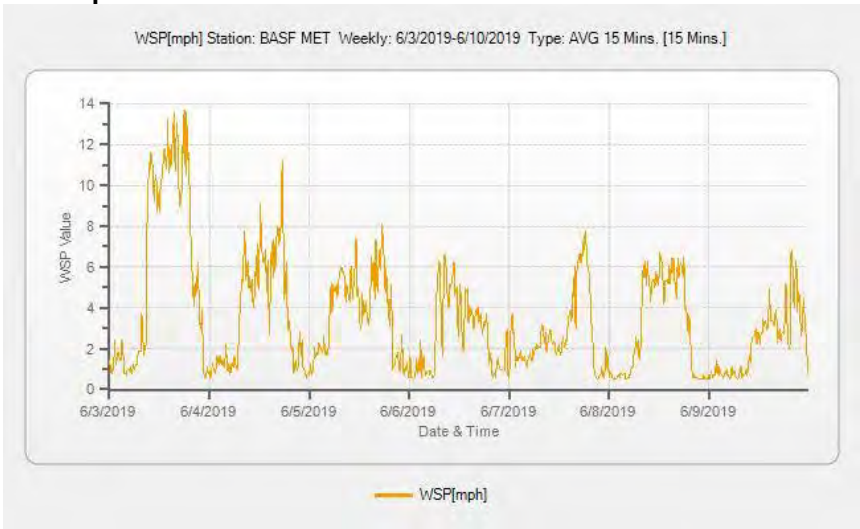
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

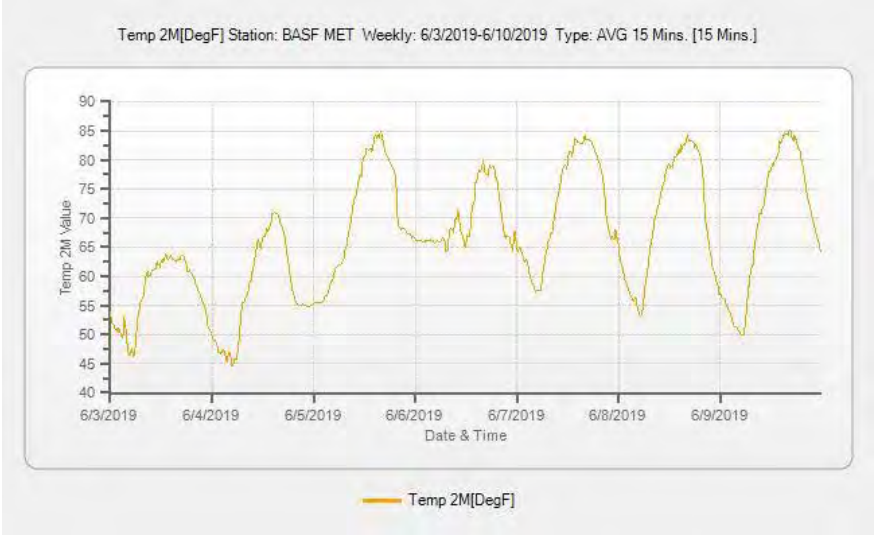
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

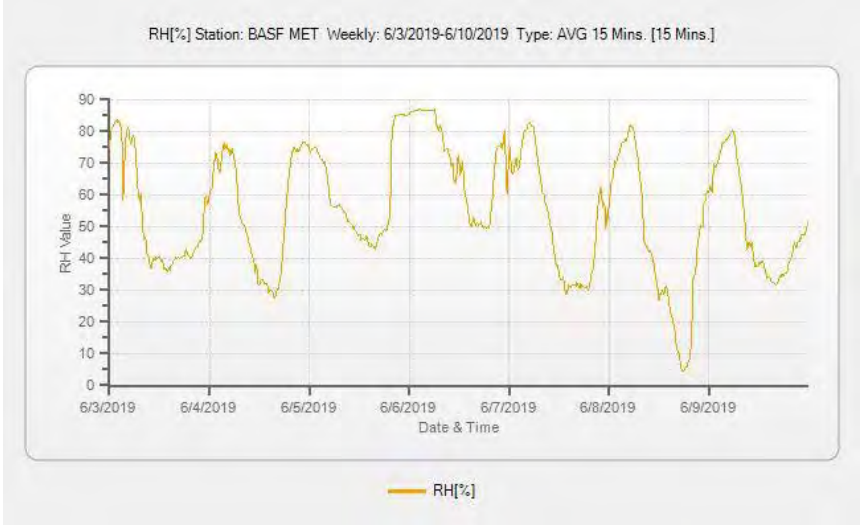


Figure 2: Site Map (6/3/19 – 6/7/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**6/10/19 – 6/16/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB and PM_{10} emission rates calculated for the AHS remained below their respective target emission rates. The VOC emission rates remained below the target emission rate with the exception of AHS-1.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/10/19	0.0	21	1	No
Tue 6/11/19	0.0	15	ND[1]	ND[1]
Wed 6/12/19	0.0	18	ND[1]	ND[1]
Thu 6/13/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 6/14/19	ND[1]	ND[1]	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/10/19	1.7	33	2	No
Tue 6/11/19	0.0	5	ND[1]	ND[1]
Wed 6/12/19	0.0	14	ND[1]	ND[1]
Thu 6/13/19	ND[1]	ND[1]	ND[1]	ND[1]
Fri 6/14/19	ND[1]	ND[1]	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	AAC	PAM-1	PAM-2	PAM-3	PAM-4	PAM-5	PAM-6
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	Units	Target	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Mon 6/10/19	lb/hr	<0.7	--	--	--	--	--	0.283	--	--

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/10/19	lb/hr	<0.7	0.0079	0.0001	0.0001	NA[1]	0.0001	0.0001	0.0003	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Table 9: Process Sampling VOC Emissions Summary

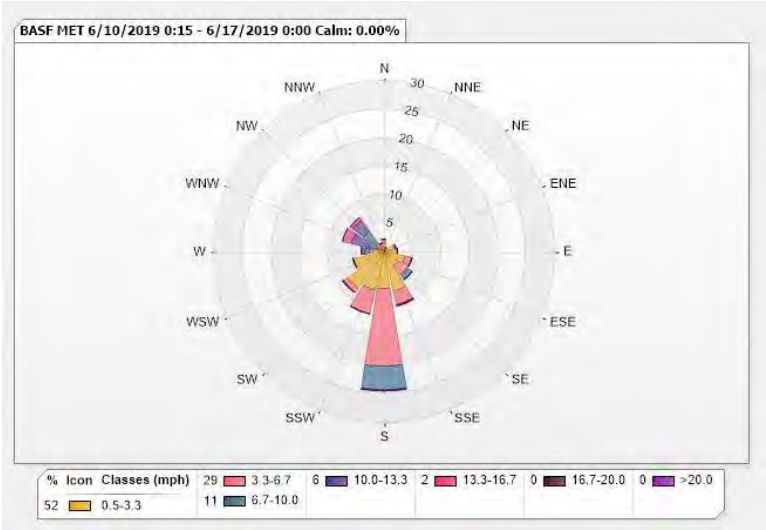
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/10/19	lb/hr	<1.3	1.906	0.189	0.314	NA[1]	0.227	0.273	0.348	NA[1]

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

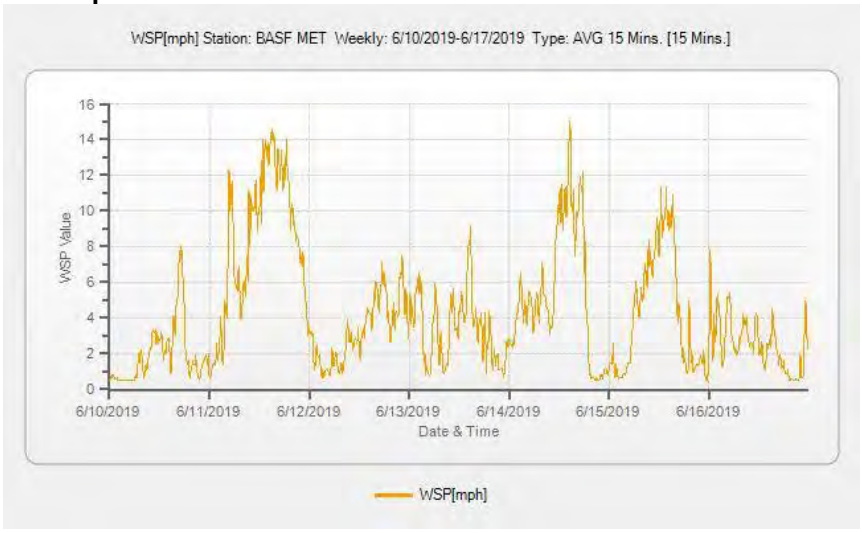
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.
[1] AHS unit was not operational; no sampling conducted.

Figure 1: Meteorological Summaries

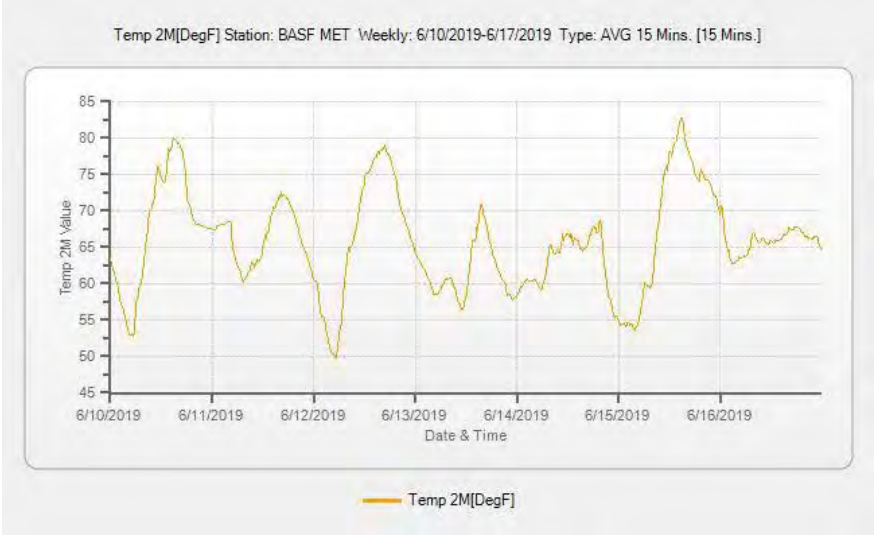
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

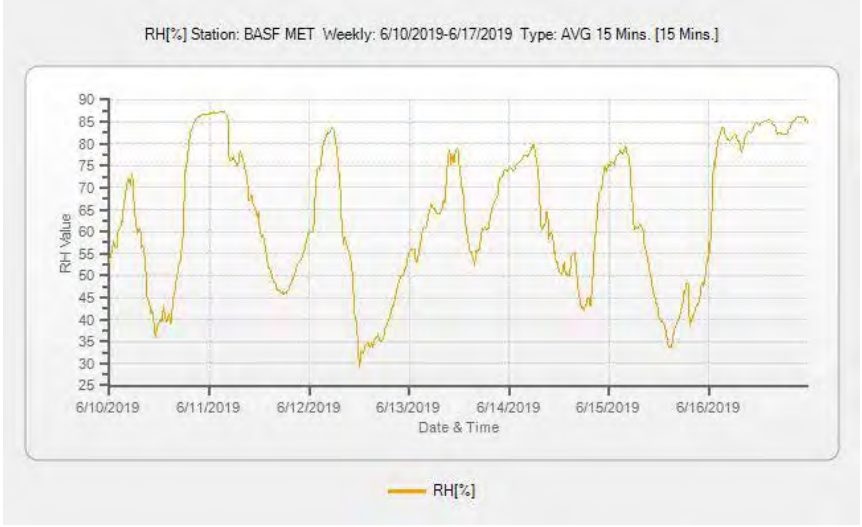


Figure 2: Site Map (6/10/19 – 6/14/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**6/17/19 – 6/23/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

The monitoring program consists of the following real-time monitoring and integrated sampling:

- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed; and
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The instantaneous hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Individual process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target emission rate to evaluate the performance of the TFS treatment systems.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Fenceline Real-Time Alert Levels, Action Levels, and Site Shutdown Level;

- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is no longer conducted at the fenceline following the CAMP reduction that was implemented on January 21, 2019. Project-to-date results are presented in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results have remained below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Process Sampling PCB Emissions Summary;
- **Table 8**: Process Sampling PM_{10} Emissions Summary; and
- **Table 9**: Process Sampling VOC Emissions Summary.

During the operational week, the PCB, PM_{10}, and VOC emission rates calculated for each AHS remained below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Fenceline Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – pounds per hour

Notes:

[1] Target emission rates are used for comparison of the process sampling emission rates calculated for PCBs, PM_{10} and VOCs at the air handling systems.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/17/19	0.1	18	0	No
Tue 6/18/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 6/19/19	0.9	34	ND[1]	ND[1]
Thu 6/20/19	0.0	34	ND[1]	ND[1]
Fri 6/21/19	0.0	4	ND[1]	ND[1]
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-10)**	**Visible Dust**
Mon 6/17/19	13.2	243	7	No
Tue 6/18/19	ND[1]	ND[1]	ND[1]	ND[1]
Wed 6/19/19	1.5	28	ND[1]	ND[1]
Thu 6/20/19	0.3	18	ND[1]	ND[1]
Fri 6/21/19	1.5	15	ND[1]	ND[1]

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:
TVOC – Total Volatile Organic Compounds (ppm)
PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)
ppm – Parts per million
$\mu g/m^3$ – micrograms per cubic meter
ND – No Data
NA – Not Applicable

Notes:
- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	$\mu g/m^3$	<10	3.49	3.55	3.53	3.59	3.56	3.57

Definitions:
PAM – Portable Air Monitoring Station
$\mu g/m^3$ – micrograms per cubic meter
NA – not applicable
ND – no data

Notes:
- Fenceline PCB sampling began on November 19, 2018 and concluded on January 18, 2019.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Process Sampling PCB Emissions Summary

			Sample Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/17/19	lb/hr	<0.7	--	--	--	--	--	--	--	0.319

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.

Table 8: Process Sampling PM_{10} Emissions Summary

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/17/19	lb/hr	<0.7	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0003

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Table 9: Process Sampling VOC Emissions Summary

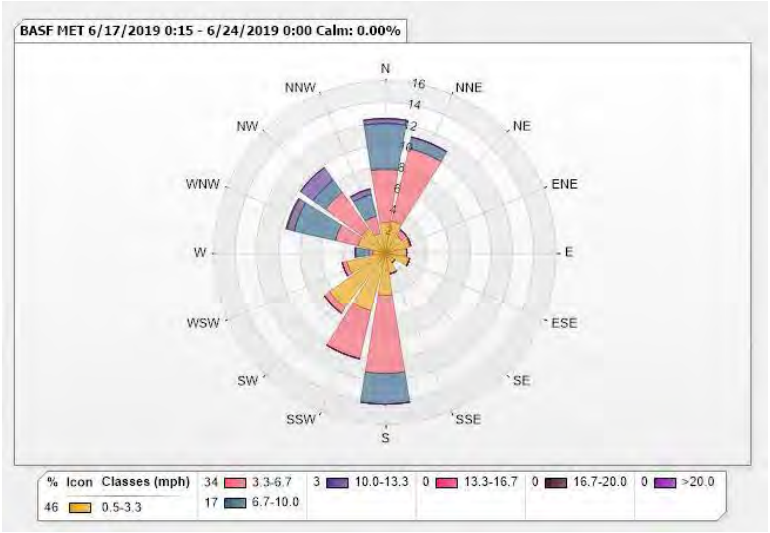
			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 6/17/19	lb/hr	<1.3	0.655	0.001	0.000	0.000	0.000	0.025	0.000	0.332

Definitions:
AHS – Air Handling System
lb/hr – pounds per hour
NA – not applicable
ND – no data

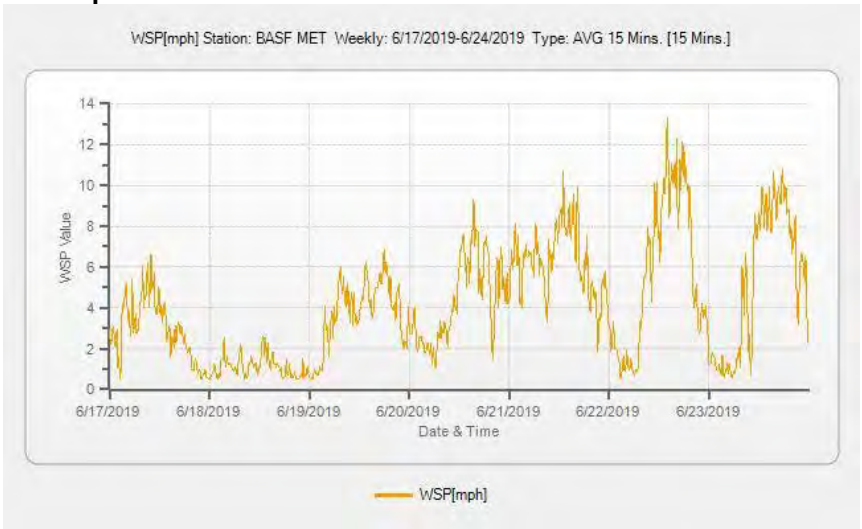
Notes:
- Process sampling began on November 29, 2018 and is conducted at a frequency of once per week.

Figure 1: Meteorological Summaries

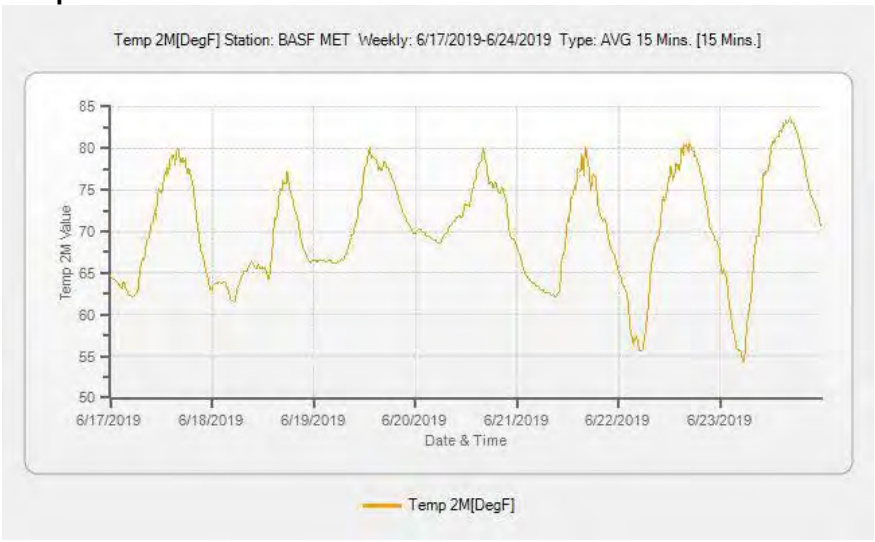
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

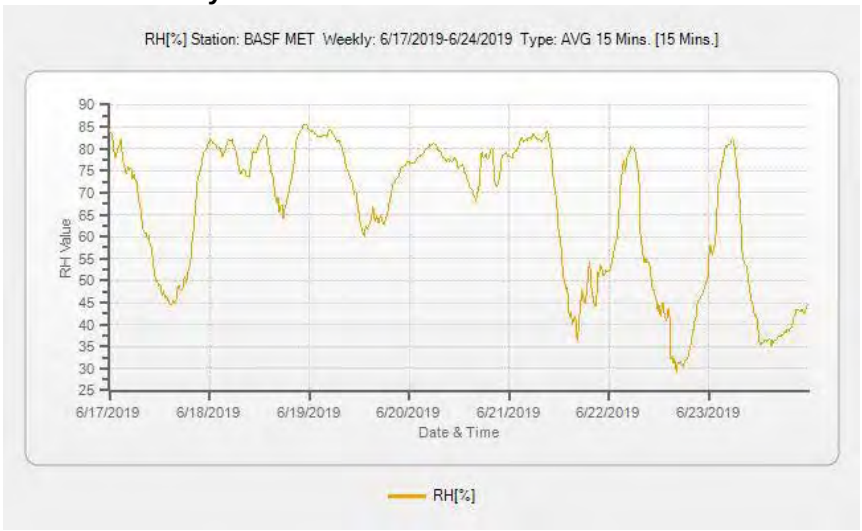


Figure 2: Site Map (6/17/19 – 6/21/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/15/19 – 7/21/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on November 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

During the operational week, there were several TVOC measurements greater than the Action Level at the 75% carbon bed depth. The project-to-date TVOC, PM_{10}, and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 7/15/19	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	NA	NA	NA	NA
Tue 7/16/19	0.1	28.8	0.1	26.5	2.1	32.2	0.2	51.6	0.1	26.4	0.8	22.2	NA	NA	NA	NA
Wed 7/17/19	0.0	31.5	0.0	25.7	0.7	33.7	0.2	50.6	0.0	31.4	0.9	33.8	NA	NA	NA	NA
Thu 7/18/19	0.0	23.2	0.0	20.2	0.2	25.3	0.0	33.9	0.1	21.1	0.9	24.0	NA	NA	NA	NA
Fri 7/19/19	0.4	39.0	0.6	36.2	0.3	48.1	0.5	72.3	0.2	47.2	1.6	49.2	NA	NA	NA	NA
Sat 7/20/19	0.1	37.0	0.2	28.5	0.4	39.6	0.2	42.0	0.2	33.2	1.0	34.0	NA	NA	NA	NA
Sun 7/21/19	0.0	16.4	0.4	12.4	0.6	18.8	0.7	21.3	0.2	13.0	0.4	13.9	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.4	39.0	0.6	36.2	2.1	48.1	0.7	72.3	0.2	47.2	1.6	49.2	--	--	--	--
Weekly Average	0.0	18.7	0.0	14.7	0.0	21.4	0.0	25.4	0.0	16.0	0.2	18.1	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Data was not collected due to mobilization and installation activities.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 7/19/19[1]			
Analyte	**Units**	**PAM-1**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	0.036[2]	**0.094**
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	0.372	0.430

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

TBD – To Be Determined

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Fenceline PCB samples were only collected at one upwind and one downwind station on 7/19/19.

[2] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.37	3.55	3.53	3.59	3.56	3.43

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
TBD – To Be Determined
NA – Not Applicable
ND – No Data

Notes:
- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.
[1] Results will be reported when they become available from the analytical laboratory.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Fri 7/19/19	ppm	<1.0	7.909	1.870	NA[1]	2.503	1.288	10.060	NA[1]	19.570

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	**Units**	**Target Emission Rate**	**Total System Emissions**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
			Weekly Summary								
Fri 7/19/19	--	--	11.653	3.017	0.000	NA[1]	0.147	0.239	0.339	NA[1]	7.911
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.159	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.
[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Fri 7/19/19	--	--	0.0953	0.0194	0.0185	NA[1]	0.0028	0.0200	0.0309	NA[1]	0.0037
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0659	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

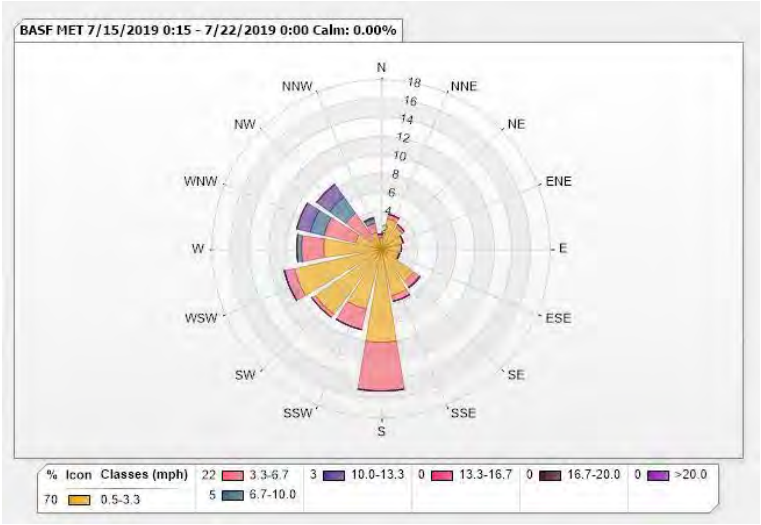
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
					Weekly Summary						
Fri 7/19/19	--	--	0.021	--	--	--	--	--	0.021	--	--
					Project-to-Date Summary						
Project-to-Date Average	lb/hr	<0.7	0.292	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
TBD – To Be Determined
NA – Not Applicable
ND – No Data

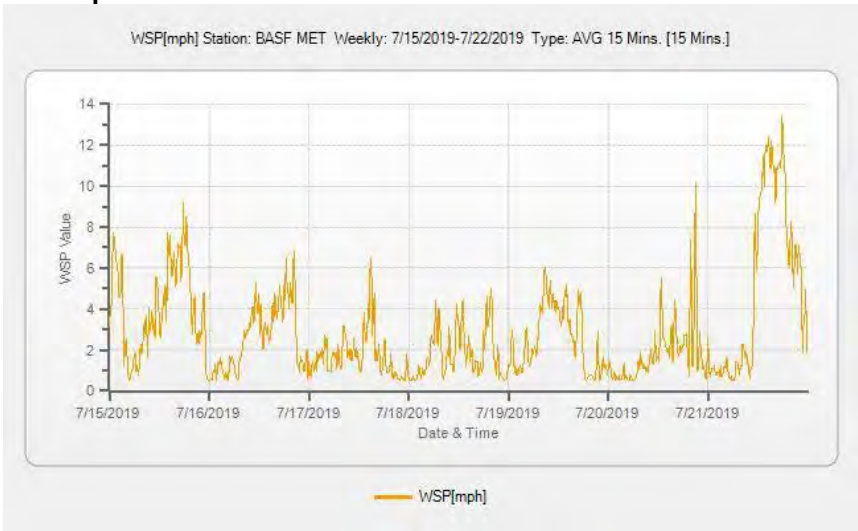
Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

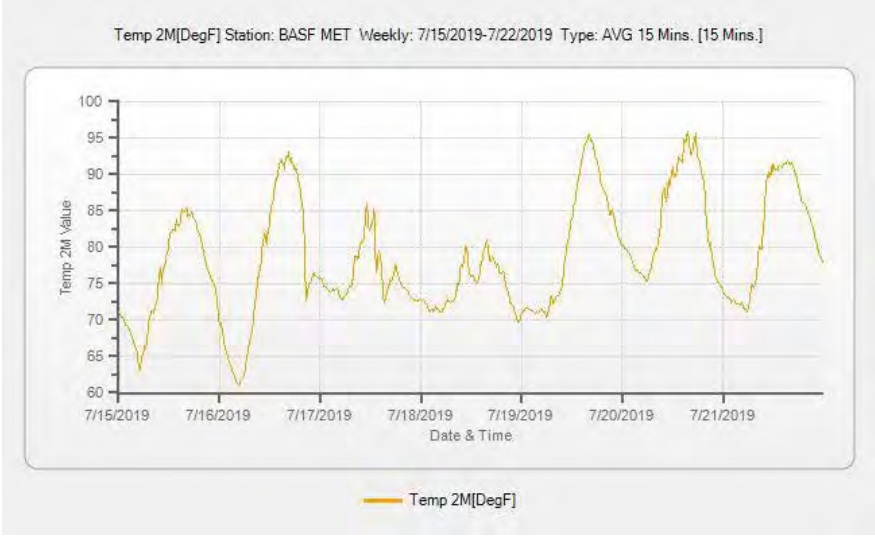
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

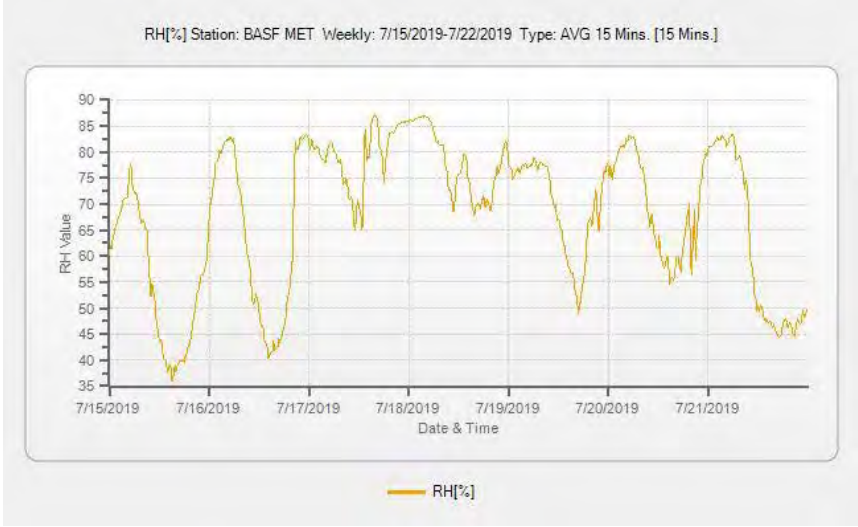


Figure 2: Site Map (7/15/19 – 7/19/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/22/19 – 7/28/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the PM_{10} concentrations remained below the Action Level. However, there was one TVOC concentration measured greater than the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on November 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

During the operational week, there were several TVOC measurements greater than the Action Level at the 75% carbon bed depth. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date TVOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 7/22/19	0.1	28.5	0.1	27.5	3.9	31.3	0.6	46.5	0.9	26.2	0.4	26.3	NA	NA	NA	NA
Tue 7/23/19	0.3	19.8	0.0	22.1	1.6	21.6	0.1	28.2	0.4	45.6	1.7	19.7	NA	NA	NA	NA
Wed 7/24/19	0.2	47.5	0.3	48.9	3.8	33.2	0.3	43.2	1.7	32.4	0.5	29.7	NA	NA	NA	NA
Thu 7/25/19	0.2	38.4	1.8	38.0	5.6	30.6	0.6	44.4	0.6	36.2	0.4	46.3	0.0	26	0	No
Fri 7/26/19	1.2	67.9	1.1	65.3	1.1	66.5	0.9	92.4	0.8	82.4	3.4	58.0	0.1	42	0	No
Sat 7/27/19	0.9	48.0	0.8	40.0	1.1	54.9	0.8	72.2	1.1	68.0	0.7	50.6	NA	NA	NA	NA
Sun 7/28/19	0.1	40.2	0.4	31.0	0.2	41.9	0.4	42.0	0.0	38.4	0.1	33.6	NA	NA	NA	NA
Weekly Summ4ary																
Weekly Maximum	1.2	67.9	1.8	65.3	5.6	66.5	0.9	92.4	1.7	82.4	3.4	58.0	--	--	--	--
Weekly Average	0.0	23.8	0.1	19.5	0.1	23.6	0.1	24.9	0.1	18.2	0.2	18.8	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	Thu 7/25/19	3:00PM	PAM-3	WNW 5.4 mph	5.6	0.0	5.6	The elevated TVOC concentration was caused by fumes escaping from the temporary fabric structure. Mike Evans was contacted and the eastern-facing vents were closed, effectively reducing TVOC concentrations below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 7/26/19			
Analyte	**Units**	**PAM-1**	**PAM-5**
AROCLOR-1016	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1221	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1232	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1242	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1248	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1254	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1260	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1262	µg/m^3	*< 0.043*	*< 0.043*
AROCLOR-1268	µg/m^3	*< 0.043*	*< 0.043*
Total PCBs Aroclor	µg/m^3	< 0.387	< 0.387

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Fenceline PCB samples were only collected at one upwind and one downwind station on 7/26/19.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.26	3.55	3.53	3.59	3.44	3.43

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Wed 7/24/19	ppm	<1.0	NA[1]	0.361	NA[1]	0.788	0.226	3.375	0.736	7.240
Fri 7/26/19	ppm	<1.0	5.067	3.567	4.911	4.718	4.307	9.552	2.974	2.595

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 7/24/19	--	--	3.153	NA[1]	0.000	NA[1]	0.019	0.036	0.306	0.176	2.616
Fri 7/26/19	--	--	10.481	4.487	0.569	1.012	0.571	0.861	1.168	0.958	0.855
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.325	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 7/24/19	--	--	0.0138	NA[1]	0.0008	NA[1]	0.0009	0.0030	0.0019	0.0040	0.0031
Fri 7/26/19	--	--	0.2348	0.0070	0.0063	0.0148	0.0665	0.0435	0.0347	0.0557	0.0064
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0677	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
Weekly Summary											
Wed 7/24/19	--	--	0.026	--	0.026	--	--	--		--	--
Project-to-Date Summary											
Project-to-Date Average	lb/hr	<0.7	0.288	--	--	--	--	--	--	--	--

Definitions:

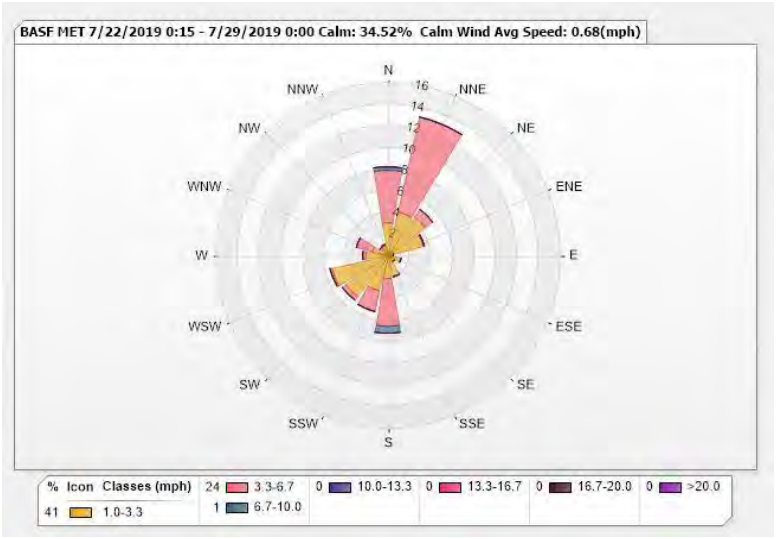
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

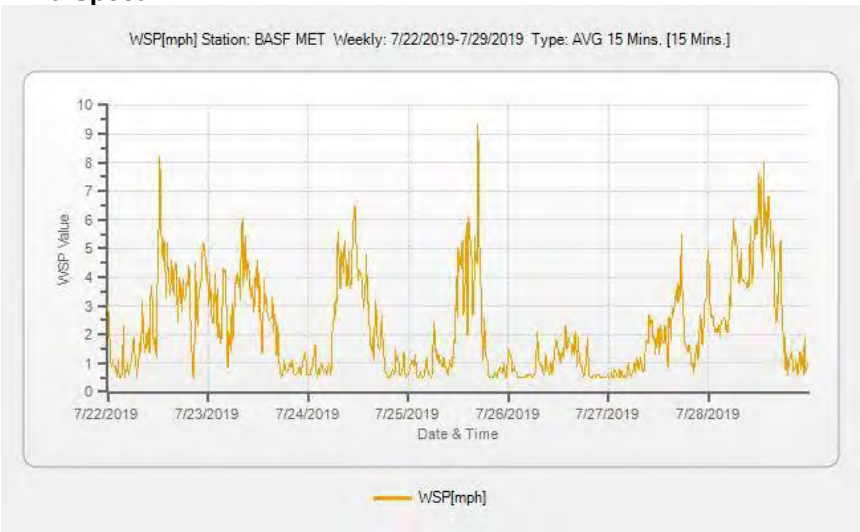
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

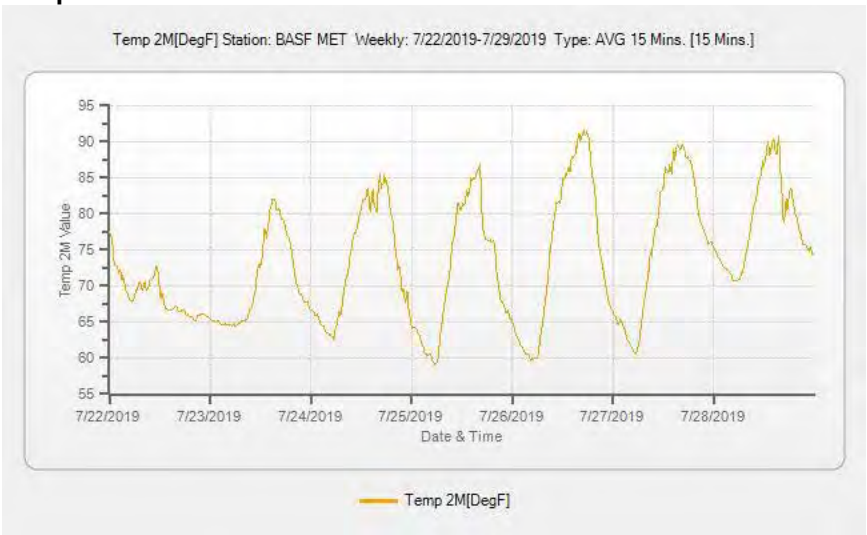
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

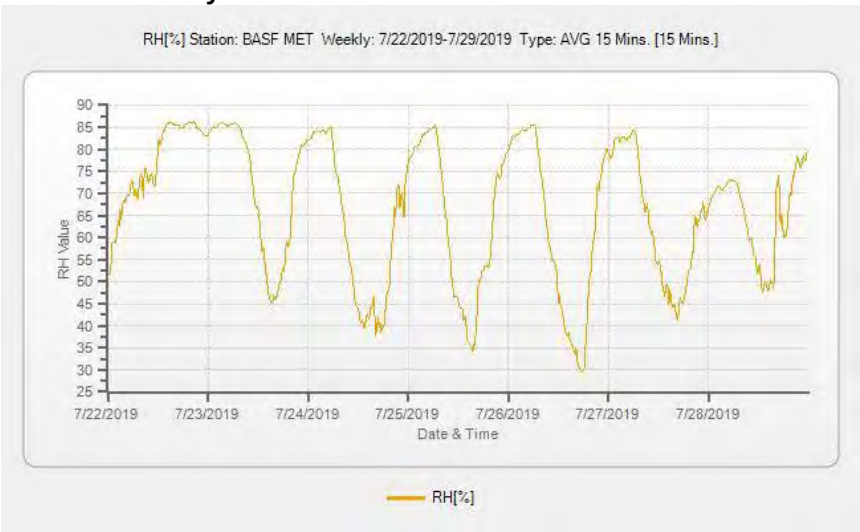


Figure 2: Site Map (7/22/19 – 7/28/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/29/19 – 8/4/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the PM_{10} concentrations remained below the Action Level. There was however, one TVOC concentration measured above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on November 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date TVOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Maximum Instantaneous Hand-held Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 7/29/19	0.4	52.1	0.5	41.4	0.5	55.2	0.4	58.7	1.4	24.0	0.3	74.8	NA	NA	NA	NA
Tue 7/30/19	0.0	61.0	0.0	54.1	0.2	59.1	0.1	78.6	1.8	56.7	0.1	91.5	NA	NA	NA	NA
Wed 7/31/19	0.0	55.5	0.1	52.6	0.4	53.3	0.3	69.6	0.1	51.6	0.0	52.6	NA	NA	NA	NA
Thu 8/1/19	0.1	33.9	0.1	30.2	0.7	25.4	2.0	32.8	0.7	31.6	0.6	26.0	NA	NA	NA	NA
Fri 8/2/19	0.0	48.3	0.4	27.9	0.6	29.9	1.1	33.8	0.6	32.7	0.2	36.4	NA	NA	NA	NA
Sat 8/3/19	0.0	32.7	0.4	27.3	0.6	33.0	0.3	34.8	0.3	24.8	0.0	28.7	NA	NA	NA	NA
Sun 8/4/19	0.0	31.6	0.0	26.9	0.1	31.0	0.0	34.3	0.0	37.6	0.0	27.5	NA	NA	NA	NA
Weekly Summ4ary																
Weekly Maximum	0.4	61.0	0.5	54.1	0.7	59.1	2.0	78.6	1.8	56.7	0.6	91.5	--	--	--	--
Weekly Average	0.0	26.6	0.0	21.5	0.0	25.6	0.0	29.9	0.1	20.7	0.0	23.7	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 7/31/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1232	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*	0.016[1]
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.041*
Total PCBs Aroclor	µg/m^3	< 0.378	< 0.378	0.344

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.16	3.55	3.53	3.59	3.34	3.29

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 7/29/19	ppm	<1.0	10.250	0.000	5.957	3.430	0.000	32.830	0.819	0.796
Tue 7/30/19	ppm	<1.0	14.240	4.379	8.729	7.741	5.003	22.450	NA[1]	3.603
Wed 7/31/19	ppm	<1.0	2.240	0.674	NA[1]	0.634	2.235	NA[1]	NA[1]	0.572
Thu 8/1/19	ppm	<1.0	0.540	0.236	0.484	0.517	0.530	0.941	NA[1]	0.260
Fri 8/2/19	ppm	<1.0	0.289	0.110	0.142	0.195	0.176	0.423	0.141	0.162

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 7/29/19	--	--	12.303	9.088	0.000	0.000	0.000	0.000	2.277	0.376	0.562
Tue 7/30/19	--	--	16.330	7.253	1.049	1.715	1.037	1.743	1.791	0.000	1.743
Wed 7/31/19	--	--	1.644	0.695	0.114	NA[1]	0.077	0.548	NA[1]	NA[1]	0.211
Thu 8/1/19	--	--	0.631	0.138	0.016	0.061	0.033	0.180	0.109	0.000	0.096
Fri 8/2/19	--	--	0.234	0.094	0.003	0.013	0.004	0.029	0.029	0.031	0.032
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.661	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 7/29/19	--	--	0.2477	0.0665	0.0012	0.1070	0.0154	0.0056	0.0019	0.0415	0.0085
Tue 7/30/19	--	--	0.0161	0.0058	0.0023	0.0017	0.0006	0.0018	0.0007	0.0000	0.0031
Wed 7/31/19	--	--	0.0156	0.0021	0.0023	NA[1]	0.0012	0.0032	NA[1]	NA[1]	0.0068
Thu 8/1/19	--	--	0.0276	0.0097	0.0036	0.0034	0.0011	0.0051	0.0011	0.0000	0.0038
Fri 8/2/19	--	--	0.0118	0.0010	0.0012	0.0010	0.0005	0.0008	0.0002	0.0033	0.0038
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0674	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Tue 7/30/19	--	--	0.031	0.031	--	--	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.284	--	--	--	--	--	--	--	--

Definitions:

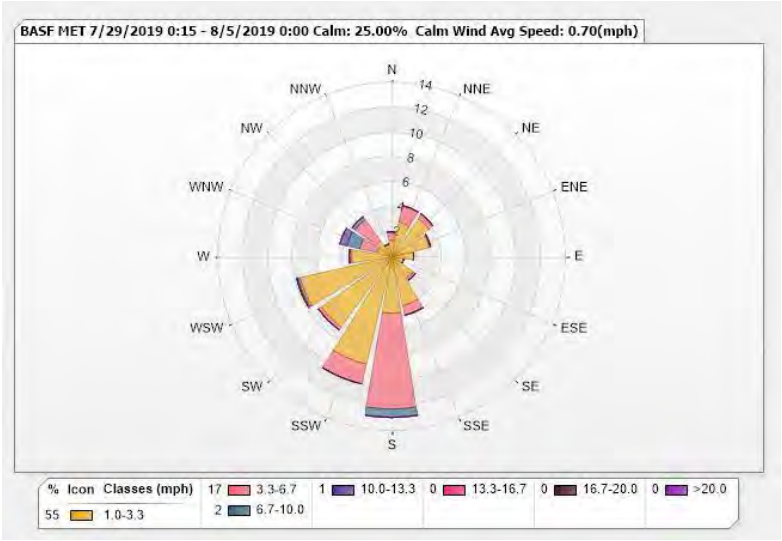
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

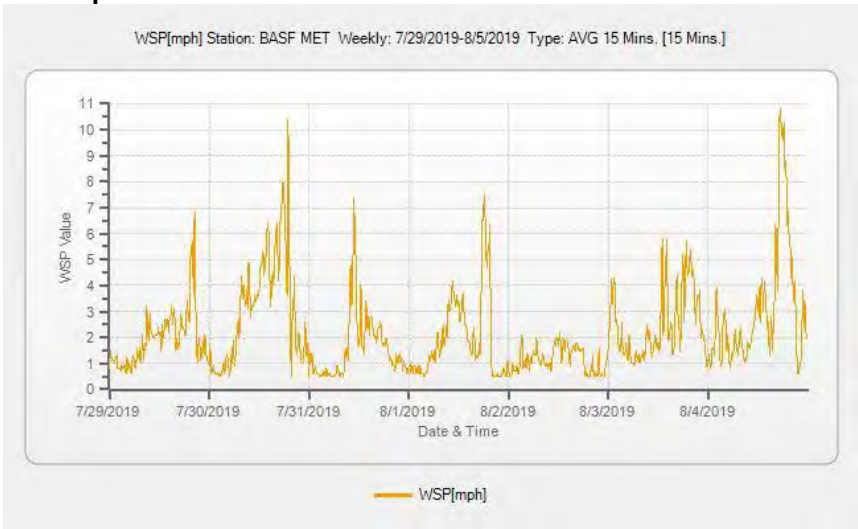
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

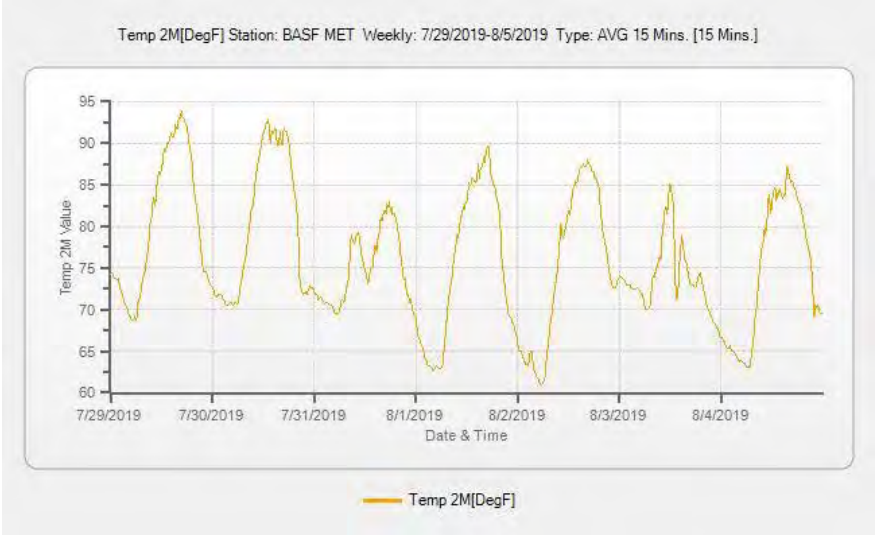
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

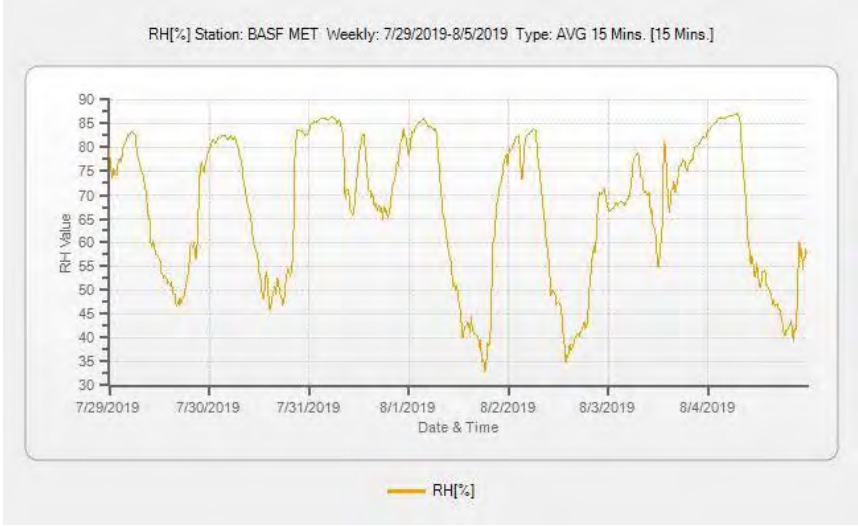


Figure 2: Site Map (7/29/19 – 8/4/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/5/19 – 8/11/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC concentrations remained below the Action Level. However, there were two PM_{10} concentrations measured above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on November 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date TVOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 8/5/19	0.2	22.9	1.0	179.2	0.8	20.8	1.8	39.5	1.1	26.3[1]	0.7	31.9	0.1	35	1	No
Tue 8/6/19	0.3	60.5	0.8	60.2	1.3	72.4	2.1	149.5	1.3	45.8[2]	1.2	52.6	NA	NA	NA	NA
Wed 8/7/19	0.0	43.1	0.0	37.3	0.0	51.2	0.0	58.1	0.2	38.4[2]	0.0	55.2	NA	NA	NA	NA
Thu 8/8/19	0.0	34.8	0.0	30.1	0.2	44.5	0.2	70.0	0.1	27.3[2]	0.1	298.9	NA	NA	NA	NA
Fri 8/9/19	0.2	17.1	0.2	32.5	0.6	28.6	0.2	26.5	0.3	16.9[2]	0.2	26.7	NA	NA	NA	NA
Sat 8/10/19	0.1	22.3	0.0	8.0	0.1	12.0	0.1	13.6	0.2	ND[2]	0.1	14.0	NA	NA	NA	NA
Sun 8/11/19	0.1	23.9	0.0	12.9	0.0	16.9	0.0	20.5	0.1	ND[2]	0.1	18.3	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.3	60.5	1.0	179.2	1.3	72.4	2.1	149.5	1.3	45.8	1.2	298.9	--	--	--	--
Weekly Average	0.0	16.9	0.0	14.6	0.0	18.5	0.0	19.1	0.0	10.8	0.0	19.1	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] TVOC/PM_{10} data was missing between 8/4/19 (8:00PM) and 8/5/19 (10:45AM) due to a battery failure.

[2] TVOC/PM_{10} data was invalid between 8/6/19 (5:15PM) and 8/7/19 (10:15AM), 8/7/19 (10:00PM) and 8/8/19 (8:15AM), and between 8/9/19 (10:30PM) and 8/11/19 (11:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	Mon 8/5/19	10:30AM 10:45PM	PAM-2	W 1.3 mph W 1.2 mph	179.2 158.4	19.2 18.4	160.0 140.0	The elevated PM_{10} concentrations were caused by the contractor filling the north end silo with concrete.
PM_{10}	Thu 8/8/19	2:45PM 3:00PM 3:15PM	PAM-6	NNE 8.8 mph ESE 3.7 mph S 4.4 mph	235.8 260.9 298.9	5.2 8.2 15.0	230.6 252.7 283.9	The elevated PM_{10} concentrations were caused by dust from binder material being used while transferring sediment from the barge to the trucks.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 8/6/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1221	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1232	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1242	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1248	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1254	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1260	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1262	µg/m^3	ND[1]	ND[1]	ND[1]
AROCLOR-1268	µg/m^3	ND[1]	ND[1]	ND[1]
Total PCBs Aroclor	µg/m^3	ND[1]	ND[1]	ND[1]

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB sampling began on November 19, 2018.
- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Each sampler was blown over by high winds near the end of the day and the sample media were broken as a result. TAS samplers were also damaged by water from the event, and fenceline PCB samples were unable to be collected during the reporting period.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.16	3.55	3.53	3.59	3.34	3.29

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 8/5/19	ppm	<1.0	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
Tue 8/6/19	ppm	<1.0	1.298	0.412	NA[2]	1.355	0.730	2.394	0.690	0.650
Wed 8/7/19	ppm	<1.0	0.398	0.008	NA[2]	0.046	0.029	1.172	0.146	0.105
Thu 8/8/19	ppm	<1.0	0.447	0.047	NA[2]	0.012	0.106	1.848	0.179	NA[2]
Fri 8/9/19	ppm	<1.0	0.763	0.292	NA[2]	0.552	0.480	2.007	0.297	0.200

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] Data was invalid due to instrument calibration issues.
[2] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/5/19	--	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
Tue 8/6/19	--	--	0.716	0.110	0.029	NA[2]	0.039	0.171	0.138	0.088	0.142
Wed 8/7/19	--	--	0.553	0.164	0.000	NA[2]	0.004	0.234	0.108	0.017	0.026
Thu 8/8/19	--	--	0.562	0.187	0.000	NA[2]	0.000	0.205	0.170	NA[2]	NA[2]
Fri 8/9/19	--	--	0.865	0.236	0.049	NA[2]	0.062	0.114	0.249	0.093	0.064
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.610	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] Data was invalid due to instrument calibration issues.
[2] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/5/19	--	--	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
Tue 8/6/19	--	--	0.1561	0.0611	0.0290	NA[2]	0.0059	0.0316	0.0048	0.0088	0.0149
Wed 8/7/19	--	--	0.0171	0.0023	0.0017	NA[2]	0.0003	0.0016	0.0015	0.0031	0.0067
Thu 8/8/19	--	--	0.0107	0.0037	0.0015	NA[2]	0.0005	0.0027	0.0023	NA[2]	NA[2]
Fri 8/9/19	--	--	0.0749	0.0018	0.0062	NA[2]	0.0013	0.0619	0.0004	0.0009	0.0025
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0673	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] Data was invalid due to instrument calibration issues.
[2] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Tue 8/6/19	--	--	0.031	--	--	--	--	--	--	0.031	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.281	--	--	--	--	--	--	--	--

Definitions:

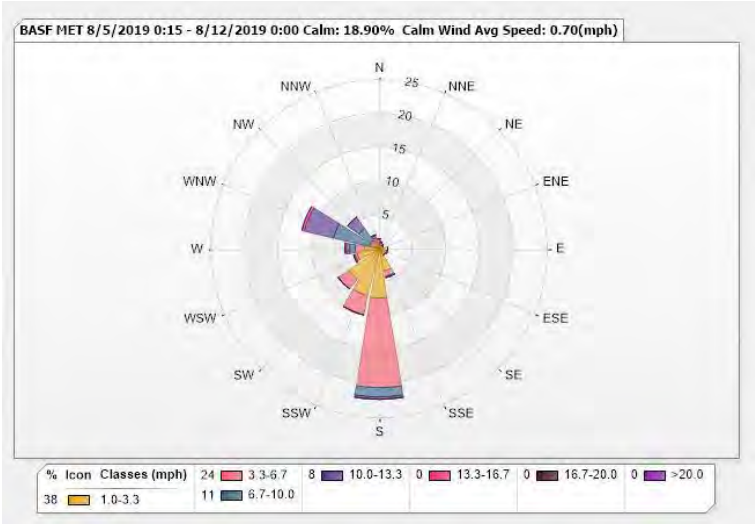
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

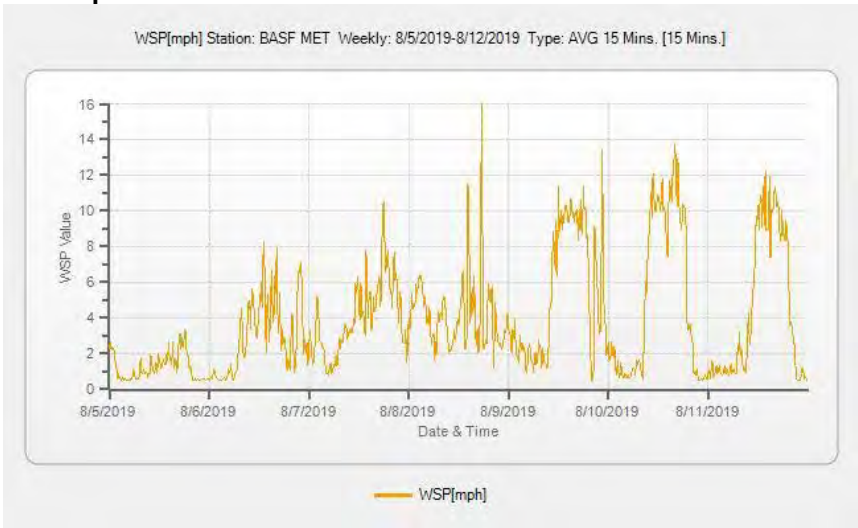
- Air handling system PCB sampling began on November 29, 2018.
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

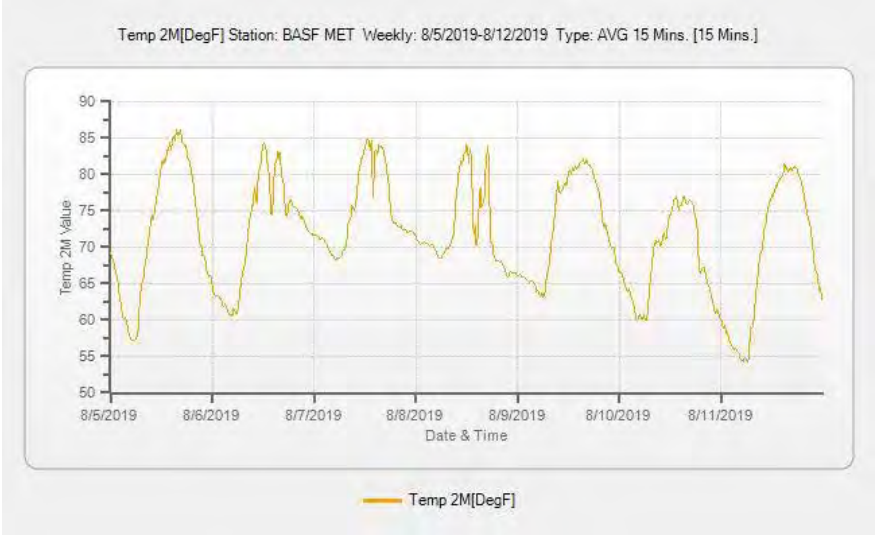
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

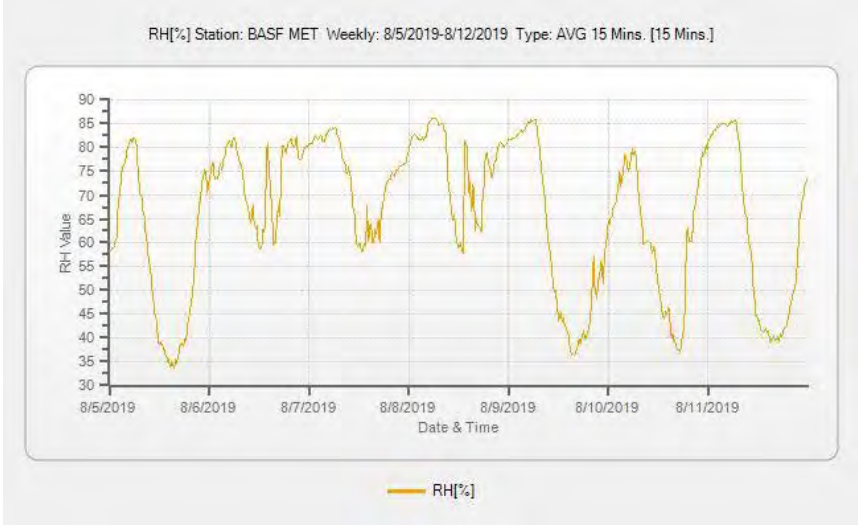


Figure 2: Site Map (8/5/19 – 8/11/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/12/19 – 8/18/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 8/12/19	0.1	29.5	0.1	25.3	0.1	56.4	0.2	52.4	0.1	32.8[1]	0.1	60.2	0.0	28	0	No
Tue 8/13/19	0.1	37.5	0.2	27.3	0.1	45.8	0.1	55.5	0.1	38.0	0.1	87.3	0.0	41	0	No
Wed 8/14/19	0.1	27.4	0.2	24.7	0.2	31.7	0.3	39.4	0.2	26.6	0.1	29.1	0.0	21	0	No
Thu 8/15/19	0.1	21.4	0.1	20.3	0.2	23.2	0.1	29.0	0.1	22.0	0.1	38.9	0.0	25	0	No
Fri 8/16/19	0.1	52.3	0.1	25.0	0.1	36.0	0.1	67.1	0.1	46.3	0.1	45.9	0.0	41	0	No
Sat 8/17/19	0.0	35.1	0.1	25.1	0.0	35.7	0.0	35.9	0.0	27.0	0.0	33.8[2]	NA	NA	NA	NA
Sun 8/18/19	0.0	26.0	0.0	21.8	0.0	29.8	0.0	35.2	0.0	26.5	0.0[3]	ND[2]	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	52.3	0.2	27.3	0.2	56.4	0.3	67.1	0.2	46.3	0.1	87.3	--	--	--	--
Weekly Average	0.0	16.8	0.0	12.4	0.0	20.6	0.0	21.6	0.0	16.0	0.0	22.7	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data invalid between 8/12/19 (12:00AM) and 8/12/19 (7:15AM) due to a battery failure.

[2] PM_{10} data invalid between 8/17/19 (3:45AM) and 8/18/19 (11:45PM) due to a battery failure.

[3] TVOC data missing between 8/18/19 (5:30AM) and 8/18/19 (12:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 8/16/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	**0.043**	**0.035**[1]	**0.140**
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	0.379	0.371	0.476

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.07	3.55	3.53	3.59	3.24	3.18

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 8/12/19	ppm	<1.0	0.698	0.411	NA[1]	0.367	0.412	1.108	0.191	NA[1]
Tue 8/13/19	ppm	<1.0	0.381	0.045	NA[1]	0.153	0.187	1.432	0.208	NA[1]
Wed 8/14/19	ppm	<1.0	0.750	0.704	NA[1]	0.626	1.075	1.092	0.443	NA[1]
Thu 8/15/19	ppm	<1.0	0.645	0.608	NA[1]	0.595	0.641	NA[1]	0.282	0.193
Fri 8/16/19	ppm	<1.0	0.370	0.081	NA[1]	0.272	0.362	NA[1]	0.304	0.312

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/12/19	--	--	0.751	0.353	0.061	NA[1]	0.039	0.099	0.135	0.065	NA[1]
Tue 8/13/19	--	--	0.508	0.149	0.000	NA[1]	0.000	0.186	0.158	0.015	NA[1]
Wed 8/14/19	--	--	1.092	0.235	0.190	NA[1]	0.080	0.251	0.216	0.121	NA[1]
Thu 8/15/19	--	--	0.835	0.299	0.156	NA[1]	0.076	0.143	NA[1]	0.068	0.093
Fri 8/16/19	--	--	0.493	0.111	0.005	NA[1]	0.006	0.208	NA[1]	0.094	0.069
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.556	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/12/19	--	--	0.1575	0.0076	0.1100	NA[1]	0.0011	0.0051	0.0017	0.0319	NA[1]
Tue 8/13/19	--	--	0.0162	0.0040	0.0030	NA[1]	0.0006	0.0024	0.0021	0.0042	NA[1]
Wed 8/14/19	--	--	0.3931	0.0012	0.3908	NA[1]	0.0001	0.0006	0.0001	0.0003	NA[1]
Thu 8/15/19	--	--	0.2089	0.0116	0.0041	NA[1]	0.0563	0.0517	NA[1]	0.0647	0.0204
Fri 8/16/19	--	--	0.0553	0.0305	0.0049	NA[1]	0.0009	0.0051	NA[1]	0.0124	0.0014
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0733	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

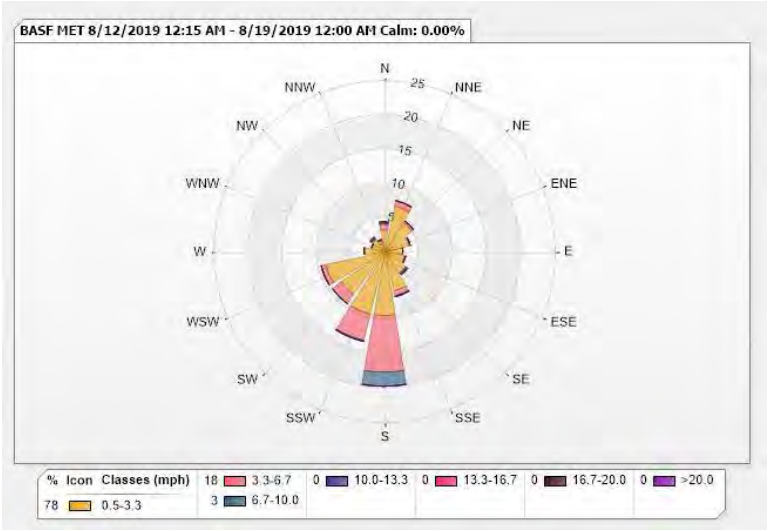
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Thu 8/15/19	--	--	0.033	--	--	--	--	--	--	0.033	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.277	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

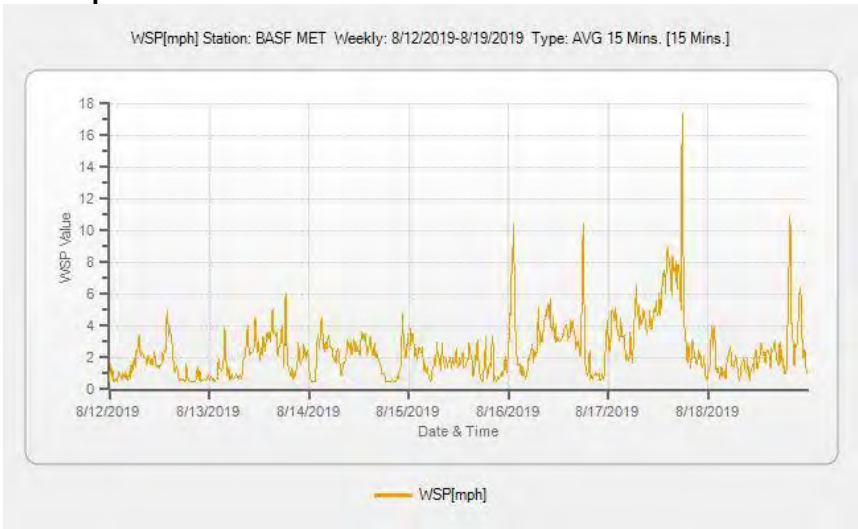
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

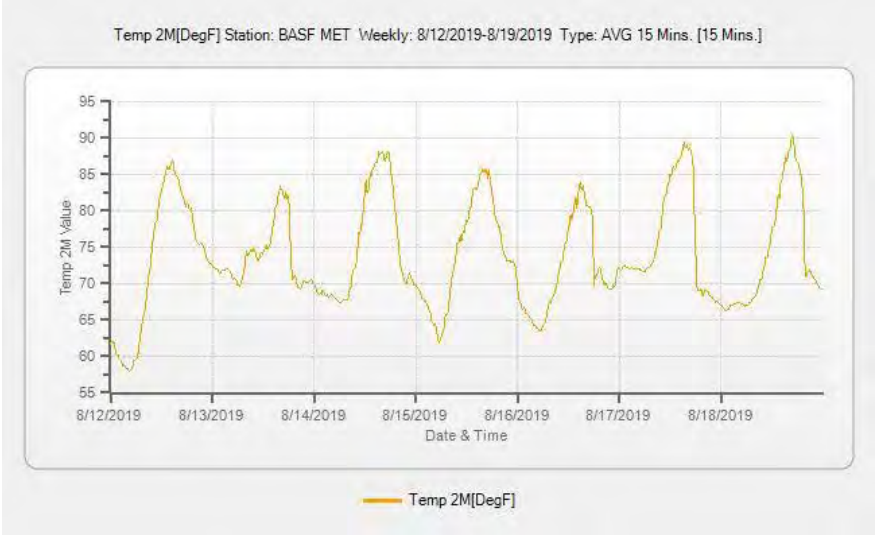
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

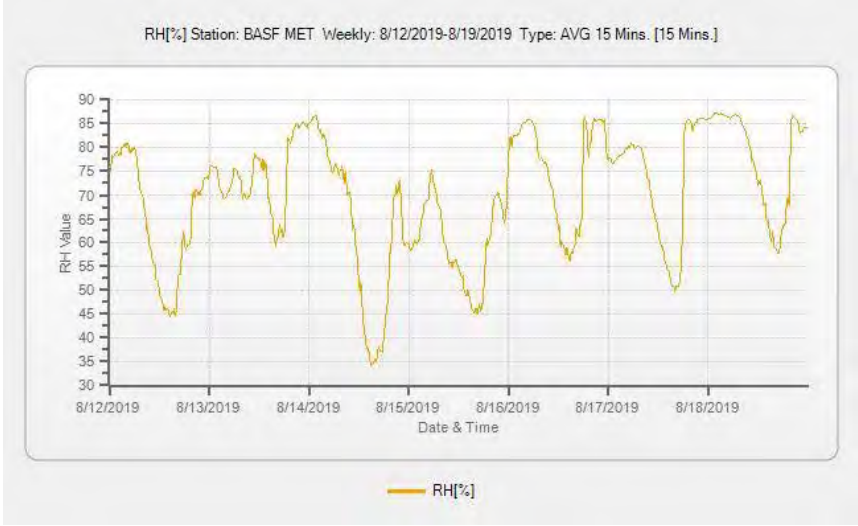


Figure 2: Site Map (8/12/19 – 8/18/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/19/19 – 8/25/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC concentrations remained below the Action Level. However, there were several PM_{10} concentrations measured greater than the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation remained below the Action Level at 75% bed depth with the exception of one AHS location. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 8/19/19	0.1	27.9	0.2	22.9	0.1	27.8	0.1	34.8	0.1	29.4	0.0[1]	53.0[2]	0.0	20	0	No
Tue 8/20/19	0.1	34.8[3]	0.2	90.0	0.2	131.9	0.2	101.9	0.2	25.9[4]	0.1	80.1	0.0	34	0	No
Wed 8/21/19	0.1	62.6	0.1	41.7	0.1	49.0	0.1	49.3	0.0	43.8[4]	0.0	74.8	0.0	33	0	No
Thu 8/22/19	0.1	28.7	0.1	143.0	0.5	38.4	0.1	51.3	0.1	17.3[4]	0.0	49.6	NA	NA	NA	NA
Fri 8/23/19	0.2	267.4	0.1	247.8	0.1	196.9	0.1	193.4	0.1	183.8[4]	0.1	191.9	0.0	20	0	No
Sat 8/24/19	0.0	14.9	0.0	8.5	0.0	13.0	0.0	21.3	0.0	ND[4]	0.0	19.0	NA	NA	NA	NA
Sun 8/25/19	0.0	12.5	0.0	10.0	0.0	14.1	0.0	25.5	0.0	ND[4]	0.0	18.0	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.2	267.4	0.2	247.8	0.5	196.9	0.2	193.4	0.2	183.8	0.1	191.9	--	--	--	--
Weekly Average	0.0	13.0	0.0	11.0	0.0	16.1	0.0	20.4	0.0	13.5	0.0	18.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] TVOC data missing between 8/19/19 (12:00AM) and 8/19/19 (7:00AM) due to a battery failure.

[2] PM_{10} data invalid between 8/19/19 (12:00AM) and 8/19/19 (7:45AM) due to a battery failure.

[3] PM_{10} data invalid between 8/20/19 (2:15AM) and 8/20/19 (7:45AM) due to a battery failure.

[4] PM_{10} data invalid between 8/20/19 (3:45AM) and 8/20/19 (8:00AM), 8/21/19 (2:15AM) and 8/21/19 (8:00AM), 8/21/19 (5:15PM) and 8/22/19 (8:30AM), and 8/23/19 (7:45PM) and 8/25/19 (11:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	Fri 8/23/19	1:45AM	PAM-2	NNE 1.8 mph	150.4	123.8	26.6	The elevated PM_{10} concentrations were due to an unknown source. There was no site activity being conducted at the time, and the elevated concentrations were reduced below Action Level after background subtraction.
			PAM-3		156.2		32.4	
			PAM-4		193.4		69.6	
			PAM-5		183.8		60.0	
			PAM-6		165.8		42.0	
PM_{10}	Fri 8/23/19	2:00AM	PAM-4	N 1.9 mph	164.0	112.7	51.3	
			PAM-5		150.1		37.4	
			PAM-6		170.1		57.4	
PM_{10}	Fri 8/23/19	2:15AM	PAM-1	NNW 2.2 mph	267.4	147.0	120.4	
			PAM-2		247.8		100.8	
			PAM-3		196.9		49.9	
			PAM-5		156.3		9.3	
			PAM-6		191.9		44.9	

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 8/22/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	**0.017**[1]	**0.027**[1]	**0.076**
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	0.353	0.363	0.412

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.07	3.55	3.53	3.49	3.15	3.07

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 8/19/19	ppm	<1.0	0.953	0.147	NA[1]	0.520	0.328	NA[1]	1.170	0.681
Tue 8/20/19	ppm	<1.0	0.562	0.148	NA[1]	0.349	0.723	NA[1]	0.765	0.580
Wed 8/21/19	ppm	<1.0	0.628	0.000	NA[1]	0.019	0.062	NA[1]	0.190	0.122
Thu 8/22/19	ppm	<1.0	0.857	0.000	NA[1]	0.000	0.294	NA[1]	1.406	0.816
Fri 8/23/19	ppm	<1.0	0.481	0.125	NA[1]	0.399	0.269	0.301	0.304	0.200

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/19/19	--	--	1.019	0.198	0.000	NA[1]	0.017	0.394	NA[1]	0.206	0.203
Tue 8/20/19	--	--	0.908	0.232	0.023	NA[1]	0.037	0.217	NA[1]	0.229	0.170
Wed 8/21/19	--	--	0.483	0.171	0.000	NA[1]	0.000	0.312	NA[1]	0.000	0.000
Thu 8/22/19	--	--	0.842	0.205	0.000	NA[1]	0.000	0.400	NA[1]	0.098	0.140
Fri 8/23/19	--	--	0.343	0.121	0.000	NA[1]	0.019	0.121	0.011	0.041	0.030
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.508	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/19/19	--	--	0.0880	0.0219	0.0084	NA[1]	0.0010	0.0073	NA[1]	0.0415	0.0079
Tue 8/20/19	--	--	0.6652	0.1448	0.0032	NA[1]	0.0007	0.0631	NA[1]	0.4517	0.0017
Wed 8/21/19	--	--	0.0062	0.0015	0.0007	NA[1]	0.0001	0.0006	NA[1]	0.0022	0.0011
Thu 8/22/19	--	--	0.0145	0.0010	0.0007	NA[1]	0.0001	0.0007	NA[1]	0.0047	0.0071
Fri 8/23/19	--	--	0.0143	0.0008	0.0017	NA[1]	0.0003	0.0030	0.0008	0.0030	0.0048
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0781	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

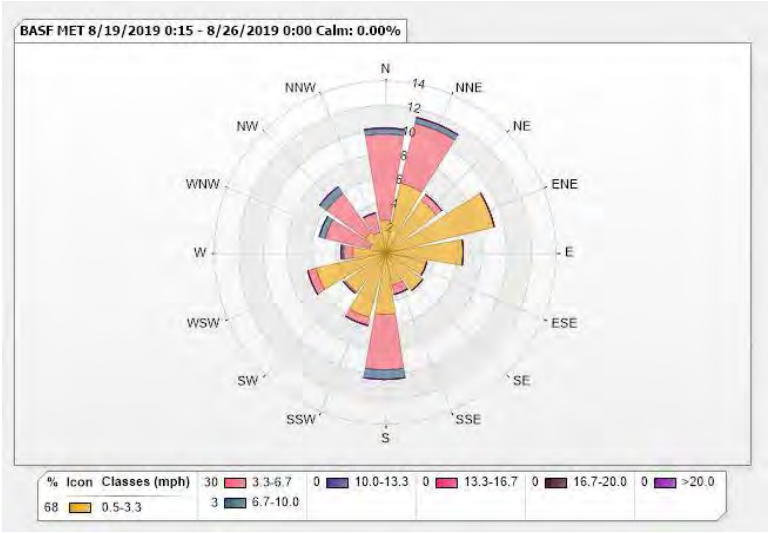
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 8/21/19	--	--	0.011	--	--	--	0.011	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.273	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

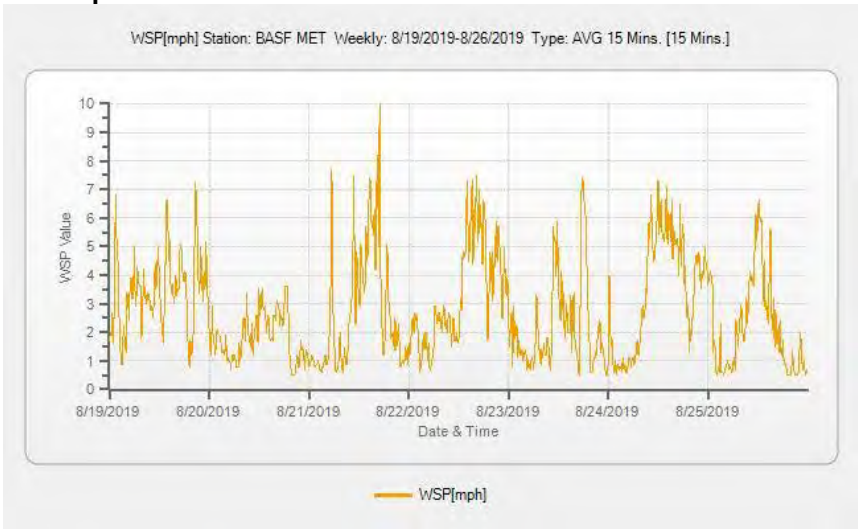
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

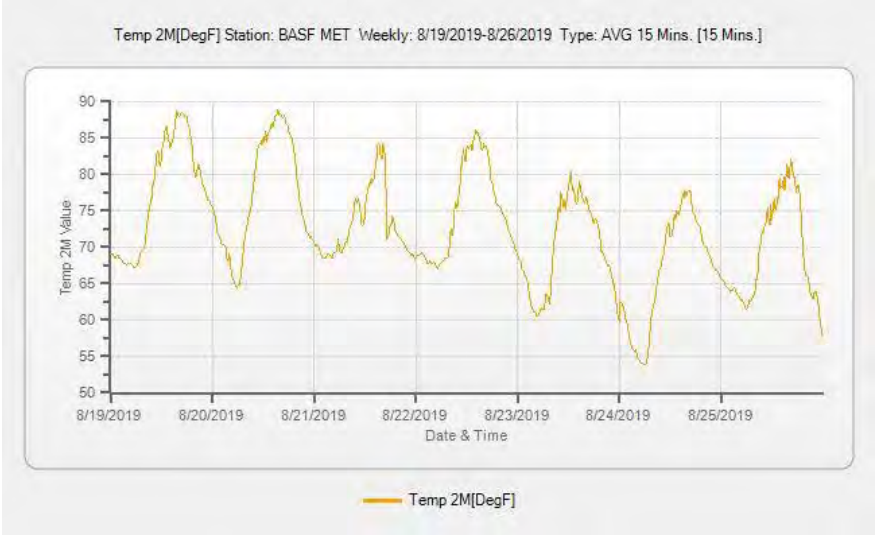
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

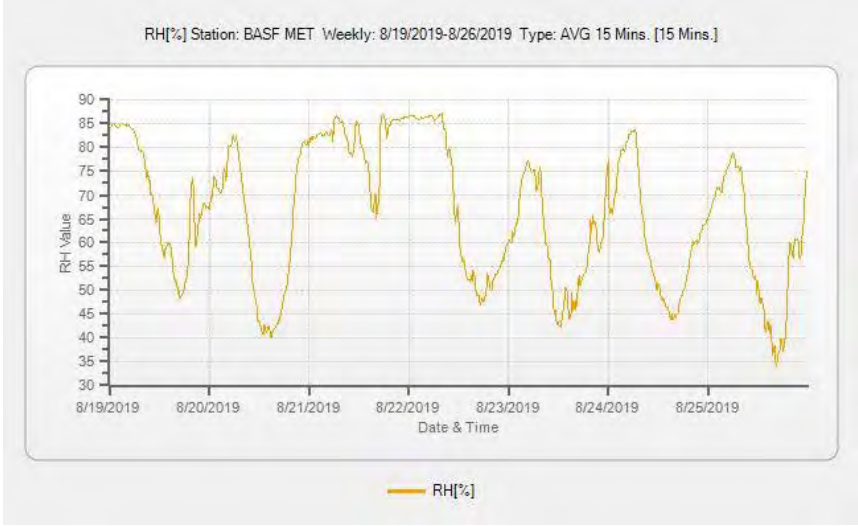


Figure 2: Site Map (8/19/19 – 8/25/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/26/19 – 9/1/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

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More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC concentrations remained below the Action Level. However, there was one PM_{10} concentration measured greater than the Action Level. The results of the real-time air monitoring are presented in the following tables:

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Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation remained below the Action Level at 75% bed depth at each of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date TVOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 8/26/19	0.1	34.8	0.1	17.6	0.1	60.9	0.3	239.2	0.1	34.0[1]	0.1	58.6	0.0	28	0	No
Tue 8/27/19	0.1	29.8	0.1	24.7	0.1	33.9	0.1	49.2	0.2	52.8	0.1	99.2	0.0	62	0	No
Wed 8/28/19	0.0	30.4	0.0	24.3	0.1	37.9	0.1	71.6	0.0	37.4	0.1	41.2	NA	NA	NA	NA
Thu 8/29/19	0.1	16.2	0.2	101.6	0.2	34.9	0.3	19.8	0.1	21.2[1]	0.1	42.5	0.0	73	0	No
Fri 8/30/19	0.1	35.0	0.1	27.3	0.1	33.7	0.1	48.7	0.1	19.8[1]	0.1	43.3	NA	NA	NA	NA
Sat 8/31/19	0.0	16.7	0.0	10.4	0.1	13.9	0.1	20.8[2]	0.2	8.4[1]	0.0	14.4	NA	NA	NA	NA
Sun 9/1/19	0.0	19.1	0.0	19.4	0.0	17.4[3]	0.1	ND[2]	0.1	ND[1]	0.0	21.7	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.1	35.0	0.2	101.6	0.2	60.9	0.3	239.2	0.2	52.8	0.1	99.2	--	--	--	--
Weekly Average	0.0	13.1	0.0	8.4	0.0	13.3	0.0	21.8	0.0	8.2	0.0	15.1	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data invalid between 8/26/19 (12:00AM) and 8/26/19 (7:30AM), 8/29/19 (4:15PM) and 8/30/19 (7:45AM), and 8/31/19 (7:30PM) and 9/1/19 (11:45PM) due to a battery failure.

[2] PM_{10} data invalid between 8/31/19 (5:00AM) and 9/1/19 (11:45PM) due to a battery failure.

[3] PM_{10} data invalid between 9/1/19 (1:45AM) and 9/1/19 (7:15AM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	Mon 8/26/19	3:15PM	PAM-4	WNW 3.6 mph	239.2	5.2	234.0	Elevated PM_{10} concentration caused by truck traffic during loadout activities.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 8/29/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1221	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1232	µg/m^3	*< 0.041*	**0.020**[1]	**0.013**[1]
AROCLOR-1242	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1248	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1254	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1260	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1262	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
AROCLOR-1268	µg/m^3	*< 0.041*	*< 0.041*	*< 0.041*
Total PCBs Aroclor	µg/m^3	< 0.369	0.348	0.341

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.07	3.55	3.53	3.40	3.06	2.96

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- Fenceline PCB sampling restarted the week of July 15, 2019 with the start of Phase 2 remedial activities.
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 8/26/19	ppm	<1.0	0.516	0.409	NA[1]	0.309	0.801	0.216	0.378	0.312
Tue 8/27/19	ppm	<1.0	0.299	0.120	NA[1]	NA[1]	0.256	0.278	0.421	0.414
Wed 8/28/19	ppm	<1.0	0.306	0.000	NA[1]	NA[1]	0.189	0.321	0.378	0.186
Thu 8/29/19	ppm	<1.0	0.382	0.030	NA[1]	NA[1]	0.116	0.350	0.476	0.177
Fri 8/30/19	ppm	<1.0	0.388	0.034	NA[1]	NA[1]	0.087	0.256	0.282	0.112

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/26/19	--	--	0.691	0.200	0.022	NA[1]	0.031	0.191	0.027	0.121	0.100
Tue 8/27/19	--	--	0.569	0.085	0.007	NA[1]	NA[1]	0.184	0.037	0.130	0.126
Wed 8/28/19	--	--	0.282	0.119	0.000	NA[1]	NA[1]	0.108	0.012	0.021	0.023
Thu 8/29/19	--	--	0.451	0.105	0.000	NA[1]	NA[1]	0.262	0.014	0.021	0.049
Fri 8/30/19	--	--	0.507	0.103	0.010	NA[1]	NA[1]	0.361	0.015	0.011	0.008
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.453	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 8/26/19	--	--	0.0020	0.0007	0.0004	NA[1]	0.0001	0.0004	0.0001	0.0001	0.0002
Tue 8/27/19	--	--	0.0167	0.0038	0.0021	NA[1]	NA[1]	0.0033	0.0006	0.0016	0.0053
Wed 8/28/19	--	--	0.0044	0.0005	0.0003	NA[1]	NA[1]	0.0012	0.0002	0.0018	0.0005
Thu 8/29/19	--	--	0.0062	0.0013	0.0016	NA[1]	NA[1]	0.0022	0.0003	0.0003	0.0006
Fri 8/30/19	--	--	0.0026	0.0006	0.0000	NA[1]	NA[1]	0.0004	0.0001	0.0003	0.0006
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0742	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

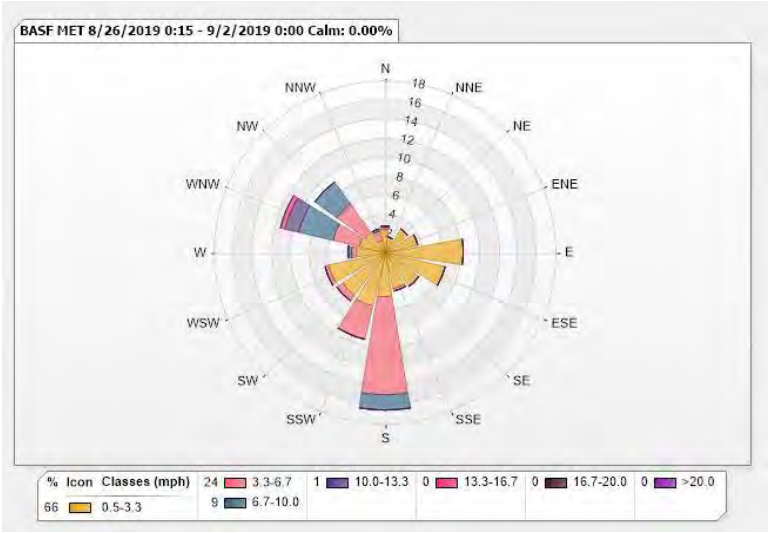
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Tue 8/27/19	--	--	0.032	--	--	--	--	--	--	--	0.032
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.270	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

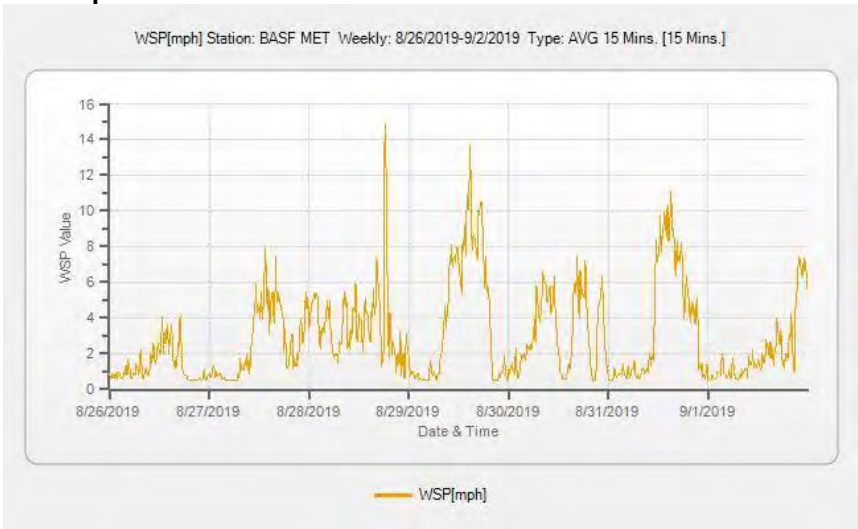
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

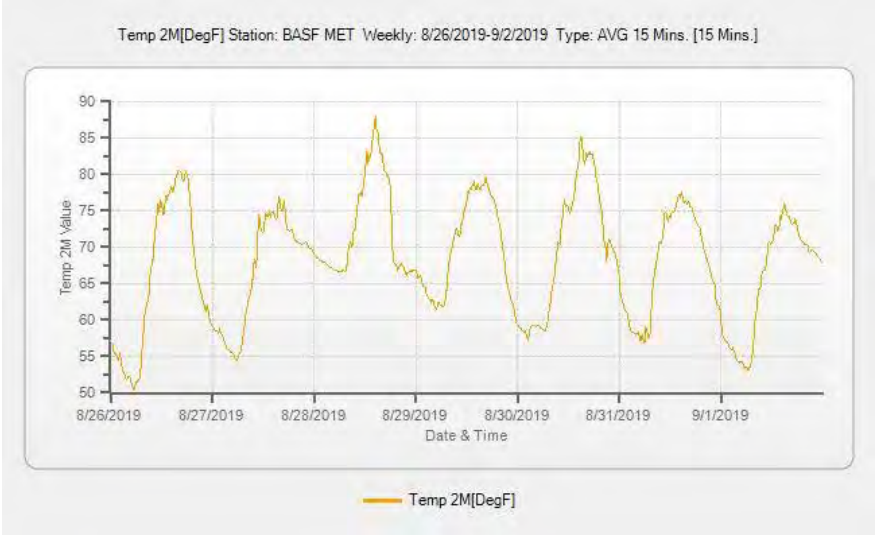
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

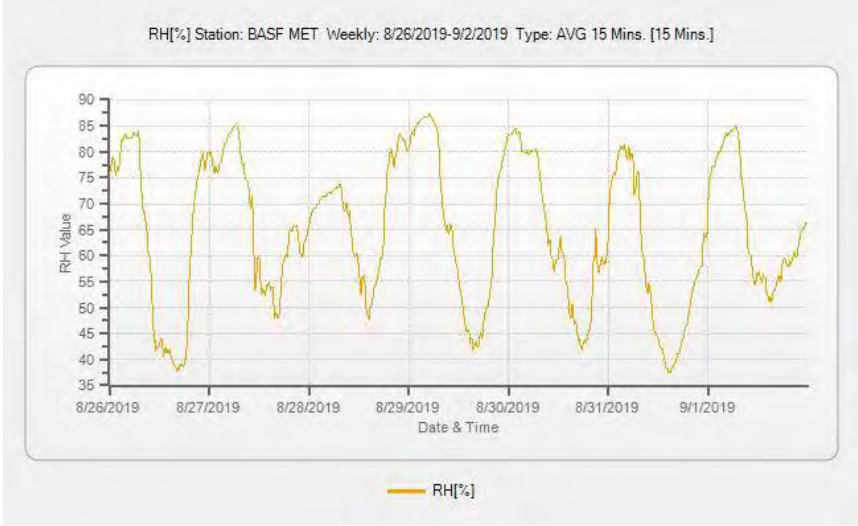


Figure 2: Site Map (8/26/19 – 9/1/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/2/19 – 9/8/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the PM_{10} concentrations remained below the Action Level. There was one TVOC concentration measured greater than the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at one of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 9/2/19	0.0	11.0[1]	0.0	5.4[1]	0.0	9.1[1]	0.0	ND[2]	0.0	ND[3]	0.0	10.6[5]	NA	NA	NA	NA
Tue 9/3/19	0.2	48.3[1]	0.1	50.3[1]	0.7	57.9[1]	0.2	64.9[2]	0.2	37.5[3]	0.1[4]	40.8[5]	NA	NA	NA	NA
Wed 9/4/19	0.1	51.7	0.2	28.9	0.1	37.8	0.1	57.4	0.1	42.4	0.0	90.7	0.0	26	0	No
Thu 9/5/19	0.1	14.9	0.1	14.6	0.5	11.3	0.1	25.8	0.1	5.8[6]	0.1	32.4	0.0	16	0	No
Fri 9/6/19	0.1	21.3	0.1	29.2	7.8	28.9	0.1	29.7	0.1	13.8[6]	0.1	24.8	NA	NA	NA	NA
Sat 9/7/19	0.0	10.7[7]	0.0	23.7	0.0	31.0	0.1	22.7	0.0	17.1	0.0	14.7	NA	NA	NA	NA
Sun 9/8/19	0.1	ND[7]	0.1	16.5	0.1	16.5	0.1[8]	18.9[9]	0.1	9.2[9]	0.0	16.3	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.2	51.7	0.2	50.3	7.8	57.9	0.2	64.9	0.2	42.4	0.1	90.7	--	--	--	--
Weekly Average	0.0	14.1	0.0	8.2	0.0	11.4	0.0	21.6	0.0	6.6	0.0	12.2	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data was invalid between 9/2/19 (1:00PM) and 9/3/19 (7:30AM) due to a battery failure.

[2] PM_{10} data was invalid between 9/2/19 (12:00AM) and 9/3/19 (7:30AM) due to a battery failure.

[3] PM_{10} data was invalid between 9/2/19 (12:00AM) and 9/3/19 (8:00AM) due to a battery failure.

[4] TVOC data was missing between 9/3/19 (1:45AM) and 9/2/19 (7:45AM) due to a battery failure.

[5] PM_{10} data was invalid between 9/2/19 (12:15PM) and 9/3/19 (8:15AM) due to a battery failure.

[6] PM_{10} data was invalid between 9/5/19 (9:45PM) and 9/6/19 (8:15AM) due to a battery failure.

[7] PM_{10} data was invalid between 9/7/19 (2:00AM) and 9/8/19 (11:45PM) due to a battery failure.

[8] TVOC data was missing between 9/8/19 (5:15AM) and 9/8/19 (10:15AM) due to a battery failure.

[9] PM_{10} data was invalid between 9/8/19 (3:00AM) and 9/8/19 (11:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	Fri 9/6/19	9:30AM	PAM-3	ENE 1.7 mph	7.8	0.0	7.8	The elevated TVOC concentration was caused by gasoline fumes from the nearby fueling station.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 9/6/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1242	µg/m^3	*< 0.042*	**0.010**[1]	**0.017**[1]
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	*< 0.378*	0.346	0.345

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	3.07	3.55	3.53	3.32	2.98	2.86

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 9/2/19	ppm	<1.0	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 9/3/19	ppm	<1.0	0.376	0.086	NA[2]	NA[2]	0.333	1.179	0.522	0.136
Wed 9/4/19	ppm	<1.0	0.444	0.037	NA[2]	NA[2]	0.188	0.999	0.438	0.062
Thu 9/5/19	ppm	<1.0	0.644	0.505	NA[2]	NA[2]	0.493	0.795	0.395	0.274
Fri 9/6/19	ppm	<1.0	0.831	0.385	0.350	NA[2]	0.307	0.975	0.763	0.220

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] Site closed for Labor Day (no site activities).
[2] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/2/19	--	--	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 9/3/19	--	--	0.506	0.080	0.012	NA[2]	NA[2]	0.284	0.039	0.056	0.035
Wed 9/4/19	--	--	0.453	0.100	0.006	NA[2]	NA[2]	0.287	0.028	0.029	0.003
Thu 9/5/19	--	--	0.408	0.119	0.023	NA[2]	NA[2]	0.119	0.036	0.025	0.086
Fri 9/6/19	--	--	0.667	0.089	0.030	0.057	NA[2]	0.361	0.038	0.044	0.048
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.414	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] Site closed for Labor Day (no site activities).
[2] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/2/19	--	--	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 9/3/19	--	--	0.0065	0.0015	0.0013	NA[2]	NA[2]	0.0012	0.0004	0.0008	0.0013
Wed 9/4/19	--	--	0.0044	0.0009	0.0007	NA[2]	NA[2]	0.0009	0.0002	0.0006	0.0011
Thu 9/5/19	--	--	0.0121	0.0042	0.0034	NA[2]	NA[2]	0.0021	0.0007	0.0004	0.0013
Fri 9/6/19	--	--	0.0278	0.0074	0.0047	0.0045	NA[2]	0.0040	0.0018	0.0021	0.0033
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0717	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] Site closed for Labor Day (no site activities).
[2] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

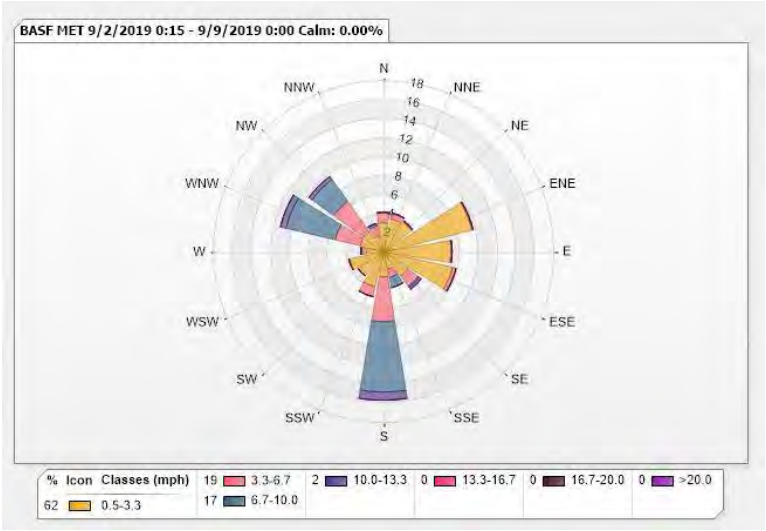
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 9/4/19	--	--	0.022	--	--	--	--	0.022	--		--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.267	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

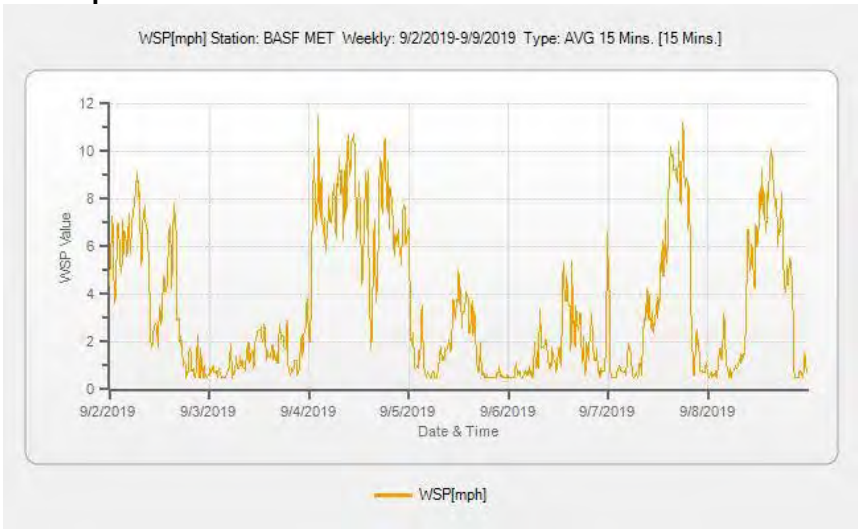
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

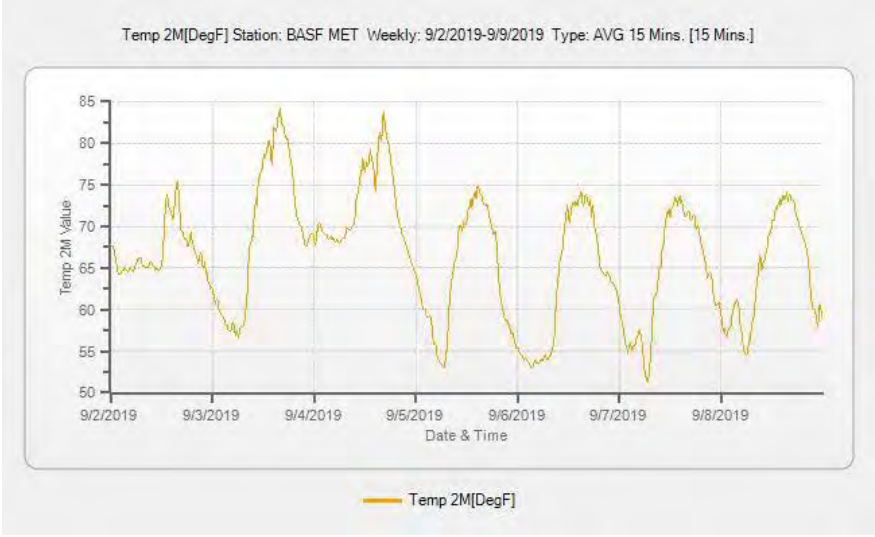
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

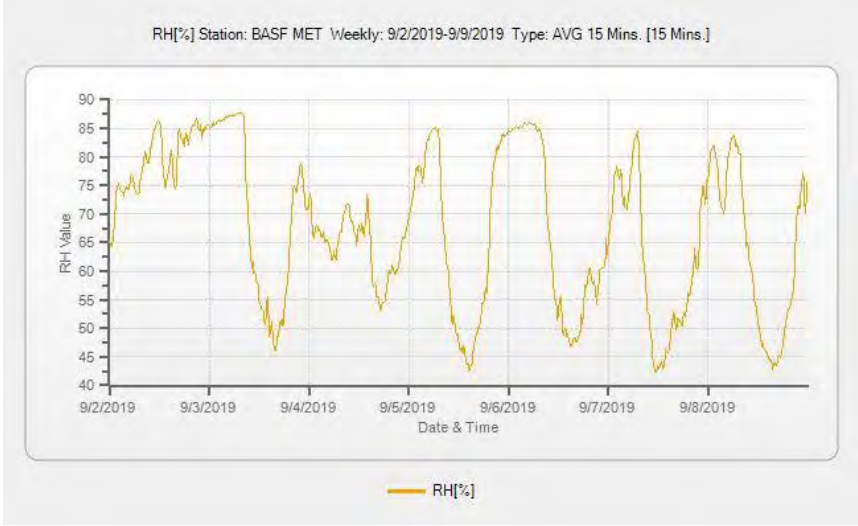


Figure 2: Site Map (9/2/19 – 9/8/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/9/19 – 9/15/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC concentrations remained below the Action Level. There was one PM_{10} concentration measured greater than the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at two of the AHS locations. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 9/9/19	0.0	10.4	0.1	20.4	0.3	230.7	0.1	37.8	0.1	21.3	0.1	25.5	0.0	46	0	No
Tue 9/10/19	0.1	42.5	0.1	24.5	0.3	103.6	0.1	53.9	0.2	26.0	0.1	63.4	NA	NA	NA	NA
Wed 9/11/19	0.1	45.0	0.1	42.8	0.2	43.4	0.1	42.2	0.1	44.8	0.1	43.5	NA	NA	NA	NA
Thu 9/12/19	0.3	39.2	0.2	41.4	0.2	42.0	0.1	41.0	0.1	39.0	0.2	39.4	0.0	21	0	No
Fri 9/13/19	0.2	38.3	0.1	42.7	0.1	93.7	0.1	122.5	0.2	59.5	0.1	61.8	0.0	26	0	No
Sat 9/14/19	0.1	12.3	0.1	20.2	0.0	24.8	0.0	58.3	0.0	29.7	0.0	39.4	NA	NA	NA	NA
Sun 9/15/19	0.0	16.1	0.3	21.1	0.1	18.6	0.0	25.7	0.1	20.1	0.1	20.8	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.3	45.0	0.3	42.8	0.3	230.7	0.1	122.5	0.2	59.5	0.2	63.4	--	--	--	--
Weekly Average	0.0	12.8	0.0	12.6	0.0	14.8	0.0	20.0	0.0	10.8	0.0	15.7	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	9/9/19	4:00AM	PAM-3	0.8 mph ESE	230.7	8.2	222.5	The elevated PM_{10} concentration was due to an unknown source. There was no site activity at this time.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 9/11/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	**0.046**	**0.023**[1]	**0.110**
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	0.382	0.359	0.446

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.98	3.55	3.53	3.32	2.90	2.78

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 9/9/19	ppm	<1.0	0.423	0.193	0.304	NA[1]	0.283	2.234	1.103	0.340
Tue 9/10/19	ppm	<1.0	0.416	0.075	0.178	NA[1]	0.161	0.960	0.518	0.219
Wed 9/11/19	ppm	<1.0	0.756	0.079	0.607	NA[1]	0.307	1.255	0.497	NA[1]
Thu 9/12/19	ppm	<1.0	0.429	0.057	0.071	NA[1]	0.032	0.464	0.204	NA[1]
Fri 9/13/19	ppm	<1.0	0.638	0.642	0.587	NA[1]	0.669	0.804	0.692	0.438

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/9/19	--	--	1.004	0.089	0.012	0.038	NA[1]	0.089	0.368	0.252	0.156
Tue 9/10/19	--	--	0.372	0.096	0.000	0.003	NA[1]	0.165	0.021	0.084	0.003
Wed 9/11/19	--	--	0.634	0.122	0.008	0.036	NA[1]	0.280	0.028	0.160	NA[1]
Thu 9/12/19	--	--	0.246	0.114	0.012	0.006	NA[1]	0.112	0.002	0.000	NA[1]
Fri 9/13/19	--	--	0.512	0.103	0.029	0.055	NA[1]	0.184	0.049	0.056	0.036
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.372	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/9/19	--	--	0.0073	0.0015	0.0011	0.0008	NA[1]	0.0018	0.0004	0.0007	0.0010
Tue 9/10/19	--	--	0.0130	0.0031	0.0008	0.0006	NA[1]	0.0007	0.0014	0.0027	0.0037
Wed 9/11/19	--	--	0.0209	0.0068	0.0059	0.0026	NA[1]	0.0032	0.0009	0.0015	NA[1]
Thu 9/12/19	--	--	0.0095	0.0046	0.0024	0.0014	NA[1]	0.0005	0.0002	0.0004	NA[1]
Fri 9/13/19	--	--	0.0163	0.0015	0.0020	0.0016	NA[1]	0.0021	0.0006	0.0014	0.0071
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0688	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

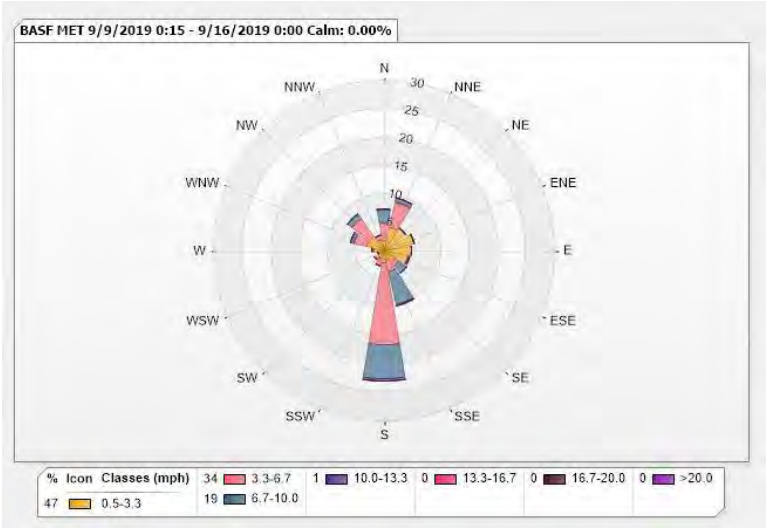
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Tue 9/10/19	--	--	0.030	--	--	0.030	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.263	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

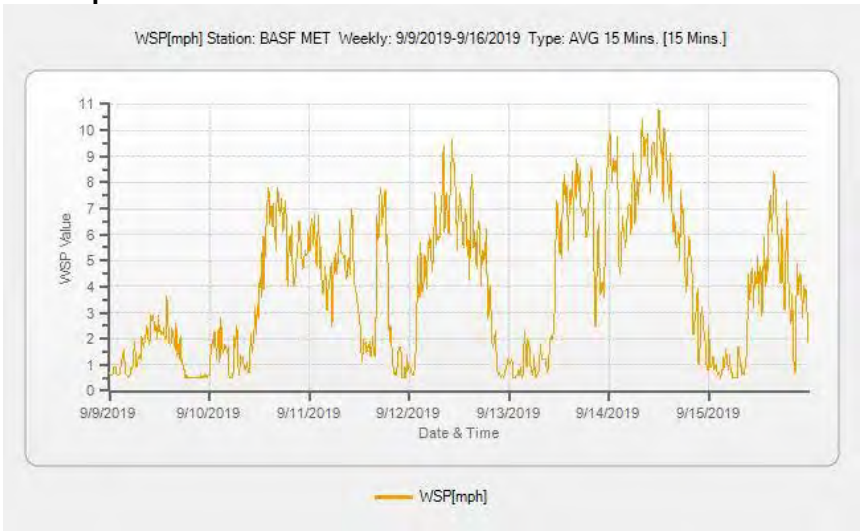
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

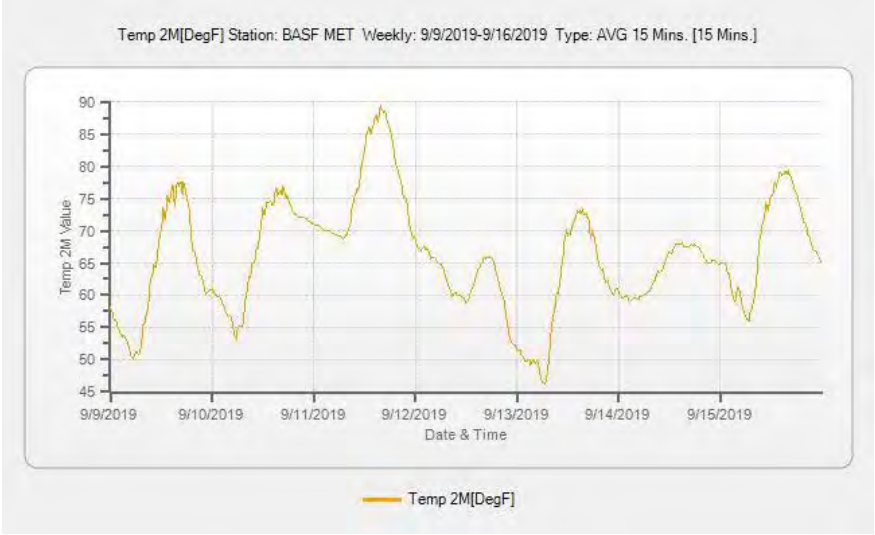
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

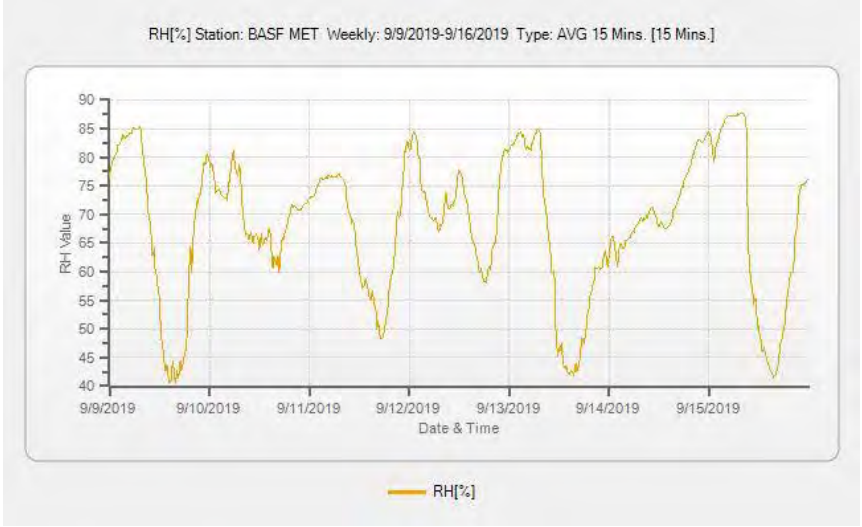


Figure 2: Site Map (9/9/19 – 9/15/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/16/19 – 9/22/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at AHS-6. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 9/16/19	0.1	13.9	0.1	16.3	0.3	15.8	0.1	61.2	0.1	16.0	0.1	15.6	0.0	21	0	No
Tue 9/17/19	0.2	18.7	0.1	27.1	0.1	19.5	0.1	51.4	0.2	12.3	0.1	17.1	0.0	26	0	No
Wed 9/18/19	0.1	27.9	0.2	23.7	0.1	19.0[1]	0.1	48.6	0.4	20.9	0.1	17.5	0.0	11	0	No
Thu 9/19/19	0.3	43.8	0.3	59.5	0.2	61.9[1]	0.2	47.6	0.3	52.4	0.2	51.2	NA	NA	NA	NA
Fri 9/20/19	0.3	31.3	0.2	35.6	0.2	35.7	0.2	53.9	0.2	51.1	0.1	49.4	NA	NA	NA	NA
Sat 9/21/19	0.1	36.3	0.1	46.4	0.2	40.1	0.2	68.6	0.2	33.4	0.1	40.0	NA	NA	NA	NA
Sun 9/22/19	0.1	35.9	0.1	36.9	0.1	44.9	0.2	52.1	0.1	44.7	0.1	42.4	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.3	43.8	0.3	59.5	0.3	61.9	0.2	68.6	0.4	52.4	0.2	51.2	--	--	--	--
Weekly Average	0.0	13.1	0.0	12.9	0.0	16.7	0.0	21.6	0.0	10.6	0.0	15.7	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data invalid between 9/18/19 (8:45AM) and 9/19/19 (7:45AM) due to instrument malfunction.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 9/20/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1232	µg/m^3	**0.014**[1]	**0.021**[1]	**0.018**[1]
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.041*	*< 0.041*
Total PCBs Aroclor	µg/m^3	0.350	0.349	0.346

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.90	3.55	3.53	3.32	2.83	2.69

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 9/16/19	ppm	<1.0	0.470	0.361	0.673	NA[1]	0.838	1.355	0.566	0.479
Tue 9/17/19	ppm	<1.0	0.351	0.099	0.410	NA[1]	0.801	0.540	0.374	0.380
Wed 9/18/19	ppm	<1.0	0.260	0.181	0.271	NA[1]	0.641	0.535	0.252	0.201
Thu 9/19/19	ppm	<1.0	0.404	0.339	0.774	NA[1]	0.828	1.121	0.549	0.435
Fri 9/20/19	ppm	<1.0	0.893	0.549	0.253	NA[1]	0.939	0.613	0.173	0.145

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/16/19	--	--	0.589	0.133	0.042	0.069	NA[1]	0.117	0.051	0.086	0.091
Tue 9/17/19	--	--	0.474	0.109	0.021	0.027	NA[1]	0.215	0.042	0.055	0.043
Wed 9/18/19	--	--	0.286	0.069	0.015	0.032	NA[1]	0.086	0.027	0.041	0.015
Thu 9/19/19	--	--	0.686	0.086	0.030	0.082	NA[1]	0.215	0.049	0.116	0.108
Fri 9/20/19	--	--	0.455	0.064	0.025	0.031	NA[1]	0.221	0.059	0.034	0.021
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.330	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/16/19	--	--	0.0139	0.0021	0.0013	0.0017	NA[1]	0.0021	0.0007	0.0021	0.0039
Tue 9/17/19	--	--	0.0055	0.0003	0.0003	0.0003	NA[1]	0.0003	0.0005	0.0010	0.0028
Wed 9/18/19	--	--	0.0037	0.0007	0.0005	0.0005	NA[1]	0.0005	0.0001	0.0002	0.0012
Thu 9/19/19	--	--	0.0397	0.0058	0.0046	0.0070	NA[1]	0.0065	0.0018	0.0045	0.0095
Fri 9/20/19	--	--	0.0058	0.0010	0.0022	0.0005	NA[1]	0.0007	0.0001	0.0004	0.0009
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0662	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

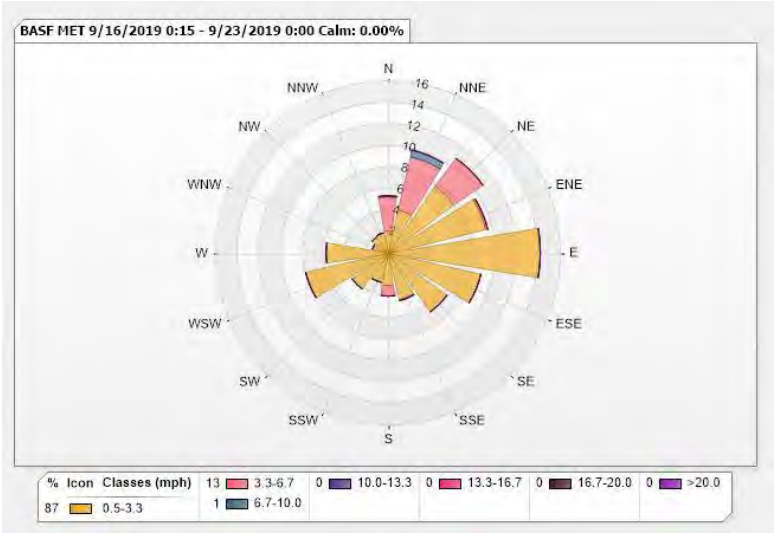
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Thu 9/19/19	--	--	0.032	--	--	0.032	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.260	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

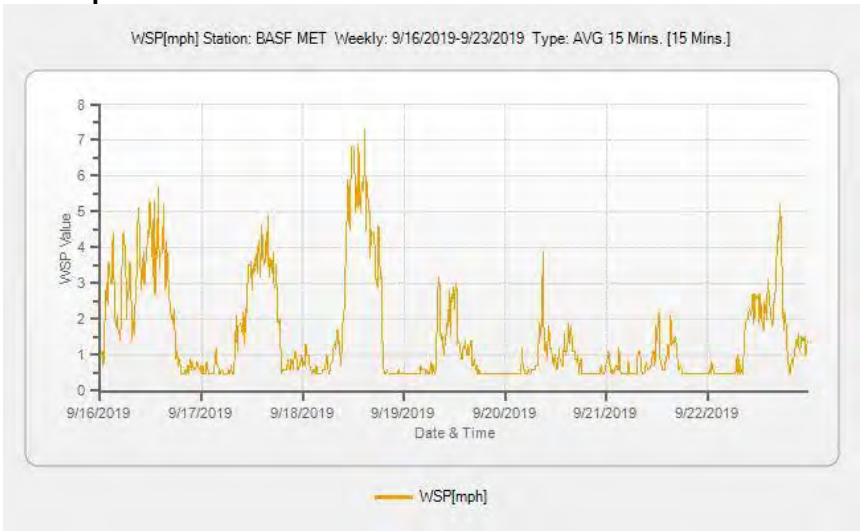
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

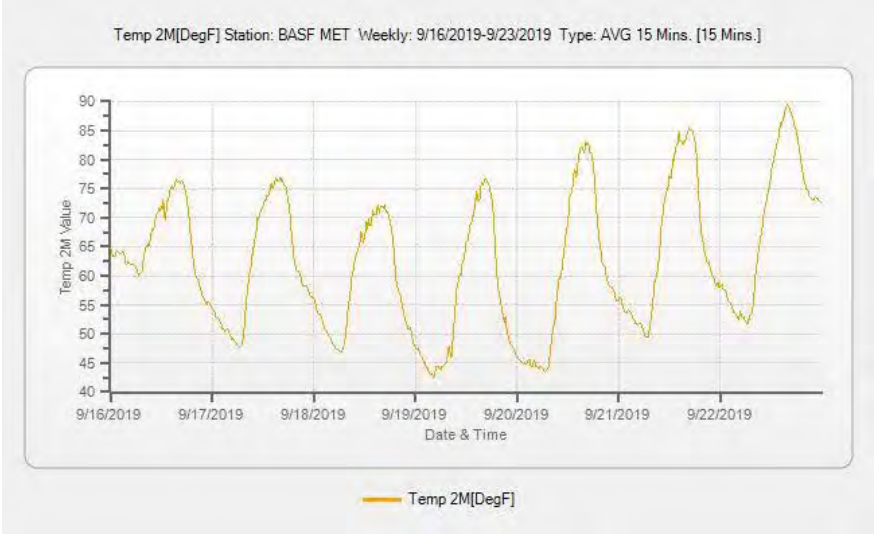
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

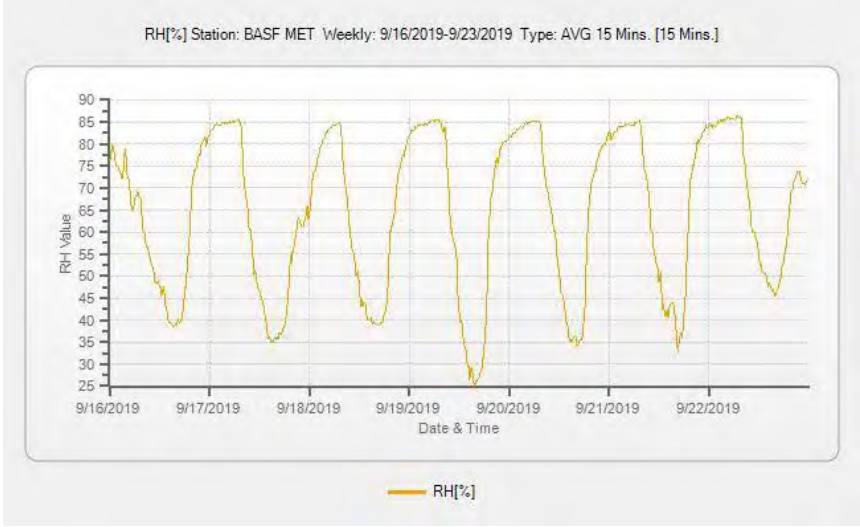


Figure 2: Site Map (9/16/19 – 9/22/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/23/19 – 9/29/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations. Based on this data, the need for operational maintenance of one or more of the AHS locations has been identified and a suitable approach is under review by the project team. The project-to-date PM_{10} and PCB emission rates remain below their respective target emission rates, while the project-to-date VOC emission rate is currently greater than the target emission rate.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 9/23/19	0.1	81.6	0.1	83.2	0.1	89.7	0.1	99.2	0.1	67.2	0.1	86.5	0.0	ND[1]	0	No
Tue 9/24/19	0.1	32.6	0.2	44.3	1.1	50.5	0.2	78.9	0.6	32.3	0.1	33.7	0.0	24	0	No
Wed 9/25/19	0.2	45.5	0.6	47.9	0.8	72.5	0.2	85.6	0.4	53.2	0.5	60.3[2]	NA	NA	NA	NA
Thu 9/26/19	0.5	43.9	0.1	40.4	0.2	49.9	0.1	65.2	0.5	34.3	0.1	48.2	NA	NA	NA	NA
Fri 9/27/19	0.2	32.9	0.2	55.2	0.3	46.8	0.1	35.2	0.2	32.6	0.1	33.6	NA	NA	NA	NA
Sat 9/28/19	0.1	50.9	0.1	41.1	0.1	38.4	0.2	44.5	0.1	34.2	0.1	42.5	NA	NA	NA	NA
Sun 9/29/19	0.0	21.5	0.0	14.6	0.0	19.8	0.0	23.6	0.0	12.0[3]	0.0	17.2	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.5	81.6	0.6	83.2	1.1	89.7	0.2	99.2	0.6	67.2	0.5	86.5	--	--	--	--
Weekly Average	0.0	16.6	0.0	14.0	0.0	17.8	0.0	20.3	0.0	11.2	0.0	17.3	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held PM_{10} data was not collected on this day.

[2] PM_{10} data was invalid between 9/25/19 (1:30AM) and 9/25/19 (7:15AM) due to a battery failure.

[3] PM_{10} data was invalid between 9/29/19 (1:00AM) and 9/29/19 (11:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 9/26/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1221	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1232	µg/m^3	0.020[1]	0.033[1]	0.036[1]
AROCLOR-1242	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1248	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1254	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1260	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1262	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
AROCLOR-1268	µg/m^3	*< 0.041*	*< 0.042*	*< 0.040*
Total PCBs Aroclor	µg/m^3	0.348	0.369	0.356

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.83	3.55	3.53	3.32	2.76	2.62

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 9/23/19	ppm	<1.0	0.293	0.008	1.301	NA[1]	0.257	1.050	0.958	0.185
Tue 9/24/19	ppm	<1.0	0.445	0.216	0.402	NA[1]	0.207	0.831	0.228	0.097
Wed 9/25/19	ppm	<1.0	0.471	0.280	0.800	NA[1]	0.405	0.944	0.696	1.179
Thu 9/26/19	ppm	<1.0	0.472	0.241	0.757	NA[1]	1.242	1.219	0.941	0.864
Fri 9/27/19	ppm	<1.0	0.472	0.245	2.074	NA[1]	0.821	1.902	1.131	0.969

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/23/19	--	--	0.746	0.104	0.000	0.229	NA[1]	0.213	0.036	0.137	0.027
Tue 9/24/19	--	--	0.402	0.069	0.018	0.077	NA[1]	0.192	0.021	0.025	0.000
Wed 9/25/19	--	--	0.797	0.091	0.016	0.110	NA[1]	0.272	0.055	0.142	0.112
Thu 9/26/19	--	--	0.855	0.084	0.030	0.122	NA[1]	0.453	0.038	0.072	0.056
Fri 9/27/19	--	--	1.117	0.090	0.052	0.311	NA[1]	0.350	0.071	0.177	0.066
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.306	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/23/19	--	--	0.0177	0.0013	0.0013	0.0030	NA[1]	0.0025	0.0013	0.0027	0.0057
Tue 9/24/19	--	--	0.0080	0.0016	0.0015	0.0013	NA[1]	0.0017	0.0003	0.0004	0.0012
Wed 9/25/19	--	--	0.0252	0.0047	0.0036	0.0028	NA[1]	0.0029	0.0009	0.0030	0.0072
Thu 9/26/19	--	--	0.0559	0.0105	0.0114	0.0132	NA[1]	0.0127	0.0009	0.0010	0.0062
Fri 9/27/19	--	--	0.0100	0.0004	0.0005	0.0005	NA[1]	0.0005	0.0002	0.0016	0.0062
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0643	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

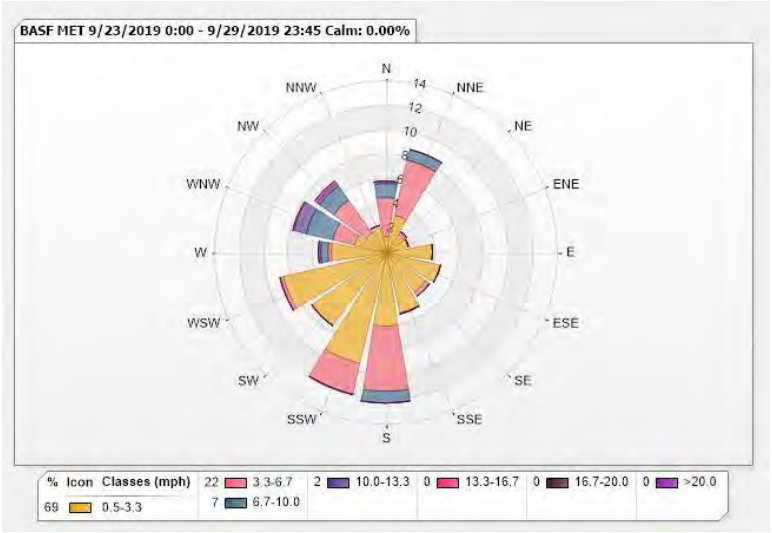
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 9/25/19	--	--	0.016	--	--	--	--	--	0.016	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.257	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

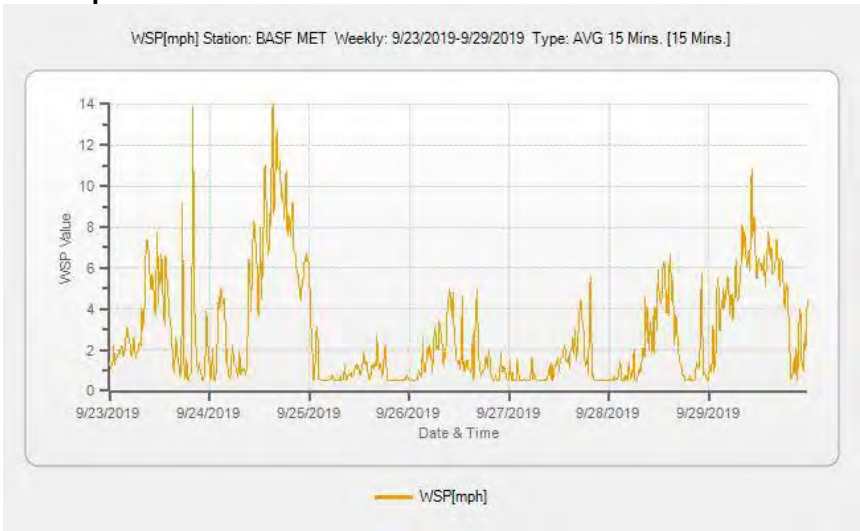
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

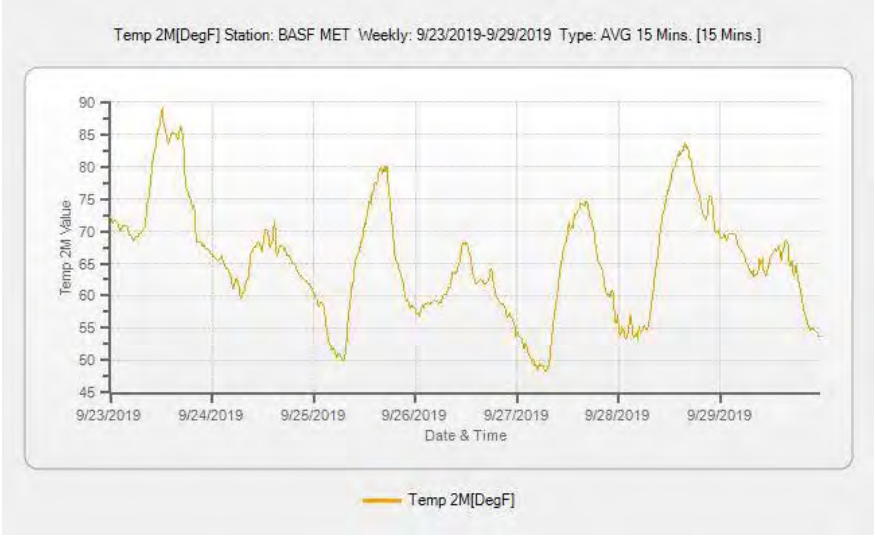
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

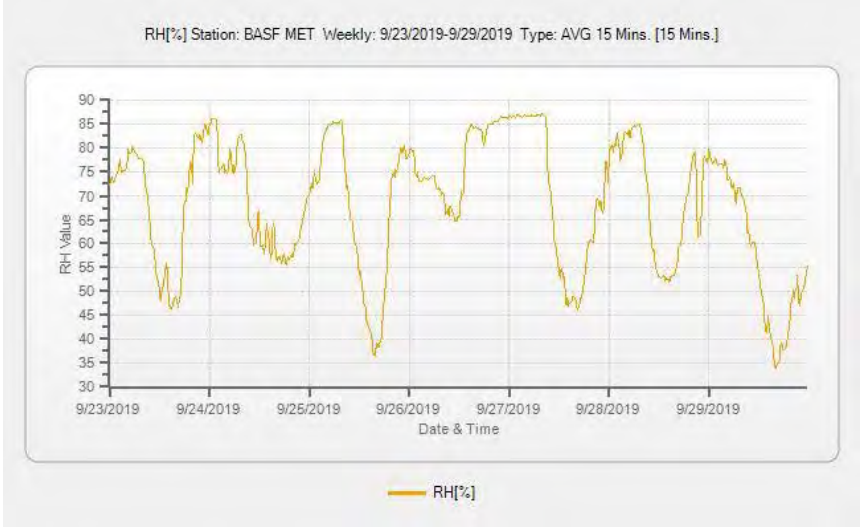


Figure 2: Site Map (9/23/19 – 9/29/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/30/19 – 10/6/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations. Based on this data, the need for operational maintenance of one or more of the AHS locations has been identified and a suitable approach is under review by the project team. The project-to-date PM_{10}, PCB, and VOC emission rates are currently below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 9/30/19	0.2	20.4	0.2	22.2	0.2	20.6	0.1	30.4	0.2	12.5[1]	0.1	30.0	0.0	20	0	No
Tue 10/1/19	0.2	35.3	0.1	28.9	0.1	29.1	0.1	35.6	0.1	27.7	0.1	27.8	NA	NA	NA	NA
Wed 10/2/19	0.1	24.2	0.3	22.3	0.6	34.2	0.1	27.0[2]	0.1	23.5[1]	0.1	59.5	NA	NA	NA	NA
Thu 10/3/19	0.1	19.7	0.0	26.1	0.1	12.3	0.0	26.2[2]	0.0	7.6[1]	0.1	16.2	NA	NA	NA	NA
Fri 10/4/19	0.5	7.7	0.1	19.0[3]	0.6	13.7	0.2	13.9	0.2	9.4[1]	0.3	19.3	NA	NA	NA	NA
Sat 10/5/19	0.1	18.5	0.3	34.0	0.4	28.9	0.1	38.7	0.2	21.4	0.1[4]	18.1[4, 5]	NA	NA	NA	NA
Sun 10/6/19	0.1	12.5	0.1	3.9	0.2[6]	17.0[6]	0.1	16.2	0.1	8.6[1]	0.1[7]	ND[5, 7]	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.5	35.3	0.3	34.0	0.6	34.2	0.2	38.7	0.2	27.7	0.3	59.5	--	--	--	--
Weekly Average	0.0	8.5	0.0	8.3	0.0	11.1	0.0	11.1	0.0	7.5	0.0	8.6	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] PM_{10} data invalid between 9/30/19 (12:15AM) and 9/30/19 (7:15AM), 10/2/19 (5:15PM) and 10/3/19 (7:45AM), 10/3/19 (4:15PM) and 10/4/19 (10:45AM), 10/6/19 (12:30AM) and 10/6/19 (9:00AM) due to a battery failure.

[2] PM_{10} data invalid between 10/2/19 (7:30PM) and 10/3/19 (7:30AM) due to a battery failure.

[3] PM_{10} data invalid between 10/4/19 (10:15AM) and 10/4/19 (3:15PM) due to a battery failure.

[4] PM_{10} and TVOC data missing between 10/5/19 (3:45AM) and 10/5/19 (9:00AM) due to a battery failure.

[5] PM_{10} data invalid between 10/5/19 (9:15AM) and 10/6/19 (3:15PM) due to a battery failure.

[6] PM_{10} and TVOC data missing between 10/6/19 (3:00PM) and 10/6/19 (11:45PM) due to a battery failure.

[7] PM_{10} and TVOC data missing between 10/6/19 (3:30PM) and 10/6/19 (11:45PM) due to a battery failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 10/3/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1232	µg/m^3	*< 0.042*	*< 0.042*	0.012[1]
AROCLOR-1242	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.042*	*< 0.042*	*< 0.042*
Total PCBs Aroclor	µg/m^3	*< 0.378*	*< 0.378*	0.348

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.83	3.55	3.53	3.23	2.69	2.54

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 9/30/19	ppm	<1.0	0.395	0.357	0.442	NA[1]	0.374	0.699	0.614	0.640
Tue 10/1/19	ppm	<1.0	0.397	0.241	0.707	NA[1]	0.348	1.624	1.215	1.875
Wed 10/2/19	ppm	<1.0	0.744	0.525	1.709	NA[1]	1.038	2.104	1.452	NA[1]
Thu 10/3/19	ppm	<1.0	0.531	0.232	0.620	NA[1]	0.401	0.980	0.535	0.562
Fri 10/4/19	ppm	<1.0	0.696	0.486	0.645	NA[1]	0.537	0.801	0.580	0.521

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/30/19	--	--	0.741	0.091	0.017	0.097	NA[1]	0.349	0.044	0.076	0.066
Tue 10/1/19	--	--	0.958	0.119	0.065	0.114	NA[1]	0.385	0.085	0.108	0.081
Wed 10/2/19	--	--	1.615	0.127	0.042	0.211	NA[1]	0.892	0.123	0.219	NA[1]
Thu 10/3/19	--	--	0.796	0.100	0.026	0.109	NA[1]	0.440	0.041	0.051	0.030
Fri 10/4/19	--	--	0.684	0.140	0.079	0.116	NA[1]	0.163	0.048	0.092	0.046
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.291	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 9/30/19	--	--	0.0087	0.0024	0.0010	0.0006	NA[1]	0.0017	0.0002	0.0011	0.0016
Tue 10/1/19	--	--	0.0063	0.0007	0.0008	0.0006	NA[1]	0.0009	0.0002	0.0010	0.0022
Wed 10/2/19	--	--	0.0392	0.0071	0.0069	0.0118	NA[1]	0.0082	0.0017	0.0036	NA[1]
Thu 10/3/19	--	--	0.0194	0.0058	0.0020	0.0009	NA[1]	0.0007	0.0004	0.0031	0.0066
Fri 10/4/19	--	--	0.0278	0.0120	0.0037	0.0027	NA[1]	0.0020	0.0044	0.0007	0.0024
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0624	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

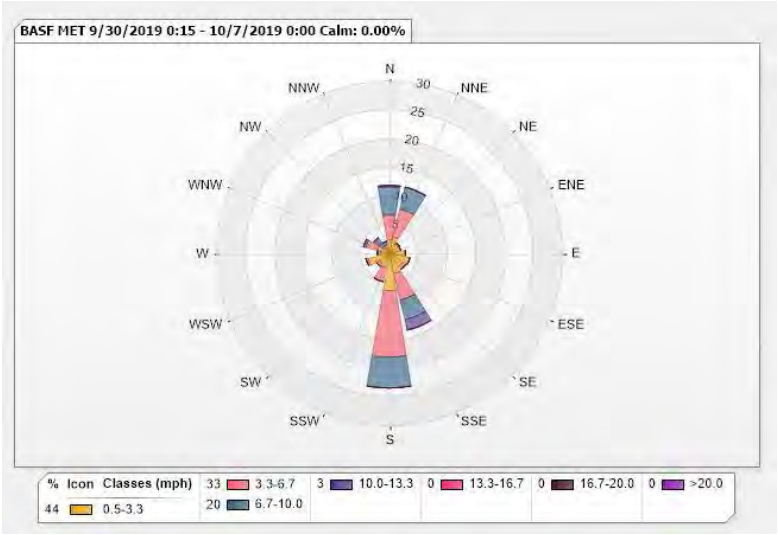
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 10/2/19	--	--	0.014	--	--	--	--	--	0.014	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.254	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

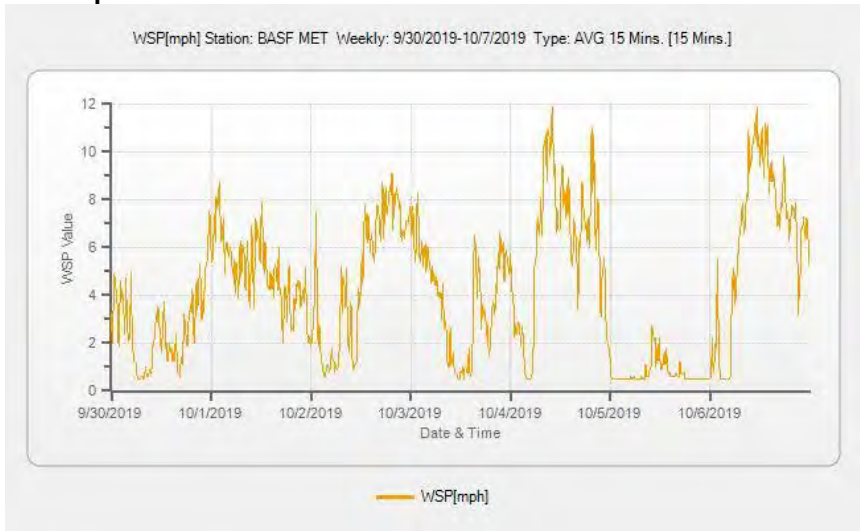
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

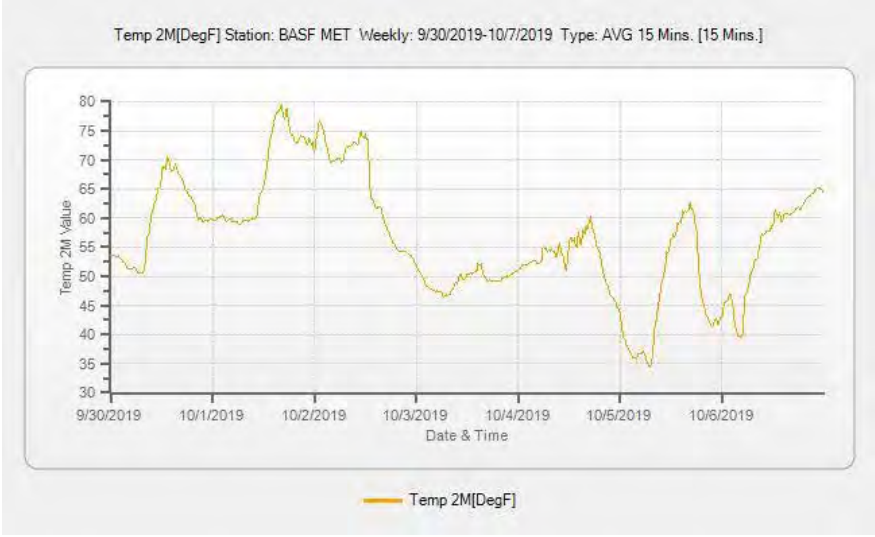
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

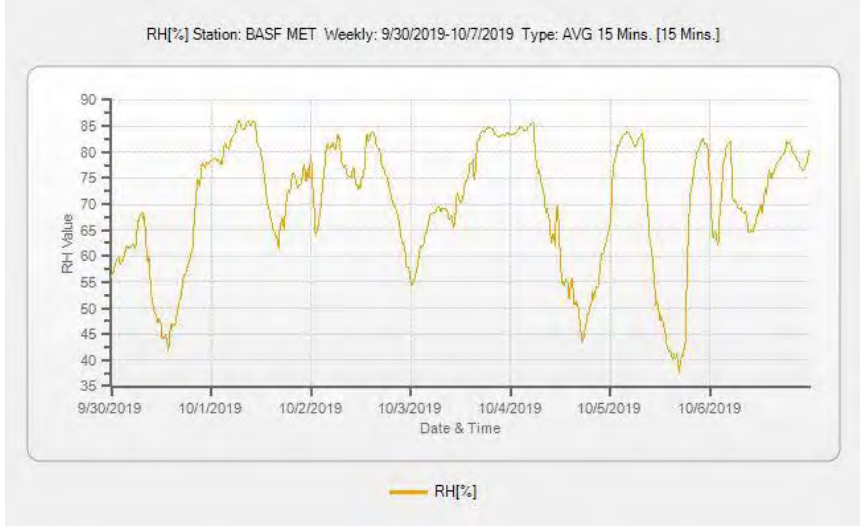


Figure 2: Site Map (9/30/19 – 10/6/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/11/19 – 11/17/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC concentrations remained below the Action Level and there were several PM_{10} concentrations above the Action Level. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations in operation. However, the project-to-date TVOC, PM_{10} and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/11/19	0.1	11.1[1]	0.2[1]	10.3[1]	0.2	37.5	0.1	49.6	0.1	32.2	0.1[1]	41.3[1]	0.0	19	0	No
Tue 11/12/19	0.2	12.6[1]	0.1[1]	12.3[1]	0.4	32.5	0.2[1]	11.0[1]	0.2	13.0	0.1	20.7	0.0	11	0	No
Wed 11/13/19	0.1	12.5[1]	0.2	13.6	0.3	206.1	0.2[1]	24.0[1]	0.1	9.4	0.1	17.6	NA	NA	NA	NA
Thu 11/14/19	0.2	53.7[1]	0.2	66.6	0.7	223.5	0.4	137.6	0.2	57.1	0.1	57.3	NA	NA	NA	NA
Fri 11/15/19	0.4	65.7[1]	0.2	99.3	0.4	191.6	0.5	199.6	0.2	108.3	0.2	104.0	NA	NA	NA	NA
Sat 11/16/19	0.1	51.8	0.0	4.0	0.1	110.5	0.1	27.6	0.1	ND[1]	0.1	10.8	NA	NA	NA	NA
Sun 11/17/19	0.2	17.9	0.1	17.8	0.0	19.4	0.0	24.7	0.1	ND[1]	0.1	12.1	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.4	65.7	0.2	99.3	0.7	223.5	0.5	199.6	0.2	108.3	0.2	104.0	--	--	--	--
Weekly Average	0.0	11.9	0.0	9.2	0.0	15.9	0.0	19.1	0.0	11.2	0.0	14.2	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Periods of data loss due to power failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	Wed 11/13/19	7:30AM	PAM-3	NW 10.7 mph	206.1	1.0	205.1	The elevated PM_{10} concentrations were caused by dust being kicked up by loadout trucks exiting the Site.
PM_{10}	Thu 11/14/19	8:30AM	PAM-3	S 4.8 mph	223.5	5.6	217.9	
PM_{10}	Fri 11/15/19	7:15AM	PAM-3	S 3.6 mph	191.6	25.1	166.5	
PM_{10}	Fri 11/15/19	7:45AM 8:00AM	PAM-4	S 2.5 mph SSW 3.0 mph	199.6 171.6	41.9 63.5	157.7 108.1	The elevated PM_{10} concentrations were caused by an offsite source. Visible dust was observed being generated at the scrap metal facility south of the Site.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 11/15/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1221	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1232	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1242	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1248	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1254	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1260	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1262	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
AROCLOR-1268	µg/m^3	*< 0.041*	*< 0.041*	*< 0.042*
Total PCBs Aroclor	µg/m^3	< 0.369	< 0.369	< 0.378

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.62	3.55	3.53	3.01	2.37	2.19

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/11/19	ppm	<1.0	0.309	0.171	NA[1]	NA[1]	NA[1]	0.369	0.257	0.288
Tue 11/12/19	ppm	<1.0	0.087	0.054	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.176
Wed 11/13/19	ppm	<1.0	0.225	0.242	0.308	NA[1]	NA[1]	NA[1]	NA[1]	0.106
Thu 11/14/19	ppm	<1.0	0.065	0.060	0.121	NA[1]	NA[1]	NA[1]	NA[1]	0.163
Fri 11/15/19	ppm	<1.0	NA[1]	2.352	1.299	NA[1]	1.311	1.540	0.591	1.415

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/11/19	--	--	0.201	0.015	0.025	NA[1]	NA[1]	NA[1]	0.040	0.085	0.036
Tue 11/12/19	--	--	0.006	0.003	0.003	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.000
Wed 11/13/19	--	--	0.161	0.010	0.013	0.133	NA[1]	NA[1]	NA[1]	NA[1]	0.005
Thu 11/14/19	--	--	0.062	0.006	0.008	0.034	NA[1]	NA[1]	NA[1]	NA[1]	0.014
Fri 11/15/19	--	--	0.638	NA[1]	0.017	0.140	NA[1]	0.138	0.130	0.143	0.070
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.273	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/11/19	--	--	0.0014	0.0003	0.0002	NA[1]	NA[1]	NA[1]	0.0001	0.0001	0.0007
Tue 11/12/19	--	--	0.0004	0.0003	0.0001	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.0000
Wed 11/13/19	--	--	0.0005	0.0003	0.0001	0.0000	NA[1]	NA[1]	NA[1]	NA[1]	0.0001
Thu 11/14/19	--	--	0.0016	0.0004	0.0002	0.0007	NA[1]	NA[1]	NA[1]	NA[1]	0.0003
Fri 11/15/19	--	--	0.0028	NA[1]	0.0005	0.0005	NA[1]	0.0004	0.0002	0.0004	0.0008
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0516	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

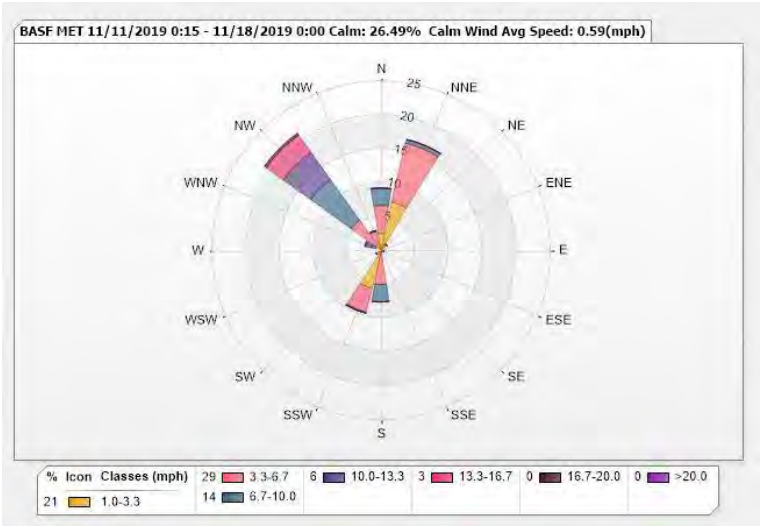
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 11/13/19	--	--	0.032	--	0.032	--	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.238	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

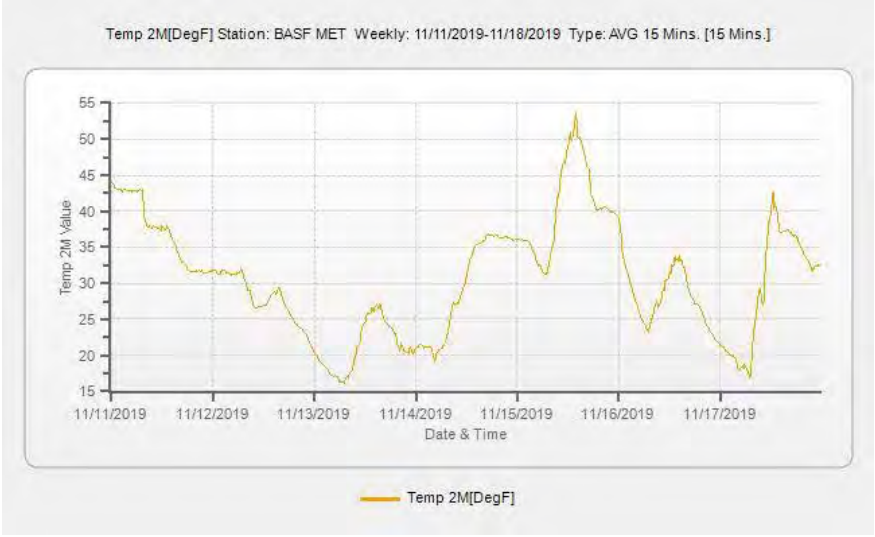
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

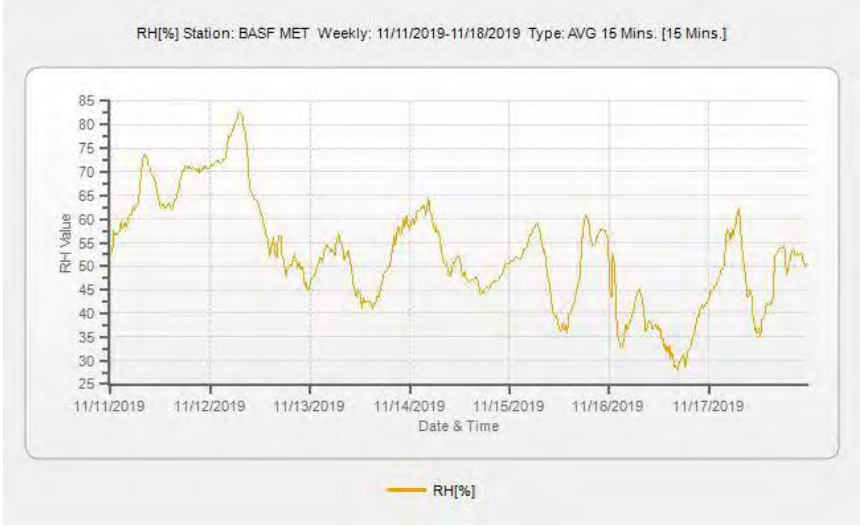


Figure 2: Site Map (11/11/19 – 11/17/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/18/19 – 11/24/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation exceeded the Action Level at 75% bed depth at several of the AHS locations in operation. However, the project-to-date TVOC, PM_{10} and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/18/19	0.1	14.7	0.2	12.5	0.7	14.9	0.2	33.3[1]	0.2	24.8[1]	0.1	14.0	0.0	25	0	No
Tue 11/19/19	0.2	41.5	0.2	41.8	0.8	46.3	0.2	52.0[1]	0.2	39.7	0.2	53.5	0.0	20	0	No
Wed 11/20/19	0.2	43.6[1]	0.2	51.9	0.2	53.7	0.2[1]	60.9[1]	0.1	45.0	0.1	48.5	NA	NA	NA	NA
Thu 11/21/19	0.2	60.1[1]	0.2	55.9	0.7	59.9	0.6	71.7	0.4	49.6	0.5	56.7	NA	NA	NA	NA
Fri 11/22/19	0.2	58.5[1]	0.1	66.0[1]	0.9	81.8	0.2	113.6[1]	0.3	72.5[1]	0.2	72.5[1]	NA	NA	NA	NA
Sat 11/23/19	0.2	20.1[1]	0.2	ND[1]	0.4	41.1	0.2	14.0[1]	0.4	18.2	0.3[1]	ND[1]	NA	NA	NA	NA
Sun 11/24/19	0.1	57.9	0.1[1]	31.6[1]	0.2	62.4	0.1	69.1	0.1	58.1	0.2[1]	ND[1]	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.2	60.1	0.2	66.0	0.9	81.8	0.6	113.6	0.4	72.5	0.5	72.5	--	--	--	--
Weekly Average	0.1	20.8	0.0	21.6	0.1	20.1	0.0	29.4	0.0	16.6	0.0	23.4	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Periods of data loss due to power failure.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 11/22/19				
Analyte	**Units**	**PAM-1**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1221	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1232	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1242	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1248	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1254	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1260	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1262	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
AROCLOR-1268	µg/m^3	*< 0.041*	*< 0.042*	*< 0.041*
Total PCBs Aroclor	µg/m^3	< 0.369	< 0.378	< 0.369

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.56	3.55	3.53	3.01	2.32	2.14

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/18/19	ppm	<1.0	0.730	0.984	0.916	NA[1]	1.765	NA[1]	2.175	NA[1]
Tue 11/19/19	ppm	<1.0	NA[1]	0.673	NA[1]	NA[1]	1.165	NA[1]	0.725	NA[1]
Wed 11/20/19	ppm	<1.0	0.819	1.640	1.822	NA[1]	1.919	1.165	1.751	0.936
Thu 11/21/19	ppm	<1.0	0.320	0.428	1.237	NA[1]	1.191	1.245	1.245	0.916
Fri 11/22/19	ppm	<1.0	0.729	0.933	0.612	NA[1]	0.608	0.466	0.287	0.526

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/18/19	--	--	0.448	0.006	0.054	0.109	NA[1]	0.173	NA[1]	0.106	NA[1]
Tue 11/19/19	--	--	0.758	0.049	NA[1]	NA[1]	NA[1]	0.546	NA[1]	0.163	NA[1]
Wed 11/20/19	--	--	1.610	0.034	0.159	0.258	NA[1]	0.579	0.134	0.293	0.153
Thu 11/21/19	--	--	1.706	0.039	0.106	0.227	NA[1]	0.766	0.101	0.358	0.109
Fri 11/22/19	--	--	0.798	0.037	0.101	0.145	NA[1]	0.260	0.076	0.121	0.058
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.266	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/18/19	--	--	0.0014	0.0005	0.0003	0.0002	NA[1]	0.0003	NA[1]	0.0001	NA[1]
Tue 11/19/19	--	--	0.0021	NA[1]	0.0005	NA[1]	NA[1]	0.0012	NA[1]	0.0004	NA[1]
Wed 11/20/19	--	--	0.0110	0.0009	0.0013	0.0012	NA[1]	0.0023	0.0008	0.0022	0.0023
Thu 11/21/19	--	--	0.0038	0.0004	0.0004	0.0005	NA[1]	0.0009	0.0002	0.0007	0.0007
Fri 11/22/19	--	--	0.0017	0.0002	0.0002	0.0000	NA[1]	0.0001	0.0009	0.0003	0.0000
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0500	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 11: Process Sampling PCB Emissions Summary

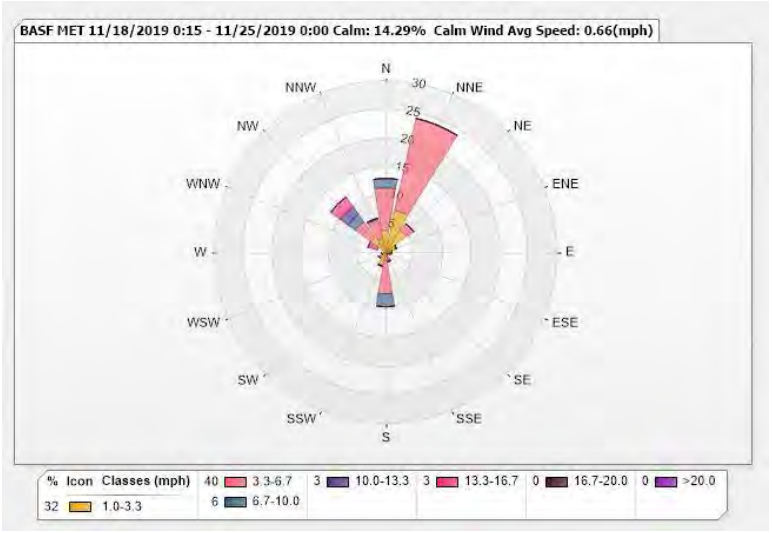
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 11/20/19	--	--	0.031	--	0.031	--	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.235	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

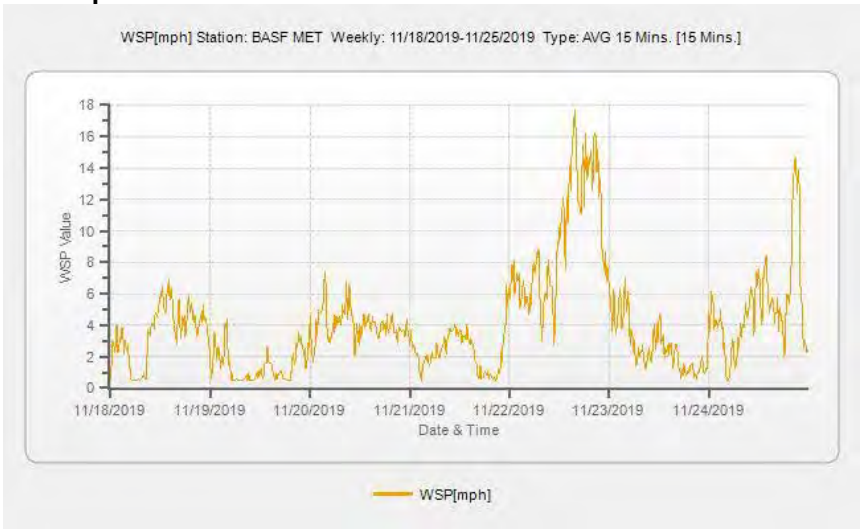
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

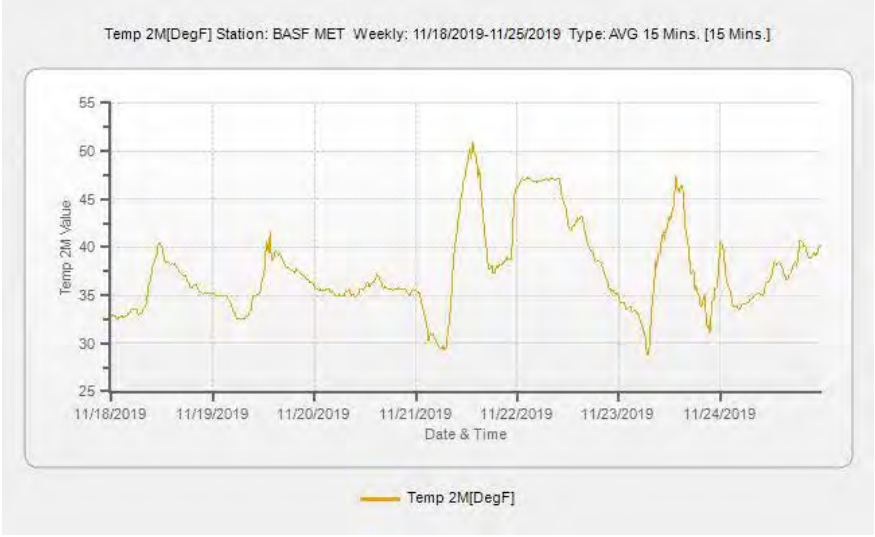
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

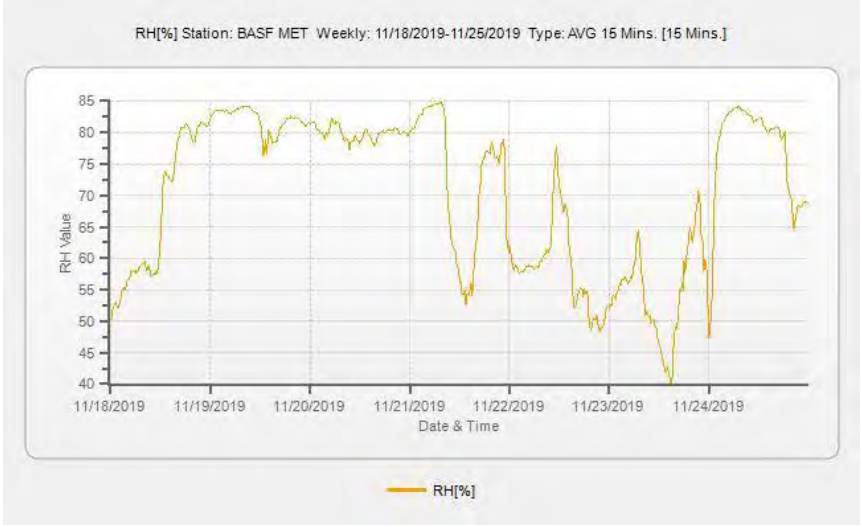


Figure 2: Site Map (11/18/19 – 11/24/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/25/19 – 12/1/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Levels with the exception of one PM_{10} concentration. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

Integrated 8-hour PCB sampling is conducted during sediment removal operations and processing activities which restarted on July 15, 2019. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 6**: Fenceline PCB Sample Results; and
- **Table 7**: Project-to-date Fenceline PCB Results Summary.

The results received to-date indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 8**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 9**: Process Monitoring TVOC Emissions Summary;
- **Table 10**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 11**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation remained below the Action Level at 75% bed depth with the exception of one AHS location. The project-to-date TVOC, PM_{10} and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 11/25/19	0.2	68.2	0.2[1]	44.2[1]	0.2	37.6[1]	1.5	140.6	0.4	91.2	0.2[1]	94.7[1]	0.0	54	0	No
Tue 11/26/19	0.2	129.1	0.2	163.2	0.2[1]	58.4[1]	0.3	121.2	0.2	124.1	0.2	108.0	NA	NA	NA	NA
Wed 11/27/19	0.2	125.0	0.1	135.3	0.1[1]	143.3	0.3	119.2	0.2	136.9	0.1	114.4	NA	NA	NA	NA
Thu 11/28/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Fri 11/29/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Sat 11/30/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Sun 12/1/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	0.2	129.1	0.2	163.2	0.2	143.3	1.5	140.6	0.4	136.9	0.2	114.4	--	--	--	--
Weekly Average	0.1	39.7	0.0	38.6	0.0	45.1	0.1	45.4	0.1	37.1	0.0	40.2	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Periods of data loss due to power failure.

[2] Site was closed for Thanksgiving holiday (no Site activities).

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	Tue 11/26/19	6:30AM	PAM-2	S 2.3 mph	163.2	74.7	88.5	The elevated PM_{10} concentration was caused by vehicle traffic on Riverside Avenue. The PM_{10} concentration was reduced below the Action Level after background subtraction.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Fenceline PCB Sample Results

Sample Date: 11/27/19				
Analyte	**Units**	**PAM-4**	**PAM-5**	**PAM-6**
AROCLOR-1016	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1221	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1232	µg/m^3	0.015[1]	< *0.041*	< *0.041*
AROCLOR-1242	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1248	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1254	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1260	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1262	µg/m^3	< *0.041*	< *0.041*	< *0.041*
AROCLOR-1268	µg/m^3	< *0.041*	< *0.041*	< *0.041*
Total PCBs Aroclor	µg/m^3	0.343	< 0.369	< 0.369

Definitions:

PAM – Portable Air Monitoring Station

µg/m^3 – micrograms per cubic meter

Bold – Results reported above the laboratory reporting limit (RL)

Italics – Compound was analyzed for, but not detected above the RL (reported as the RL)

Notes:

- Fenceline PCB samples are collected daily at 1 upwind and 2 downwind locations.

[1] Result is less than the RL but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

Table 7: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.56	3.55	3.53	2.95	2.28	2.10

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 8: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 11/25/19	ppm	<1.0	0.245	0.377	0.559	NA[1]	0.797	0.837	0.288	0.718
Tue 11/26/19	ppm	<1.0	NA[1]	0.397	NA[1]	NA[1]	1.012	0.896	0.662	NA[1]
Wed 11/27/19	ppm	<1.0	NA[1]	0.415	NA[1]	NA[1]	1.055	NA[1]	NA[1]	NA[1]
Thu 11/28/19	ppm	<1.0	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Fri 11/29/19	ppm	<1.0	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.
[2] Site was closed for Thanksgiving holiday (no Site activities).

Table 9: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/25/19	--	--	0.944	0.044	0.093	0.137	NA[1]	0.379	0.079	0.119	0.093
Tue 11/26/19	--	--	0.980	NA[1]	0.098	NA[1]	NA[1]	0.464	0.101	0.317	NA[1]
Wed 11/27/19	--	--	0.688	NA[1]	0.140	NA[1]	NA[1]	0.548	NA[1]	NA[1]	NA[1]
Thu 11/28/19	--	--	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Fri 11/29/19	--	--	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.258	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

[2] Site was closed for Thanksgiving holiday (no Site activities).

Table 10: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 11/25/19	--	--	0.0039	0.0008	0.0006	0.0006	NA[1]	0.0008	0.0002	0.0004	0.0005
Tue 11/26/19	--	--	0.0017	NA[1]	0.0005	NA[1]	NA[1]	0.0006	0.0002	0.0004	NA[1]
Wed 11/27/19	--	--	0.0023	NA[1]	0.0005	NA[1]	NA[1]	0.0018	NA[1]	NA[1]	NA[1]
Thu 11/28/19	--	--	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
Fri 11/29/19	--	--	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0491	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

[2] Site was closed for Thanksgiving holiday (no Site activities).

Table 11: Process Sampling PCB Emissions Summary

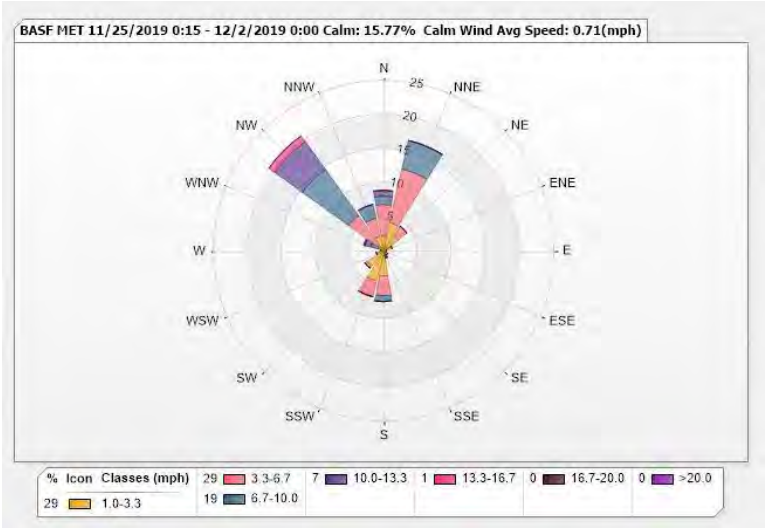
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Tue 11/26/19	--	--	0.032	--	--	--	--	--	--	0.032	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.233	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

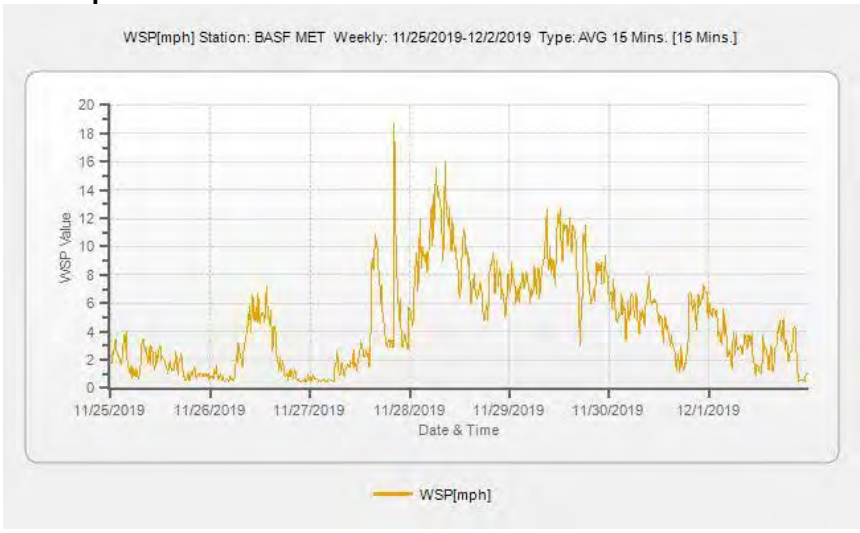
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

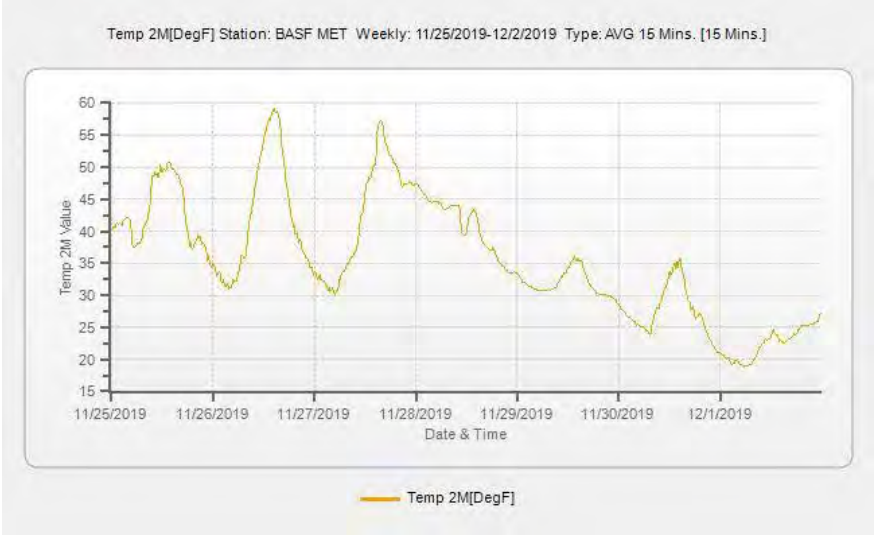
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

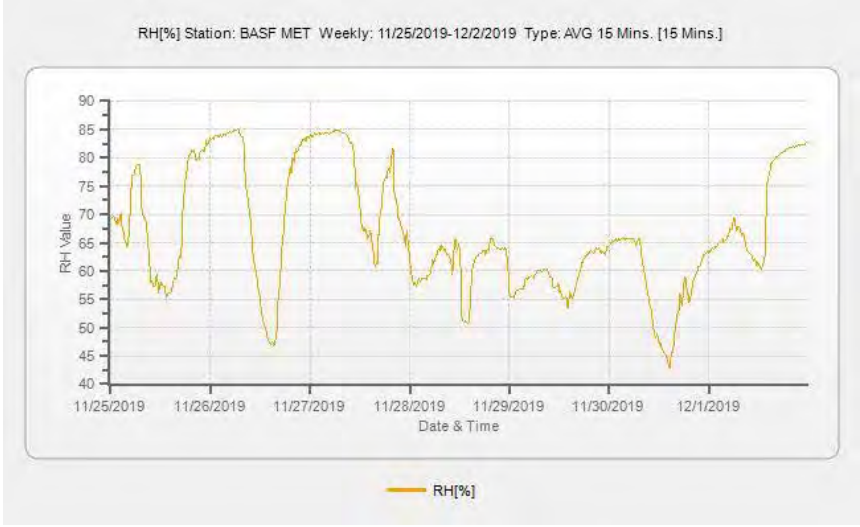


Figure 2: Site Map (11/25/19 – 12/1/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/2/19 – 12/8/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

More recently, Phase 2 of the remedial activities began on July 15, 2019 and includes the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

Additionally, process monitoring and sampling is conducted during sediment processing activities in the Temporary Fabric Structure (TFS) to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also

used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time continuous TVOC and PM_{10} monitoring was conducted at each of the six PAM stations. During the report period, the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Fenceline Real-Time Maximum Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

The project-to-date Fenceline PCB results collected during the project are summarized in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 8**: Process Monitoring TVOC Emissions Summary;
- **Table 9**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation remained below the Action Level at 75% bed depth at each of the operational AHS locations. The project-to-date TVOC, PM_{10} and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

Date	PAM-1		PAM-2		PAM-3		PAM-4		PAM-5		PAM-6		Hand-Held			
	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	TVOC (ppm)	PM_{10} ($\mu g/m^3$)	Odor (0-8)	Visible Dust
Mon 12/2/19	ND[1]	ND[1]	0.1	26.3	0.0	14.3	ND[1]	ND[1]	0.1	11.6	0.0	16.1	NA	NA	NA	NA
Tue 12/3/19	ND[1]	28.1[1]	0.1	6.4[1]	0.1	21.7	ND[1]	ND[1]	0.1	14.6	0.1	17.9	NA	NA	NA	NA
Wed 12/4/19	ND[1]	28.7[1]	ND[1]	ND[1]	0.2	57.7	ND[1]	85.1	0.2	53.8	0.1	49.7	NA	NA	NA	NA
Thu 12/5/19	ND[1]	ND[1]	0.6[1]	39.7[1]	1.1	62.9	ND[1]	72.8	0.1	66.3[1]	0.1	52.8	NA	NA	NA	NA
Fri 12/6/19	ND[1]	28.9[1]	0.3	59.6[1]	0.2	42.2	0.2	115.2	0.1	72.6	0.2	76.8	NA	NA	NA	NA
Sat 12/7/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Sun 12/8/19	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA[2]	NA	NA	NA	NA
Weekly Summary																
Weekly Maximum	ND[1]	28.9	0.6	59.6	1.1	62.9	0.2	115.2	0.2	72.6	0.2	76.8	--	--	--	--
Weekly Average	ND[1]	26.9	0.1	11.2	0.1	16.7	0.1	25.8	0.0	13.8	0.0	13.9	--	--	--	--

Definitions:

PAM – Portable Air Monitoring Station

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- PAM reported TVOC and PM_{10} data represent 15-minute average concentrations.
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Periods of data loss due to power failure.

[2] PAM station TVOC/PM_{10} monitoring was permanently shut down at the end of the day on 12/6/19 and was replaced with hand-held TVOC/PM_{10} monitoring in response to reduced Site activities.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.56	3.55	3.53	2.95	2.28	2.10

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/2/19	ppm	<1.0	NA[1]	0.369	NA[1]	NA[1]	0.521	NA[1]	NA[1]	NA[1]
Tue 12/3/19	ppm	<1.0	0.145	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.392
Wed 12/4/19	ppm	<1.0	0.144	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/5/19	ppm	<1.0	0.126	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/6/19	ppm	<1.0	0.182	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 8: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 12/2/19	--	--	0.397	NA[1]	0.111	NA[1]	NA[1]	0.286	NA[1]	NA[1]	NA[1]
Tue 12/3/19	--	--	0.074	0.015	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.059
Wed 12/4/19	--	--	0.032	0.032	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/5/19	--	--	0.018	0.018	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/6/19	--	--	0.035	0.035	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.222	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 12/2/19	--	--	0.0017	NA[1]	0.0006	NA[1]	NA[1]	0.0011	NA[1]	NA[1]	NA[1]
Tue 12/3/19	--	--	0.0005	0.0003	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	0.0002
Wed 12/4/19	--	--	0.0005	0.0005	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/5/19	--	--	0.0001	0.0001	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/6/19	--	--	0.0006	0.0006	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0475	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10:Process Sampling PCB Emissions Summary

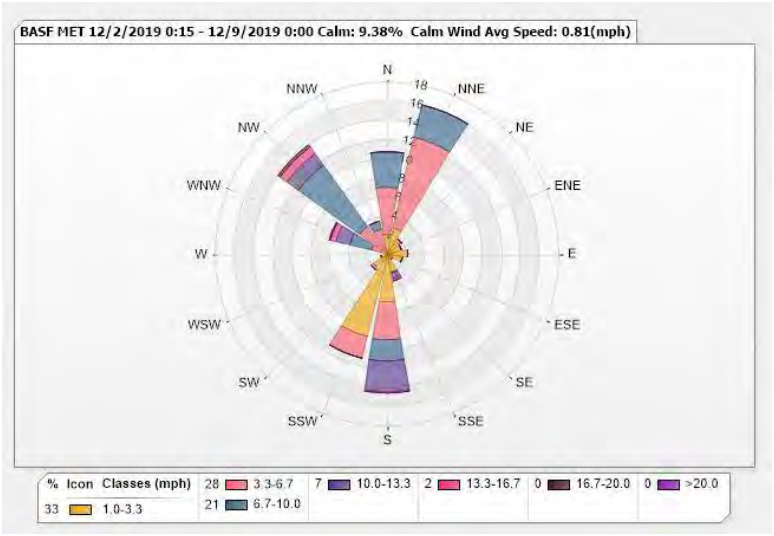
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 12/4/19	--	--	0.031	0.031	--	--	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.231	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

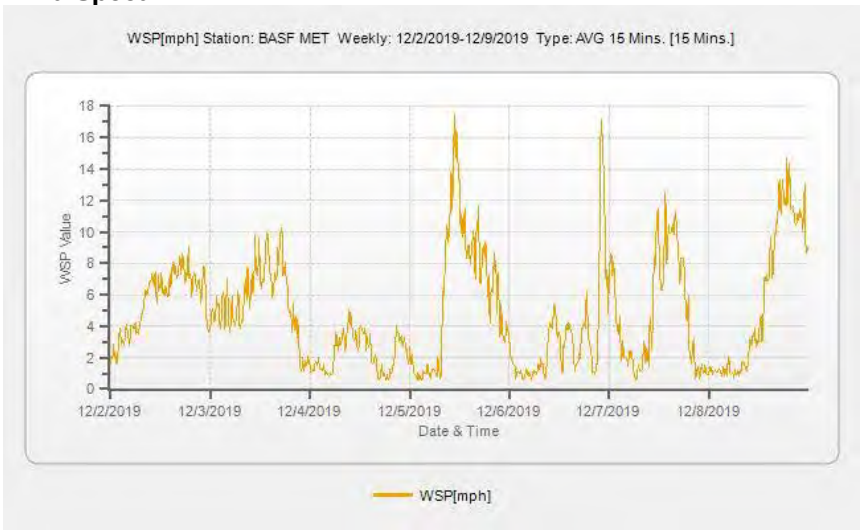
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

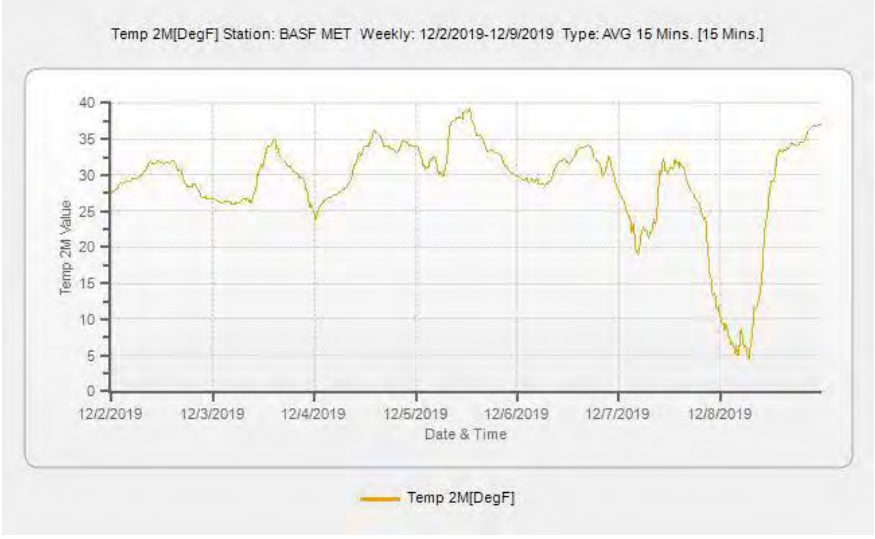
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

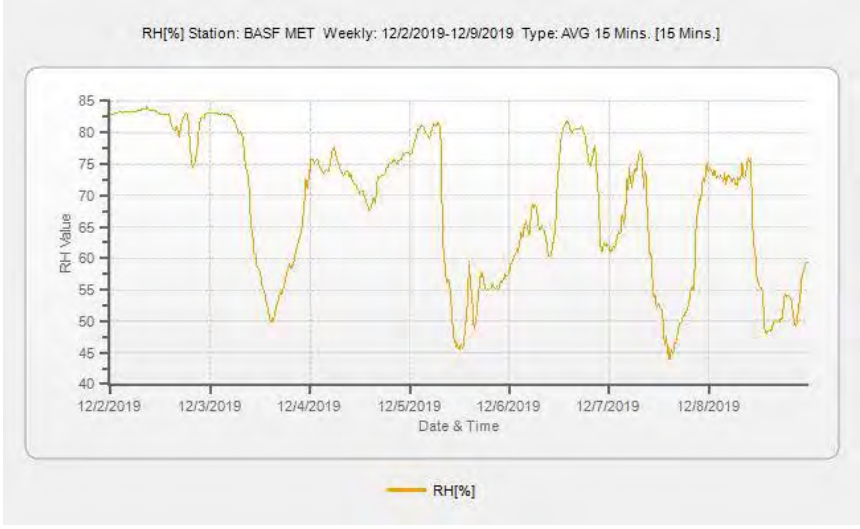


Figure 2: Site Map (12/2/19 – 12/6/19)



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Weekly Community Air Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/9/19 – 12/15/19**

On behalf of BASF Corporation (BASF), AECOM has prepared this air monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient air-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Community Air Monitoring Plan (CAMP) prepared by AECOM and incorporated into the August 2018 100% Design.

Introduction

Air monitoring and sampling activities were conducted during the report period to evaluate conditions at the property line (fenceline) to ensure that the measures used to control potential fugitive emissions are effective, and to document ambient air quality/conditions at the fenceline. The CAMP monitoring activities were reduced following the approval of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) documented in an email dated January 18, 2019. The CAMP reduction was implemented on January 21, 2019.

Phase 2 of the remedial activities began on July 15, 2019 and included the following real-time monitoring and integrated sampling:

- Continuous real-time monitoring for 15-minute total volatile organic compound (TVOC) and respirable particulate matter (PM_{10}) concentrations conducted at six (6) portable air monitoring (PAM) stations during work hours (Monday – Friday, 7AM through 5PM) and 24 hours per day, 7 days per week as needed;
- Instantaneous hand-held monitoring for TVOCs and PM_{10}, as well as observational monitoring for odor and visible dust conducted periodically (Monday – Friday, 7AM through 5PM) as needed;
- Continuous 15-minute meteorological monitoring for wind speed, wind direction, sigma (wind variability, calculated), temperature and relative humidity at an onsite location 24 hours per day 7 days per week; and
- Integrated 8-hour sampling for polychlorinated biphenyls (PCBs) conducted at three (3) fenceline PAM stations (one upwind and two downwind) on a weekly basis during sediment removal operations.

As documented in an email from the NYSDEC dated December 6, 2019 and implemented the following Monday, December 9, 2019, continuous fenceline TVOC/PM_{10} monitoring and fenceline PCB sampling was discontinued and replaced with periodic hand-held TVOC/PM_{10} monitoring. Process monitoring/sampling is to remain in effect until all sediment is removed from the Temporary Fabric Structure (TFS).

Process monitoring and sampling is conducted during sediment processing activities in the TFS to ensure the effectiveness of each operational air handling system (AHS) that is installed to control potential fugitive emissions and to document ambient air quality/conditions at the point of exhaust. The processing monitoring and sampling program consists of the following real-time monitoring and integrated sampling:

- Real-time monitoring for TVOC and PM_{10} conducted at each of the operational carbon units on a weekly basis; and
- Integrated 8-hour sampling for PCBs conducted at one (1) operational carbon unit on a weekly basis.

The real-time continuous and hand-held monitoring results are compared to a list of Site-specific Alert Levels, Action Levels and a Site Shutdown Level. Process monitoring PCB results are used in conjunction with the real-time

process monitoring data to calculate emission rates for PCBs and PM_{10}. These emission rates are then compared to a target emission rate that is calculated using the real-time PCB AAC. The process monitoring VOC data is also used to calculate an emission rate that's compared to a separate target to evaluate the performance of the TFS treatment system.

The Site-specific Alert Levels, Action Levels, Site Shutdown Level, PCB AAC and process sampling target emission rates are defined in the following tables:

- **Table 1**: Real-Time Alert Levels, Action Levels, and Site Shutdown Level;
- **Table 2**: Fenceline PCB AAC; and
- **Table 3:** Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs.

Fenceline Real-Time Air Monitoring Summary

Real-time instantaneous hand-held TVOC and PM_{10} monitoring, in addition to odor and visible dust observations was conducted at the perimeter of the site and the TFS.

During the report period the TVOC and PM_{10} concentrations remained below the Action Levels. The results of the real-time air monitoring are presented in the following tables:

- **Table 4**: Weekly Maximum Instantaneous Hand-held Concentrations Summary; and
- **Table 5**: Weekly Fenceline Elevated Concentrations greater than the Action Levels.

Fenceline Integrated PCB Sampling Summary

The project-to-date Fenceline PCB results collected during the project are summarized in the following table:

- **Table 6**: Project-to-date Fenceline PCB Results Summary.

The results indicate that the project-to-date PCB results remain below the PCB AAC.

Process Monitoring and Sampling Summary

Process monitoring and sampling is conducted during TSCA sediment activities within the TFS which began on November 29, 2018. Results are reported when they become available from the analytical laboratory and are presented in the following tables:

- **Table 7**: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth;
- **Table 8**: Process Monitoring TVOC Emissions Summary;
- **Table 9**: Process Monitoring PM_{10} Emissions Summary; and
- **Table 10**: Process Sampling PCB Emissions Summary.

The carbon breakthrough evaluation remained below the Action Level at 75% bed depth at each of the operational AHS locations. The project-to-date TVOC, PM_{10} and PCB emission rates remain below their respective target emission rates.

Meteorological Monitoring Summaries and Site Map(s)

Additional information related to the air monitoring activities during the report period is included in the following figures:

- **Figure 1**: Meteorological Summaries; and
- **Figure 2**: Site Map.

Table 1: Real-Time Alert Levels, Action Levels and Site Shutdown Level

Target Compound	Alert Level[1]	Action Level[1]	Shutdown Level
TVOC (15-minute average)	3.7 ppm	5.0 ppm	25 ppm
PM_{10} (15-minute average)	100 µg/m^3	150 µg/m^3	NA
Odor[2] (instantaneous observation)	Onsite odor related to Site activities	Onsite odor related to Site activities greater than 4 (on scale of 0-10) or public complaint	NA
TVOC in Carbon Bed[3] (instantaneous)	1.0 ppm at 50% carbon bed depth	1.0 ppm at 75% carbon bed depth	NA

Definitions:

TVOC – Total Volatile Organic Compounds

PM_{10} – Respirable particulate matter

ppm – Parts per million

µg/m^3 – Micrograms per cubic meter

NA – Not Applicable

Notes:

- Action Levels were obtained from the Site-specific CAMP, prepared by AECOM (2018).

[1] Above background concentrations. Background concentrations are determined using the upwind or minimum onsite concentration at the time of the elevated concentration.

[2] Odor assessments are based on a qualitative assessment and are ranked on a scale of 0 to 10 (0 being no odor and 10 being extreme odors).

[3] Alert/Action Level for the carbon bed evaluation represents an instantaneous TVOC concentration used to evaluate carbon bed saturation.

Table 2: Fenceline PCB Acceptable Ambient Concentration

Constituent of Interest	Acceptable Ambient Concentration[1]
PCBs	<10 µg/m^3

Definitions:

PCBs – Polychlorinated Biphenyls

µg/m^3 – micrograms per cubic meter

Notes:

[1] AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 3: Process Monitoring and Sampling Target Emission Rates for PCBs, PM_{10} and VOCs

Constituent of Interest	Target Emission Rate[1]
PCBs	<0.7 lb/hr
PM_{10}	<0.7 lb/hr
VOCs	<1.3 lb/hr

Definitions:

AHS – Air Handling System

PCBs – Polychlorinated Biphenyls

PM_{10} – Respirable particulate matter

VOCs – Volatile Organic Compounds

lb/hr – Pounds per hour

Notes:

[1] The target average emission rates represent the sum of the emissions from each of the 8 AHSs averaged over the project duration. Therefore, the total emissions from each AHS will be totaled daily and averaged over the duration of the project for comparison to Project Average Emission Rates.

Table 4: Weekly Fenceline Real-Time Maximum Concentrations Summary

	Perimeter of the Fenceline			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 12/9/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 12/10/19	0.1	67	0	No
Wed 12/11/19	0.2	12	0	No
Thu 12/12/19	0.1	39	0	No
Fri 12/13/19	0.1	33	0	No
	Perimeter of the Temporary Fabric Structure			
Date	**TVOC (ppm)**	**PM_{10} ($\mu g/m^3$)**	**Odor (0-8)**	**Visible Dust**
Mon 12/9/19	ND[1]	ND[1]	ND[1]	ND[1]
Tue 12/10/19	3.6	85	2	No
Wed 12/11/19	0.1	21	0	No
Thu 12/12/19	0.2	57	0	No
Fri 12/13/19	0.3	78	1	No

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} - Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Highlighted concentrations (if any) require further analysis (see **Table 5**).
- Hand-held monitoring values represent instantaneous concentrations unless otherwise noted.

[1] Hand-held data was not collected on this day.

Table 5: Weekly Fenceline Elevated Concentrations greater than the Action Levels

Parameter	Date	Time	Location	Wind Conditions	Elevated Concentration(s)	Background	Adjusted Concentration	Comments/Explanation
TVOC	NA	NA	NA	NA	NA	NA	NA	TVOC concentrations remained below the Action Level.
PM_{10}	NA	NA	NA	NA	NA	NA	NA	PM_{10} concentrations remained below the Action Level.

Definitions:

TVOC – Total Volatile Organic Compounds (ppm)

PM_{10} – Particulate Matter 10 micrometers or less ($\mu g/m^3$)

ppm – Parts per million

$\mu g/m^3$ – Micrograms per cubic meter

ND – No Data

NA – Not Applicable

Notes:

- Hand-held data represent instantaneous concentrations unless stated otherwise.

Table 6: Project-to-Date Average Fenceline PCB Results Summary

			Sample Location					
	Units	**AAC**	**PAM-1**	**PAM-2**	**PAM-3**	**PAM-4**	**PAM-5**	**PAM-6**
Project-to-Date Average PCBs	µg/m^3	<10	2.56	3.55	3.53	2.95	2.28	2.10

Definitions:
PAM – Portable Air Monitoring Station
µg/m^3 – Micrograms per cubic meter
NA – Not Applicable
ND – No Data

Notes:
- AAC is used for comparison of the average fenceline PCB results at the end of the project.

Table 7: Weekly TVOC Carbon Breakthrough Evaluation at 75% Bed Depth

			Monitoring Location							
Date	**Units**	**Target**	**AHS-1**	**AHS-2**	**AHS-3**	**AHS-4**	**AHS-5**	**AHS-6**	**AHS-7**	**AHS-8**
Mon 12/9/19	ppm	<1.0	0.470	0.680	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/10/19	ppm	<1.0	0.725	0.757	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/11/19	ppm	<1.0	0.215	0.240	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/12/19	ppm	<1.0	0.047	0.060	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/13/19	ppm	<1.0	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]

Definitions:
AHS – Air Handling System
NA – Not Applicable
ND – No Data
ppm – Parts per million

Notes:
- TVOC measurements represent concentrations at 75% bed depth.
- TVOC measurements over the Action Level of 1.0 ppm are shaded grey.
[1] AHS unit was not operational on this day.

Table 8: Process Monitoring Project-to-Date TVOC Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 12/9/19	--	--	0.239	0.099	0.140	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/10/19	--	--	0.438	0.151	0.287	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/11/19	--	--	0.114	0.036	0.078	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/12/19	--	--	0.022	0.001	0.021	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/13/19	--	--	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<1.3	1.197	--	--	--	--	--	--	--	--

Definitions:

AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:

- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 9: Process Monitoring Project-to-Date PM_{10} Emissions Summary

Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Mon 12/9/19	--	--	0.0038	0.0020	0.0018	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Tue 12/10/19	--	--	0.0015	0.0008	0.0007	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Wed 12/11/19	--	--	0.0004	0.0001	0.0003	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Thu 12/12/19	--	--	0.0006	0.0003	0.0003	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Fri 12/13/19	--	--	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.0464	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

[1] AHS unit was not operational on this day.

Table 10:Process Sampling PCB Emissions Summary

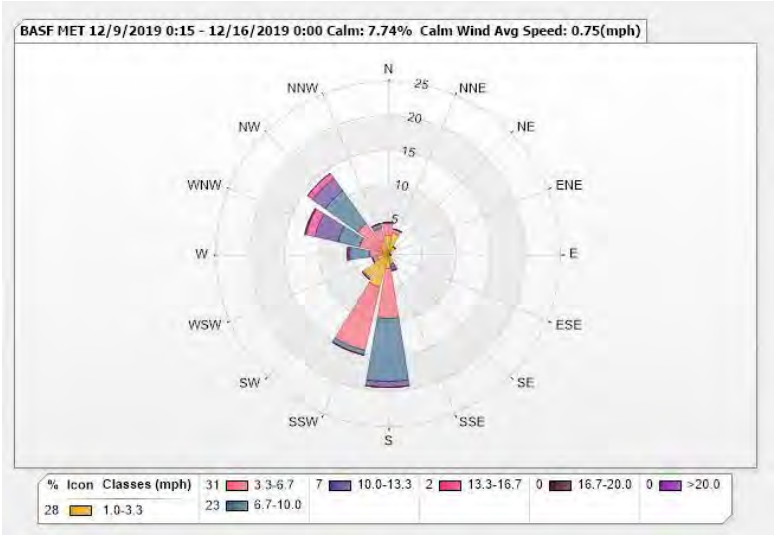
Date	Units	Target Emission Rate	Total System Emissions	AHS-1	AHS-2	AHS-3	AHS-4	AHS-5	AHS-6	AHS-7	AHS-8
			Weekly Summary								
Wed 12/11/19	--	--	0.032	--	0.032	--	--	--	--	--	--
			Project-to-Date Summary								
Project-to-Date Average	lb/hr	<0.7	0.228	--	--	--	--	--	--	--	--

Definitions:
AHS – Air Handling System
lb/hr – Pounds per hour
NA – Not Applicable
ND – No Data

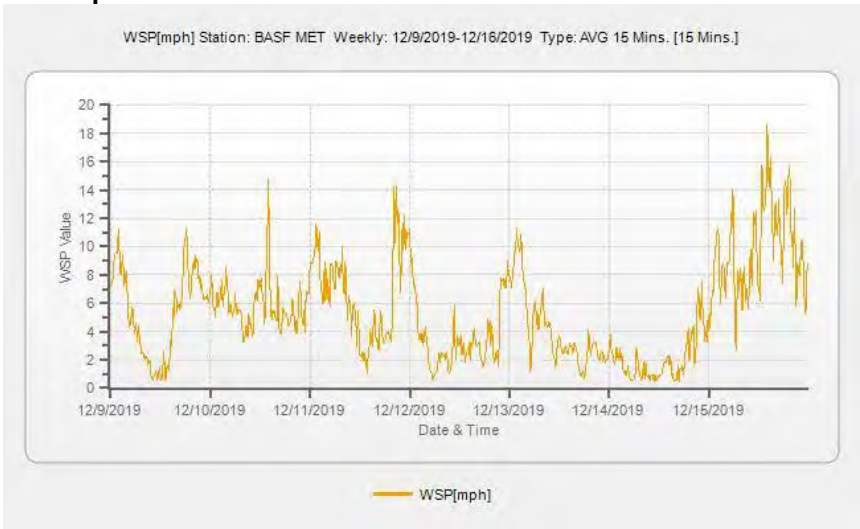
Notes:
- Air handling system PCB samples are collected at one operational location at a frequency of once per week.
- Target emission rate represents a project average and should be compared to the total system emissions rate.

Figure 1: Meteorological Summaries

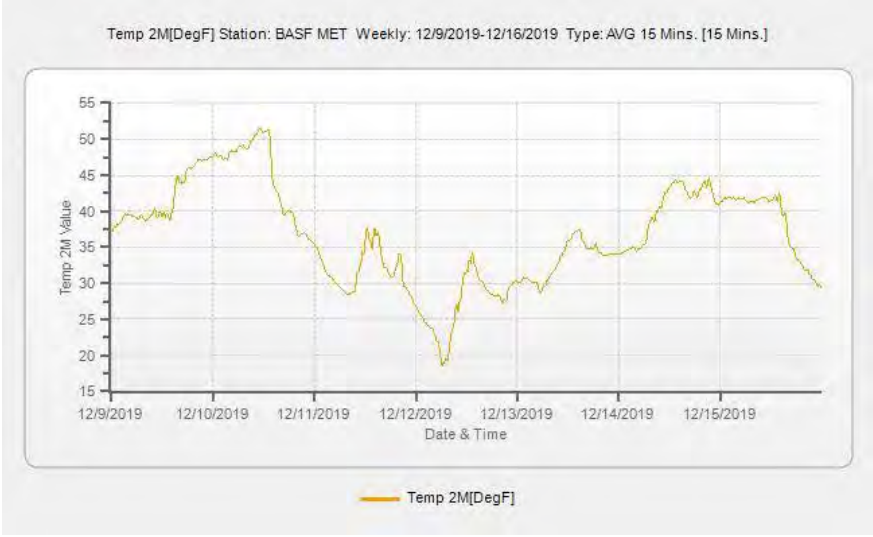
Wind Rose:



Wind Speed:



Temperature:



Relative Humidity:

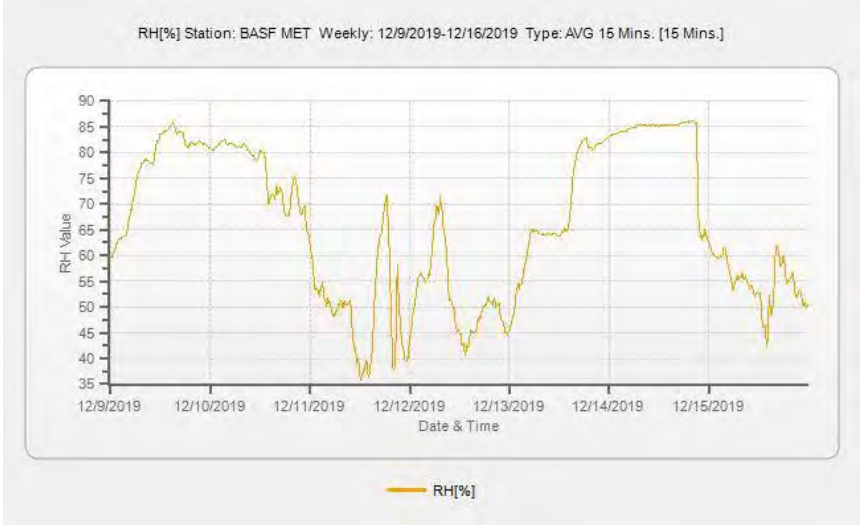


Figure 2: Site Map (12/9/19 – 12/13/19)



Appendix H – Water Quality Monitoring Data

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Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/11/18 – 12/20/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (9 sampling days) to evaluate conditions within the river during the remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/ conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes field turbidity and chemistry data collected during the above referenced reporting period

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging during the period 12/11/18 through 12/20/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings).

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan. The chemical sampling/ monitoring lab reports are presented in Attachment A.

Over the reporting period, there were several low level exceedances of the water quality criteria (Table 1). Zinc (1 exceedance) has been observed in excess of the guidance criteria previously during remedial activities and is not considered to be Site related. There were seven low level Chlorobenzene exceedances over the reporting period. There were also three low level exceedances of the sum of Dichlorobenzenes during the reporting period. Dichlorobenzes have been detected at low levels in the water samples previously, but not since 12/3/18 and never before in excess of the guidance value. There were also three exceedances for PCB Aroclor 1242 (total recoverable non-filtered water). For the first time in the program, PCB Aroclor 1248 was detected in excess of the guidance value. This singular exceedance of Aroclor 1248 is the only time in the entire monitoring program that a PCB of this concentration has been observed. Additionally, in all cases of PCB exceedances, the paired filtered water sample returned a ND for all PCB Aroclors. To date, over 210 samples had been collected/ analyzed and exceedances of the guidance criteria are extremely limited in nature. PCBs Aroclors are acknowledged as not being Site-related.

The field turbidity readings from the YSI 6920 sonde used during sampling are summarized below:

- Real-time turbidity observations at the Site had a maximum reading of 24.5 NTU during this period (n=83), with an overall average of 17.9 NTU.
- Turbidity was consistent with previous sampling events with the highest turbidity occurring at the lower and middle horizons (4.45 and 4.04 NTU average respectively). The surface horizon was slightly less turbid than the other horizons (average 2.9 NTU).

Summary

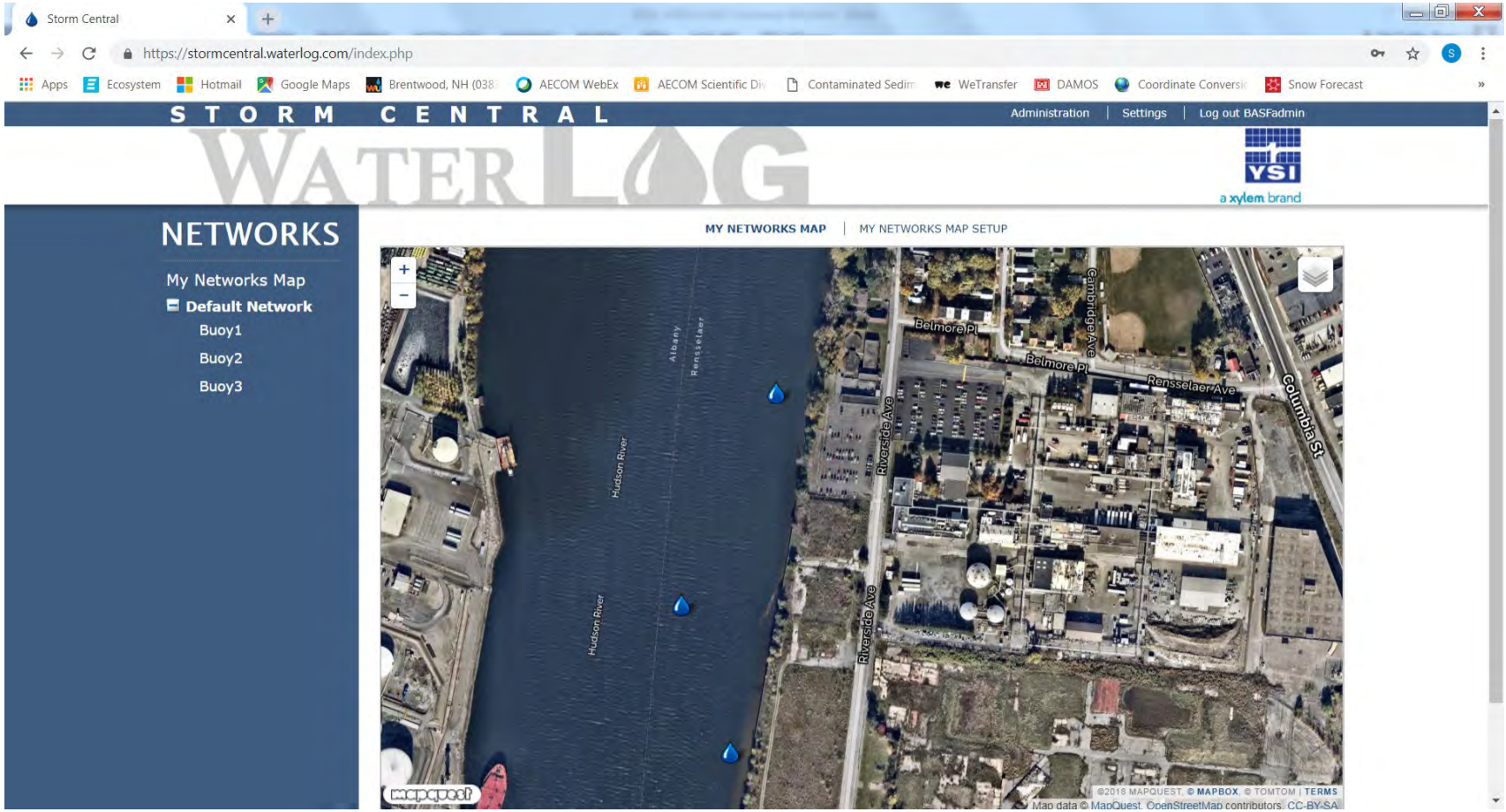
Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, upon the completion of the on-water remedial dredging program, the chemistry monitoring program has ceased for the year and will commence when the dredging program is re-mobilized later in 2019. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the de-mobilization of the dredging equipment/ infrastructure.

Table 1: Water Quality Exceedances Summary

Sample ID	Analyte	CAS_RN	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
121118-01-SW-U-B-1	BENZENE	71-43-2	T	µg/l	10	0.7	J	
121118-01-SW-U-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	16		X
121118-01-SW-U-B-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	3		
121118-02-SW-A-A-1	BENZENE	71-43-2	T	µg/l	10	1		
121118-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	27		X
121118-02-SW-A-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	5		X
121118-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
121118-03-SW-D-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.4		
121218-01-SW-U-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.497	J D2	X
121218-01-SW-U-A-1	BENZENE	71-43-2	T	µg/l	10	2		
121218-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	26		X
121218-01-SW-U-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	7		X
121218-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	1		
121218-02-SW-A-B-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.2		
121218-03-SW-D-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.186	J D1	
121218-03-SW-D-A-1	BENZENE	71-43-2	T	µg/l	10	0.4	J	
121218-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	7		X
121218-03-SW-D-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	1		
121318-01-SW-U-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	1	J	
121318-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
121418-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.6	J	
121418-01-SW-U-A-2	CHLOROBENZENE	108-90-7	T	µg/l	5	1		
121418-01-SW-U-A-2	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.3		
121418-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.7	J	
121418-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	3		
121418-03-SW-D-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.4		
121518-01-SW-U-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.369	J D1	X
121518-01-SW-U-A-1	BENZENE	71-43-2	T	µg/l	10	0.6	J	
121518-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	5		X
121518-01-SW-U-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.2		
121518-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	1		
121518-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	1		
121718-01-SW-U-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
121718-01-SW-U-C-1	ZINC	7440-66-6	D	µg/l	15.2	11.1	J	

Sample ID	Analyte	CAS_RN	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
121718-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
121718-02-SW-A-A-1	ZINC	7440-66-6	D	µg/l	15.3	10.7	J	
121718-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.2	J	
121818-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
121818-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
121818-02-SW-A-B-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.2		
121818-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	3		
121818-03-SW-D-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.2		
121918-01-SW-U-A-1	BENZENE	71-43-2	T	µg/l	10	0.2	J	
121918-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	3		
121918-01-SW-U-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.2		
121918-01-SW-U-A-1	ZINC	7440-66-6	D	µg/l	16.3	11.2	J	
121918-02-SW-A-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.25	J D1	**X**
121918-02-SW-A-A-1	BENZENE	71-43-2	T	µg/l	10	0.4	J	
121918-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	5		**X**
121918-02-SW-A-A-1	CHROMIUM, TOTAL	7440-47-3	D	µg/l	163.4	0.86	J	
121918-02-SW-A-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.3		
121918-02-SW-A-A-1	ZINC	7440-66-6	D	µg/l	16.3	13.1	J	
121918-03-SW-D-B-1	BENZENE	71-43-2	T	µg/l	10	0.3	J	
121918-03-SW-D-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	3		
121918-03-SW-D-B-1	ZINC	7440-66-6	D	µg/l	16.4	11.4	J	
121918-03-SW-D-B-2	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.298	J D1	**X**
121918-03-SW-D-B-2	BENZENE	71-43-2	T	µg/l	10	0.3	J	
121918-03-SW-D-B-2	CHLOROBENZENE	108-90-7	T	µg/l	5	3		
122018-01-SW-U-A-1	AROCLOR-1248	12672-29-6	T	µg/l	0.2	0.814	D1	**X**
122018-01-SW-U-A-1	BENZENE	71-43-2	T	µg/l	10	1		
122018-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	28		**X**
122018-01-SW-U-A-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	10		**X**
122018-01-SW-U-A-1	ZINC	7440-66-6	D	µg/l	16.6	17		**X**
122018-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.8	J	
122018-02-SW-A-B-1	ZINC	7440-66-6	D	µg/l	15.6	12.6	J	
122018-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
122018-03-SW-D-A-1	ZINC	7440-66-6	D	µg/l	15.7	12.3	J	

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 18, 2018 12:20

Project: Rensselaer

Account #: 04285
Group Number: 2017783
SDG: RNS68
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121118-01-SW-U-B-1 Grab Surface Water	12/11/2018 13:45	9936292
121118-01-SW-U-B-1 Grab Filtered Surface Water	12/11/2018 13:45	9936293
121118-02-SW-A-A-1 Grab Surface Water	12/11/2018 14:10	9936294
121118-02-SW-A-A-1 Grab Filtered Surface Water	12/11/2018 14:10	9936295
121118-03-SW-D-A-1 Grab Surface Water	12/11/2018 14:40	9936296
121118-03-SW-D-A-1 Grab Filtered Surface Water	12/11/2018 14:40	9936297
121118-01-SW-U-A-3 Grab Surface Water	12/11/2018 11:20	9936298
121118-01-SW-U-A-3 Grab Filtered Surface Water	12/11/2018 11:20	9936299
121118-TB01-01 Water	12/11/2018 16:00	9936300

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121118-01-SW-U-B-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:45
SDG#: RNS68-01

BASF Corporation
ELLE Sample #: WW 9936292
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.7 J	0.2	1	1
11997	Chlorobenzene	108-90-7	16	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	0.3 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	63,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183472AA	12/13/2018 09:13	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183472AA	12/13/2018 09:12	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 19:13	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121118-01-SW-U-B-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:45
SDG#: RNS68-01

BASF Corporation
ELLE Sample #: WW 9936292
ELLE Group #: 2017783
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:35	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 14:25	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121118-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 13:45
SDG#: RNS68-02

BASF Corporation
ELLE Sample #: WW 9936293
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 19:24	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:45	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-02-SW-A-A-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:10
SDG#: RNS68-03

BASF Corporation
ELLE Sample #: WW 9936294
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	1	0.2	1	1
11997	Chlorobenzene	108-90-7	27	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	4 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	0.5 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
	The LCS/LCSD surrogate(s) recovery is outside the QC acceptance limits as noted on the QC Summary. Since the recovery for the target analytes is compliant, the data is reported.					
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	64,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **121118-02-SW-A-A-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:10
SDG#: RNS68-03

BASF Corporation
ELLE Sample #: WW 9936294
ELLE Group #: 2017783
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183472AA	12/13/2018 09:40	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183472AA	12/13/2018 09:39	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 19:35	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:46	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 06:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 14:49	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121118-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:10
SDG#: RNS68-04

BASF Corporation
ELLE Sample #: WW 9936295
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 19:46	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-03-SW-D-A-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:40
SDG#: RNS68-05

BASF Corporation
ELLE Sample #: WW 9936296
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.4 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183472AA	12/13/2018 10:05	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183472AA	12/13/2018 10:04	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 19:57	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-03-SW-D-A-1 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:40
SDG#: RNS68-05

BASF Corporation
ELLE Sample #: WW 9936296
ELLE Group #: 2017783
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 14:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121118-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 14:40
SDG#: RNS68-06

BASF Corporation
ELLE Sample #: WW 9936297
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 20:07	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-01-SW-U-A-3 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 11:20
SDG#: RNS68-07EB

BASF Corporation
ELLE Sample #: WW 9936298
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183472AA	12/13/2018 10:31	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183472AA	12/13/2018 10:30	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 20:18	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121118-01-SW-U-A-3 Grab Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 11:20
SDG#: RNS68-07EB

BASF Corporation
ELLE Sample #: WW 9936298
ELLE Group #: 2017783
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-01-SW-U-A-3 Grab Filtered Surface Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 11:20
SDG#: RNS68-08EB

BASF Corporation
ELLE Sample #: WW 9936299
ELLE Group #: 2017783
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 20:29	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460038A	12/13/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183470705002A	12/14/2018 14:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183470571401	12/14/2018 07:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183470705002	12/14/2018 07:37	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183470571401	12/13/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121118-TB01-01 Water**
COC: 578384

Project Name: **Rensselaer**

Submittal Date/Time: 12/12/2018 10:15
Collection Date/Time: 12/11/2018 16:00
SDG#: RNS68-09TB

BASF Corporation
ELLE Sample #: WW 9936300
ELLE Group #: 2017783
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183472AA	12/13/2018 07:30	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183472AA	12/13/2018 07:29	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 12:20

Group Number: 2017783

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183472AA	Sample number(s): 9936292,9936294,9936296,9936298,9936300		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183460038A	Sample number(s): 9936292-9936299		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183470571401	Sample number(s): 9936292-9936299		
Mercury	N.D.	0.050	0.20
Batch number: 183470705002A	Sample number(s): 9936292-9936299		
Arsenic	N.D.	0.68	3.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	10.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18349001101A	Sample number(s): 9936292,9936294,9936296		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 12:20

Group Number: 2017783

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183472AA	Sample number(s): 9936292,9936294,9936296,9936298,9936300								
Benzene	20	20.33			102		80-120		
Chlorobenzene	20	21.58			108		80-120		
1,2-Dichlorobenzene	20	21.86			109		80-120		
1,3-Dichlorobenzene	20	20.9			105		80-120		
1,4-Dichlorobenzene	20	21.67			108		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183460038A	Sample number(s): 9936292-9936299								
PCB-1016	5.01	3.21	5.01	2.93	64	59	50-140	9	36
PCB-1260	5.00	4.77	5.00	4.62	95	92	50-140	3	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183470571401	Sample number(s): 9936292-9936299								
Mercury	1.00	0.858			86		85-115		
Batch number: 183470705002A	Sample number(s): 9936292-9936299								
Arsenic	10	10.54			105		85-115		
Cadmium	5.00	5.48			110		85-115		
Chromium	50	50			100		85-115		
Copper	50	51.48			103		85-115		
Lead	15	15.4			103		85-115		
Zinc	500	543.58			109		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18349001101A	Sample number(s): 9936292,9936294,9936296								
Total Hardness	40000	39540			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183470571401	Sample number(s): 9936292-9936299 UNSPK: 9936294									
Mercury	N.D.	1.00	0.798			80		80-120		
Batch number: 183470705002A	Sample number(s): 9936292-9936299 UNSPK: 9936292									
Arsenic	N.D.	10	10.9			109		70-130		
Cadmium	N.D.	5.00	5.25			105		70-130		
Chromium	N.D.	50	51.45			103		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 12:20

Group Number: 2017783

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	53.69			107		70-130		
Lead	N.D.	15	16			107		70-130		
Zinc	N.D.	500	526.27			105		70-130		
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18349001101A	Sample number(s): 9936292,9936294,9936296 UNSPK: 9936292									
Total Hardness	63500	80000	142040			98		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	**ug/l**		
Batch number: 183470571401	Sample number(s): 9936292-9936299 BKG: 9936294			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183470705002A	Sample number(s): 9936292-9936299 BKG: 9936292			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	2.55	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	**ug/l**		
Batch number: 18349001101A	Sample number(s): 9936292,9936294,9936296 BKG: 9936292			
Total Hardness	63500	65400	3 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183472AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/18/2018 12:20

Group Number: 2017783

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183472AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9936292	95	102	110	104
9936294	95	103	111	103
9936296	96	104	110	103
9936298	95	101	111	103
9936300	95	102	111	103
Blank	95	101	111	102
LCS	96	107	104	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183460038A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9936292	64	73	62	69
9936293	60	78	58	73
9936294	57	74	58	73
9936295	61	76	60	74
9936296	62	77	62	76
9936297	59	80	59	77
9936298	62	46	61	44
9936299	58	80	58	79
Blank	56	50	56	48
LCS	30*	82	30*	80
LCSD	28*	82	28*	79
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2017783 Sample # 9936292-300

COC # 578384

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Potable Water	Ground	NPDES	Surface	Other	Total # of Containers	Analysis Requested: PCBs (Filtered) F	PCBs (unfiltered)	Metals (Filtered) F	Metals (unfiltered) FN	Mercury N	Hardness N	TSS N	VOCs - 8260c H	Turbidity - SM2130	Remarks
121118-01-SW-U-B-1	12/11/18	1345	✓					✓					11	2	2	1	1	1	1		3		
121118-02-SW-A-A-1	12/11/18	1410	✓					✓			☑		11	2	2	1	1	1	1		3		
121118-03-SW-D-A-1	12/11/18	1440	✓					✓					11	2	2	1	1	1	1		3		
121118-04-SW-U-A-3	12/11/18	1120	✓					✓					11	2	2	1	1	1	1		3		
121118-FB01-01	12/11/18	1600	✓					✓					10	2	2	1	1	1			3		Equipment Blank
													1								1		

Preservation and Filtration Codes: F | FN | N | N | N | H

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

For Lab Use Only

FSC:

SCR#:

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/13/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/11/18	1700			

Received by [signature] 12/12/18 1015

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.1 | 2.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235892

Group Number(s): 2017783

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/12/2018 10:15
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:09 on 12/12/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.1	DT	Wet	Y	Bagged	N
2	DT131	2.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 21, 2018 12:00

Project: Rensselaer

Account #: 04285
Group Number: 2018300
SDG: RNS70
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121218-01-SW-U-A-1 Grab Surface Water	12/12/2018 10:15	9938524
121218-01-SW-U-A-1 Grab Filtered Surface Water	12/12/2018 10:15	9938525
121218-02-SW-A-B-1 Grab Surface Water	12/12/2018 10:50	9938526
121218-02-SW-A-B-1 Grab Filtered Surface Water	12/12/2018 10:50	9938527
121218-03-SW-D-A-1 Grab Surface Water	12/12/2018 11:15	9938528
121218-03-SW-D-A-1 Grab Filtered Surface Water	12/12/2018 11:15	9938529
121218-TB01-01 Water	12/12/2018 15:00	9938530

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121218-01-SW-U-A-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:15
SDG#: RNS70-01

BASF Corporation
ELLE Sample #: WW 9938524
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	2	0.2	1	1
11997	Chlorobenzene	108-90-7	26	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	6	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	0.7 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	0.497 JD2	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	0.497 J	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.92 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183473AA	12/13/2018 23:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183473AA	12/13/2018 23:17	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 18:21	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-01-SW-U-A-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:15
SDG#: RNS70-01

BASF Corporation
ELLE Sample #: WW 9938524
ELLE Group #: 2018300
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:37	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 15:05	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121218-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:15
SDG#: RNS70-02

BASF Corporation
ELLE Sample #: WW 9938525
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 18:32	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:55	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-02-SW-A-B-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:50
SDG#: RNS70-03

BASF Corporation
ELLE Sample #: WW 9938526
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	92,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183473AA	12/13/2018 23:44	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183473AA	12/13/2018 23:43	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 18:42	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-02-SW-A-B-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:50
SDG#: RNS70-03

BASF Corporation
ELLE Sample #: WW 9938526
ELLE Group #: 2018300
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 15:12	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121218-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 10:50
SDG#: RNS70-04

BASF Corporation
ELLE Sample #: WW 9938527
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 18:53	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 04:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-03-SW-D-A-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 11:15
SDG#: RNS70-05

BASF Corporation
ELLE Sample #: WW 9938528
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.4 J	0.2	1	1
11997	Chlorobenzene	108-90-7	7	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	1 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	0.186 JD1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	0.186 J	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,800	3,000	10,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183473AA	12/14/2018 00:10	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183473AA	12/14/2018 00:09	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 19:03	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-03-SW-D-A-1 Grab Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 11:15
SDG#: RNS70-05

BASF Corporation
ELLE Sample #: WW 9938528
ELLE Group #: 2018300
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	2	18354001101A	12/20/2018 08:42	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 11:15
SDG#: RNS70-06

BASF Corporation
ELLE Sample #: WW 9938529
ELLE Group #: 2018300
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183470036A	12/14/2018 19:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183470036A	12/13/2018 19:29	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183480705001A	12/18/2018 05:01	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183480571402	12/17/2018 12:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183480705001	12/17/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183480571402	12/17/2018 07:30	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121218-TB01-01 Water**
COC: 578385

Project Name: **Rensselaer**

Submittal Date/Time: 12/13/2018 10:00
Collection Date/Time: 12/12/2018 15:00
SDG#: RNS70-07TB

BASF Corporation
ELLE Sample #: WW 9938530
ELLE Group #: 2018300
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183473AA	12/13/2018 21:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183473AA	12/13/2018 21:34	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 12:00

Group Number: 2018300

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183473AA	Sample number(s): 9938524,9938526,9938528,9938530		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183470036A	Sample number(s): 9938524-9938529		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183480571402	Sample number(s): 9938524-9938529		
Mercury	N.D.	0.050	0.20
Batch number: 183480705001A	Sample number(s): 9938524-9938529		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18349001101A	Sample number(s): 9938524,9938526		
Total Hardness	N.D.	3,000	10,000
Batch number: 18354001101A	Sample number(s): 9938528		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 12:00

Group Number: 2018300

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183473AA	Sample number(s): 9938524,9938526,9938528,9938530								
Benzene	20	20.81			104		80-120		
Chlorobenzene	20	21.94			110		80-120		
1,2-Dichlorobenzene	20	21.92			110		80-120		
1,3-Dichlorobenzene	20	20.86			104		80-120		
1,4-Dichlorobenzene	20	21.87			109		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183470036A	Sample number(s): 9938524-9938529								
PCB-1016	5.01	4.20	5.01	3.36	84	67	50-140	22	36
PCB-1260	5.00	4.75	5.00	4.15	95	83	50-140	13	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183480571402	Sample number(s): 9938524-9938529								
Mercury	1.00	0.869			87		85-115		
Batch number: 183480705001A	Sample number(s): 9938524-9938529								
Arsenic	10	10.33			103		85-115		
Cadmium	5.00	5.35			107		85-115		
Chromium	50	50.01			100		85-115		
Copper	50	49.99			100		85-115		
Lead	15	15.34			102		85-115		
Zinc	500	533.88			107		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18349001101A	Sample number(s): 9938524,9938526								
Total Hardness	40000	39540			99		85-110		
Batch number: 18354001101A	Sample number(s): 9938528								
Total Hardness	40000	39520			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183480705001A	Sample number(s): 9938524-9938529 UNSPK: 9938524									
Arsenic	N.D.	10	10.19			102		70-130		
Cadmium	N.D.	5.00	5.57			111		70-130		
Chromium	0.917	50	52.74			104		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 12:00

Group Number: 2018300

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	51.57			103		70-130		
Lead	N.D.	15	16.56			110		70-130		
Zinc	N.D.	500	508.64			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183480705001A	Sample number(s): 9938524-9938529 BKG: 9938524			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.917	1.22	29* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	1.18	200* (1)	20
Zinc	N.D.	9.54	200* (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183473AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9938524	95	104	112	105
9938526	95	102	111	103
9938528	94	102	111	104
9938530	94	100	112	104
Blank	94	101	112	104
LCS	97	109	104	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183470036A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 12:00

Group Number: 2018300

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183470036A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9938524	75	86	71	79
9938525	78	84	71	78
9938526	78	85	73	79
9938527	77	97	70	79
9938528	82	85	74	78
9938529	77	85	71	80
Blank	97	56	90	52
LCS	80	64	73	61
LCSD	65	58	59	54
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2018300 Sample # 9938524-30

COC # 578385

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehon	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ___

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
121218-01-SW-U-A-1	12/12/18	1015	✓		11	2	2	1	1	1	1		3	
121218-02-SW-A-B-1	12/12/18	1050	✓		11	2	2	1	1	1	1		3	
121218-03-SW-D-A-1	12/12/18	1115	✓		11	2	2	1	1	1	1		3	
121218-TB01-01	12/12/18	1505	✓		1								1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/14/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehon	12/12/18	1630			
			Gstrecker	12-13-18	1000

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236022

Group Number(s): 2018300

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/13/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 12:51 on 12/13/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	0.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 20, 2018 09:50

Project: Rensselaer

Account #: 04285
Group Number: 2018790
SDG: RNS72
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121318-01-SW-U-B-1 Grab Surface Water	12/13/2018 08:45	9941005
121318-01-SW-U-B-1 Grab Filtered Surface Water	12/13/2018 08:45	9941006
121318-02-SW-A-C-1 Grab Surface Water	12/13/2018 09:20	9941007
121318-02-SW-A-C-1 Grab Filtered Surface Water	12/13/2018 09:20	9941008
121318-03-SW-D-A-1 Grab Surface Water	12/13/2018 09:35	9941009
121318-03-SW-D-A-1 Grab Filtered Surface Water	12/13/2018 09:35	9941010
121318-TB01-01 Water	12/13/2018 12:00	9941011

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121318-01-SW-U-B-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 08:45
SDG#: RNS72-01

BASF Corporation
ELLE Sample #: WW 9941005
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183491AA	12/15/2018 09:36	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183491AA	12/15/2018 09:35	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 22:55	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-01-SW-U-B-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 08:45
SDG#: RNS72-01

BASF Corporation
ELLE Sample #: WW 9941005
ELLE Group #: 2018790
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:56	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:56	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:56	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:56	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:56	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:28	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 15:46	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121318-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 08:45
SDG#: RNS72-02

BASF Corporation
ELLE Sample #: WW 9941006
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 23:06	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:57	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:57	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:57	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:57	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:57	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:31	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-02-SW-A-C-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:20
SDG#: RNS72-03

BASF Corporation
ELLE Sample #: WW 9941007
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183491AA	12/15/2018 10:02	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183491AA	12/15/2018 10:01	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 23:16	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-02-SW-A-C-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:20
SDG#: RNS72-03

BASF Corporation
ELLE Sample #: WW 9941007
ELLE Group #: 2018790
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:48	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:48	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:48	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:48	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:48	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:18	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001101A	12/15/2018 15:54	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121318-02-SW-A-C-1 Grab Filtered Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:20
SDG#: RNS72-04

BASF Corporation
ELLE Sample #: WW 9941008
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 23:27	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:59	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:59	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:59	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:59	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 20:59	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:33	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-03-SW-D-A-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:35
SDG#: RNS72-05

BASF Corporation
ELLE Sample #: WW 9941009
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.102	0.512	1
14188	PCB-1221	11104-28-2	N.D. D1	0.102	0.512	1
14188	PCB-1232	11141-16-5	N.D. D1	0.102	0.512	1
14188	PCB-1242	53469-21-9	N.D. D1	0.102	0.512	1
14188	PCB-1248	12672-29-6	N.D. D1	0.102	0.512	1
14188	PCB-1254	11097-69-1	N.D. D1	0.102	0.512	1
14188	PCB-1260	11096-82-5	N.D. D1	0.102	0.512	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0758	0.512	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0758	0.512	1
14188	Total PCBs	1336-36-3	N.D.	0.0758	0.512	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183491AA	12/15/2018 10:28	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183491AA	12/15/2018 10:27	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 23:37	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-03-SW-D-A-1 Grab Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:35
SDG#: RNS72-05

BASF Corporation
ELLE Sample #: WW 9941009
ELLE Group #: 2018790
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:04	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:04	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:04	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:04	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:04	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:39	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001101B	12/15/2018 16:02	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121318-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 09:35
SDG#: RNS72-06

BASF Corporation
ELLE Sample #: WW 9941010
ELLE Group #: 2018790
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 23:48	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183480039A	12/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:05	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:05	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:05	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:05	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705002A	12/18/2018 21:05	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705002A	12/19/2018 10:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705002	12/18/2018 04:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121318-TB01-01 Water**
COC: 578321

Project Name: **Rensselaer**

Submittal Date/Time: 12/14/2018 10:12
Collection Date/Time: 12/13/2018 12:00
SDG#: RNS72-07TB

BASF Corporation
ELLE Sample #: WW 9941011
ELLE Group #: 2018790
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183491AA	12/15/2018 10:54	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183491AA	12/15/2018 10:53	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2018 09:50

Group Number: 2018790

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183491AA	Sample number(s): 9941005,9941007,9941009,9941011		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183480039A	Sample number(s): 9941005-9941010		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183510571401	Sample number(s): 9941005-9941010		
Mercury	N.D.	0.050	0.20
Batch number: 183510705002A	Sample number(s): 9941005-9941010		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18349001101A	Sample number(s): 9941005,9941007		
Total Hardness	N.D.	3,000	10,000
Batch number: 18349001101B	Sample number(s): 9941009		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2018 09:50

Group Number: 2018790

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183491AA	Sample number(s): 9941005,9941007,9941009,9941011								
Benzene	20	20.48			102		80-120		
Chlorobenzene	20	21.65			108		80-120		
1,2-Dichlorobenzene	20	21.2			106		80-120		
1,3-Dichlorobenzene	20	21.46			107		80-120		
1,4-Dichlorobenzene	20	20.53			103		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183480039A	Sample number(s): 9941005-9941010								
PCB-1016	5.01	4.71	5.01	4.54	94	91	50-140	4	36
PCB-1260	5.00	4.46	5.00	4.31	89	86	50-140	4	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183510571401	Sample number(s): 9941005-9941010								
Mercury	1.00	0.890			89		85-115		
Batch number: 183510705002A	Sample number(s): 9941005-9941010								
Arsenic	10	10.06			101		85-115		
Cadmium	5.00	5.13			103		85-115		
Chromium	50	51.25			102		85-115		
Copper	50	51.4			103		85-115		
Lead	15	14.95			100		85-115		
Zinc	500	523.97			105		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18349001101A	Sample number(s): 9941005,9941007								
Total Hardness	40000	39540			99		85-110		
Batch number: 18349001101B	Sample number(s): 9941009								
Total Hardness	40000	39540			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183510571401	Sample number(s): 9941005-9941010 UNSPK: 9941006									
Mercury	N.D.	1.00	0.897			90		80-120		
Batch number: 183510705002A	Sample number(s): 9941005-9941010 UNSPK: 9941007									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2018 09:50

Group Number: 2018790

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Arsenic	N.D.	10	10.97			110		70-130		
Cadmium	N.D.	5.00	5.33			107		70-130		
Chromium	N.D.	50	55.09			110		70-130		
Copper	N.D.	50	52.57			105		70-130		
Lead	N.D.	15	15.73			105		70-130		
Zinc	N.D.	500	520.1			104		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183510571401	Sample number(s): 9941005-9941010 BKG: 9941006			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183510705002A	Sample number(s): 9941005-9941010 BKG: 9941007			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18349001101B	Sample number(s): 9941009 BKG: 9941009			
Total Hardness	70920	70020	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9941005	96	104	111	104
9941007	95	100	113	104

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/20/2018 09:50

Group Number: 2018790

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183491AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9941009	95	104	110	104
9941011	95	104	110	103
Blank	96	105	112	104
LCS	95	100	105	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183480039A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9941005	85	85	78	80
9941006	83	86	77	80
9941007	86	85	79	77
9941008	83	80	76	73
9941009	81	87	75	79
9941010	87	84	79	82
Blank	64	41	59	38
LCS	70	53	65	50
LCSD	71	78	66	73
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2018790 Sample # 9941005 – 1011

COC # 578321

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Preservation and Filtration Codes: F | | FN | N | N | N | | H | | |

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered)	PCBs (Unfiltered)	Metals (Filtered)	Metals (Unfiltered)	Mercury	Hardness	TSS	VOCs – 8260c	Turbidity – SM2130
121318-01-SW-U-B-1	12/13/18	0845	✓		11	2	2	1	1	1	1		3	
121318-02-SW-A-C-1	12/13/18	0920	✓		11	2	2	1	1	1	1		3	
121318-03-SW-D-A-1	12/13/18	0935	✓		11	2	2	1	1	1	1		3	
121318-TB01-01	12/13/18	1200	✓		1								1	

Analysis Requested

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/15/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/13/18	1700			
			[signature]	12-14-18	1012

EDD Required? (Yes) No
If yes, format: per contract
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____
Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236186

Group Number(s): 2018790

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/14/2018 10:12
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief (12429) at 12:22 on 12/14/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 21, 2018 10:01

Project: Rensselaer

Account #: 04285
Group Number: 2019139
SDG: RNS74
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121418-01-SW-U-A-1 Grab Surface Water	12/14/2018 09:20	9942974
121418-01-SW-U-A-1 Grab Filtered Surface Water	12/14/2018 09:20	9942975
121418-02-SW-A-A-1 Grab Surface Water	12/14/2018 09:55	9942976
121418-02-SW-A-A-1 Grab Filtered Surface Water	12/14/2018 09:55	9942977
121418-03-SW-D-A-1 Grab Surface Water	12/14/2018 10:25	9942978
121418-03-SW-D-A-1 Grab Filtered Surface Water	12/14/2018 10:25	9942979
121418-TB01-01 Water	12/14/2018 12:00	9942980
121418-01-SW-U-A-2 Grab Surface Water	12/14/2018 09:35	9942981
121418-01-SW-U-A-2 Grab Filtered Surface Water	12/14/2018 09:35	9942982

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121418-01-SW-U-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:20
SDG#: RNS74-01

BASF Corporation
ELLE Sample #: WW 9942974
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.6 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183522AA	12/18/2018 09:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183522AA	12/18/2018 09:33	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 14:54	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-01-SW-U-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:20
SDG#: RNS74-01

BASF Corporation
ELLE Sample #: WW 9942974
ELLE Group #: 2019139
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001103A	12/16/2018 01:59	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121418-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:20
SDG#: RNS74-02

BASF Corporation
ELLE Sample #: WW 9942975
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:04	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:54	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-02-SW-A-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:55
SDG#: RNS74-03

BASF Corporation
ELLE Sample #: WW 9942976
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.7 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183522AA	12/18/2018 10:00	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183522AA	12/18/2018 09:59	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:15	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-02-SW-A-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:55
SDG#: RNS74-03

BASF Corporation
ELLE Sample #: WW 9942976
ELLE Group #: 2019139
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 11:56	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001103A	12/16/2018 02:07	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121418-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:55
SDG#: RNS74-04

BASF Corporation
ELLE Sample #: WW 9942977
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:25	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:03	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571401	12/19/2018 13:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571401	12/19/2018 09:35	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-03-SW-D-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 10:25
SDG#: RNS74-05

BASF Corporation
ELLE Sample #: WW 9942978
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	3	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.4 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183522AA	12/18/2018 10:26	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183522AA	12/18/2018 10:25	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:36	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-03-SW-D-A-1 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 10:25
SDG#: RNS74-05

BASF Corporation
ELLE Sample #: WW 9942978
ELLE Group #: 2019139
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:05	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571402	12/20/2018 13:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571402	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001103A	12/16/2018 02:15	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121418-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 10:25
SDG#: RNS74-06

BASF Corporation
ELLE Sample #: WW 9942979
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:46	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:07	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571402	12/20/2018 13:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-TB01-01 Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 12:00
SDG#: RNS74-07TB

BASF Corporation
ELLE Sample #: WW 9942980
ELLE Group #: 2019139
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183522AA	12/18/2018 08:16	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183522AA	12/18/2018 08:15	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-01-SW-U-A-2 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:35
SDG#: RNS74-08FD

BASF Corporation
ELLE Sample #: WW 9942981
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.3 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183522AA	12/18/2018 10:52	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183522AA	12/18/2018 10:51	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 15:56	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121418-01-SW-U-A-2 Grab Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:35
SDG#: RNS74-08FD

BASF Corporation
ELLE Sample #: WW 9942981
ELLE Group #: 2019139
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:09	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571402	12/20/2018 13:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571402	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18349001103A	12/16/2018 02:23	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121418-01-SW-U-A-2 Grab Filtered Surface Water**
COC: 578322

Project Name: **Rensselaer**

Submittal Date/Time: 12/15/2018 10:40
Collection Date/Time: 12/14/2018 09:35
SDG#: RNS74-09FD

BASF Corporation
ELLE Sample #: WW 9942982
ELLE Group #: 2019139
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183510002A	12/18/2018 16:07	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183510002A	12/17/2018 15:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183510705005A	12/19/2018 12:11	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183510571402	12/20/2018 13:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183510705005	12/18/2018 05:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183510571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 10:01

Group Number: 2019139

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183522AA	Sample number(s): 9942974,9942976,9942978,9942980-9942981		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183510002A	Sample number(s): 9942974-9942979,9942981-9942982		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183510571401	Sample number(s): 9942974-9942977		
Mercury	N.D.	0.050	0.20
Batch number: 183510571402	Sample number(s): 9942978-9942979,9942981-9942982		
Mercury	N.D.	0.050	0.20
Batch number: 183510705005A	Sample number(s): 9942974-9942979,9942981-9942982		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18349001103A	Sample number(s): 9942974,9942976,9942978,9942981		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 10:01

Group Number: 2019139

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183522AA	Sample number(s): 9942974,9942976,9942978,9942980-9942981								
Benzene	20	21.34	20	21.9	107	109	80-120	3	30
Chlorobenzene	20	21.96	20	22.37	110	112	80-120	2	30
1,2-Dichlorobenzene	20	21.69	20	21.83	108	109	80-120	1	30
1,3-Dichlorobenzene	20	21.27	20	20.97	106	105	80-120	1	30
1,4-Dichlorobenzene	20	21.59	20	21.84	108	109	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183510002A	Sample number(s): 9942974-9942979,9942981-9942982								
PCB-1016	5.01	3.90	5.01	3.82	78	76	50-140	2	36
PCB-1260	5.00	4.45	5.00	4.40	89	88	50-140	1	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183510571401	Sample number(s): 9942974-9942977								
Mercury	1.00	0.890			89		85-115		
Batch number: 183510571402	Sample number(s): 9942978-9942979,9942981-9942982								
Mercury	1.00	0.879	1.00	0.893	88	89	85-115	2	20
Batch number: 183510705005A	Sample number(s): 9942974-9942979,9942981-9942982								
Arsenic	10	10.32			103		85-115		
Cadmium	5.00	5.06			101		85-115		
Chromium	50	49.67			99		85-115		
Copper	50	50.66			101		85-115		
Lead	15	15.45			103		85-115		
Zinc	500	514.63			103		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18349001103A	Sample number(s): 9942974,9942976,9942978,9942981								
Total Hardness	40000	39940			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183510705005A	Sample number(s): 9942974-9942979,9942981-9942982 UNSPK: 9942974									
Arsenic	N.D.	10	10.68			107		70-130		
Cadmium	N.D.	5.00	5.15			103		70-130		
Chromium	N.D.	50	50.55			101		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 10:01

Group Number: 2019139

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	51.17			102		70-130		
Lead	N.D.	15	15.56			104		70-130		
Zinc	N.D.	500	510.88			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183510705005A	Sample number(s): 9942974-9942979,9942981-9942982 BKG: 9942974			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183522AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9942974	95	104	110	105
9942976	94	102	111	105
9942978	94	102	111	106
9942980	94	100	111	105
9942981	95	100	111	105
Blank	95	103	112	104
LCS	96	105	104	102
LCSD	96	104	104	101
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/21/2018 10:01

Group Number: 2019139

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183510002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9942974	74	84	67	75
9942975	73	86	66	82
9942976	70	82	64	76
9942977	72	85	65	80
9942978	72	74	65	68
9942979	76	90	69	83
9942981	75	75	68	73
9942982	73	84	66	77
Blank	64	76	59	71
LCS	34	76	31*	72
LCSD	35	59	32*	57
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 20/9159 Sample # 9942974-82

COC # 578322

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☑ Surface ☑ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Lf:Hered)	F PCBs (Unf:Hered)	F/N Metals (Lf:Hered)	N Metals (Unf:Hered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM 2130	Remarks
121418-01-SW-U-A-1	12/14/18	0920	✓		11	2	2	1	1	1	1		3		
121418-02-SW-A-A-1	12/14/18	0955	✓		11	2	2	1	1	1	1		3		
121418-03-SW-D-A-1	12/14/18	1025	✓		11	2	2	1	1	1	1		3		
121418-TB01-01	12/14/18	1200	✓		1								1		
121418-01-SW-U-A-2	12/14/18	0935	✓		11	2	2	1	1	1	1		3		Field Duplicate

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/16/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/14/18	1530			
			[signature]	12/15/18	1040

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 2.4 3.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236328

Group Number(s): 2019139

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/15/2018 10:40
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 11:48 on 12/15/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	3.1	DT	Wet	Y	Bagged	N
2	DT42-02	2.4	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 26, 2018 10:24

Project: Rensselaer

Account #: 04285
Group Number: 2019707
SDG: RNS75
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121518-01-SW-U-A-1 Grab Surface Water	12/15/2018 09:25	9945618
121518-01-SW-U-A-1 Grab Filtered Surface Water	12/15/2018 09:25	9945619
121518-02-SW-A-A-1 Grab Surface Water	12/15/2018 09:55	9945620
121518-02-SW-A-A-1 Grab Filtered Surface Water	12/15/2018 09:55	9945621
121518-03-SW-D-A-1 Grab Surface Water	12/15/2018 10:25	9945622
121518-03-SW-D-A-1MS Grab Surface Water	12/15/2018 10:25	9945623
121518-03-SW-D-A-1MSD Grab Surface Water	12/15/2018 10:25	9945624
121518-03-SW-D-A-1DUP Grab Surface Water	12/15/2018 10:25	9945625
121518-03-SW-D-A-1 Grab Filtered Surface Water	12/15/2018 10:25	9945626
121518-03-SW-D-A-1MS Grab Filtered Surface Water	12/15/2018 10:25	9945627
121518-03-SW-D-A-1MSD Grab Filtered Surface Water	12/15/2018 10:25	9945628
121518-03-SW-D-A-1DUP Grab Filtered Surface Water	12/15/2018 10:25	9945629
121518-01-SW-U-A-3 Grab Water	12/15/2018 12:30	9945630
121518-01-SW-U-A-3 Grab Filtered Water	12/15/2018 12:30	9945631
121718-01-SW-U-C-1 Grab Surface Water	12/17/2018 09:10	9945632
121718-01-SW-U-C-1 Grab Filtered Surface Water	12/17/2018 09:10	9945633
121718-02-SW-A-A-1 Grab Surface Water	12/17/2018 09:30	9945634
121718-02-SW-A-A-1 Grab Filtered Surface Water	12/17/2018 09:30	9945635
121718-03-SW-D-A-1 Grab Surface Water	12/17/2018 10:30	9945636
121718-03-SW-D-A-1 Grab Filtered Surface Water	12/17/2018 10:30	9945637
121717-TB01-01 Water	12/17/2018 12:30	9945638

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121518-01-SW-U-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:25
SDG#: RNS75-01

BASF Corporation
ELLE Sample #: WW 9945618
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.6 J	0.2	1	1
11997	Chlorobenzene	108-90-7	5	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	0.369 JD1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	0.369 J	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 11:45	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 11:44	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 18:12	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121518-01-SW-U-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:25
SDG#: RNS75-01

BASF Corporation
ELLE Sample #: WW 9945618
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:33	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:51	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:33	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:33	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:51	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:33	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 08:50	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:25
SDG#: RNS75-02

BASF Corporation
ELLE Sample #: WW 9945619
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 18:22	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:35	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:52	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:35	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:35	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:52	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:35	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-02-SW-A-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:55
SDG#: RNS75-03

BASF Corporation
ELLE Sample #: WW 9945620
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 12:11	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 12:10	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 18:33	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121518-02-SW-A-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:55
SDG#: RNS75-03

BASF Corporation
ELLE Sample #: WW 9945620
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:58	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:58	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 08:58	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 09:55
SDG#: RNS75-04

BASF Corporation
ELLE Sample #: WW 9945621
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 18:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:44	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:59	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:44	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:44	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:59	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:44	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:07	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05BKG

BASF Corporation
ELLE Sample #: WW 9945622
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 08:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 08:43	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 18:54	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121518-03-SW-D-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05BKG

BASF Corporation
ELLE Sample #: WW 9945622
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:20	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:40	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:20	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:20	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:40	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:20	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 14:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 09:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1MS Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05MS

BASF Corporation
ELLE Sample #: WW 9945623
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	25	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	22	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	23	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.98 D2	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	5.55 D2	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	10.5	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.6	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	49.2	0.70	4.0	1
06033	Copper	7440-50-8	49.5	9.9	40.0	1
06035	Lead	7439-92-1	15.1	1.1	3.0	1
06049	Zinc	7440-66-6	503	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.86	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	149,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 09:10	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 09:09	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 19:04	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121518-03-SW-D-A-1MS Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05MS

BASF Corporation
ELLE Sample #: WW 9945623
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:26	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:26	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:26	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:26	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 14:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 09:14	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1MSD Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05MSD

BASF Corporation
ELLE Sample #: WW 9945624
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	26	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	24	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	22	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	24	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.71 D2	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	5.22 D2	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	9.94	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.3	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	50.6	0.70	4.0	1
06033	Copper	7440-50-8	50.7	9.9	40.0	1
06035	Lead	7439-92-1	15.7	1.1	3.0	1
06049	Zinc	7440-66-6	516	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.85	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	151,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 09:36	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 09:35	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530006A	12/20/2018 19:15	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121518-03-SW-D-A-1MSD Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05MSD

BASF Corporation
ELLE Sample #: WW 9945624
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530006A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:28	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:28	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:28	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:28	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 14:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 09:23	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1DUP Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-05DUP

BASF Corporation
ELLE Sample #: WW 9945625
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.72 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:24	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:43	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:24	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:24	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 13:43	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:24	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 14:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 09:31	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-06BKG

BASF Corporation
ELLE Sample #: WW 9945626
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D2	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D2	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 20:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:42	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 16:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1MS Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-06MS

BASF Corporation
ELLE Sample #: WW 9945627
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.39 D2	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D2	0.116	0.581	1
14188	PCB-1260	11096-82-5	5.17 D2	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0860	0.581	1
14188	Total PCBs	1336-36-3	9.55	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.2	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	50.8	0.70	4.0	1
06033	Copper	7440-50-8	53.4	9.9	40.0	1
06035	Lead	7439-92-1	15.1	1.1	3.0	1
06049	Zinc	7440-66-6	533	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.93	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 20:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:48	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 16:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1MSD Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-06MSD

BASF Corporation
ELLE Sample #: WW 9945628
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.78 D2	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D2	0.121	0.607	1
14188	PCB-1260	11096-82-5	6.09 D2	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0898	0.607	1
14188	Total PCBs	1336-36-3	11.9	0.0898	0.607	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	9.8	0.68	2.0	1
06028	Cadmium	7440-43-9	4.8	0.15	1.0	1
06031	Chromium	7440-47-3	48.3	0.70	4.0	1
06033	Copper	7440-50-8	52.7	9.9	40.0	1
06035	Lead	7439-92-1	15.2	1.1	3.0	1
06049	Zinc	7440-66-6	504	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:49	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-03-SW-D-A-1DUP Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 10:25
SDG#: RNS75-06DUP

BASF Corporation
ELLE Sample #: WW 9945629
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:46	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 16:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-01-SW-U-A-3 Grab Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 12:30
SDG#: RNS75-07EB

BASF Corporation
ELLE Sample #: WW 9945630
ELLE Group #: 2019707
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D2	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D2	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	10,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 10:02	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 10:01	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:10	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-01-SW-U-A-3 Grab Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 12:30
SDG#: RNS75-07EB

BASF Corporation
ELLE Sample #: WW 9945630
ELLE Group #: 2019707
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:53	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 09:44	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **121518-01-SW-U-A-3 Grab Filtered Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/15/2018 12:30
SDG#: RNS75-08EB

BASF Corporation
ELLE Sample #: WW 9945631
ELLE Group #: 2019707
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D2	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D2	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 14:55	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121718-01-SW-U-C-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:10
SDG#: RNS75-09

BASF Corporation
ELLE Sample #: WW 9945632
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D2	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D2	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 10:28	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 10:27	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:31	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121718-01-SW-U-C-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:10
SDG#: RNS75-09

BASF Corporation
ELLE Sample #: WW 9945632
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:00	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 10:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121718-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:10
SDG#: RNS75-10

BASF Corporation
ELLE Sample #: WW 9945633
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D2	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D2	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:41	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:02	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121718-02-SW-A-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:30
SDG#: RNS75-11

BASF Corporation
ELLE Sample #: WW 9945634
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D2	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D2	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.5	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 10:54	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 10:53	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 21:52	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121718-02-SW-A-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:30
SDG#: RNS75-11

BASF Corporation
ELLE Sample #: WW 9945634
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:03	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 10:21	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121718-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 09:30
SDG#: RNS75-12

BASF Corporation
ELLE Sample #: WW 9945635
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D2	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D2	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 22:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705002A	12/20/2018 15:05	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571402	12/20/2018 17:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705002	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571402	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121718-03-SW-D-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 10:30
SDG#: RNS75-13

BASF Corporation
ELLE Sample #: WW 9945636
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.		0.2	1	1
11997	Chlorobenzene	108-90-7	0.2	J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.		0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.		0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.		0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**		**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D.	D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D.	D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D.	D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D.	D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D.	D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D.	D2	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D.	D2	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D.	D2	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D.	D2	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.		0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**		**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.		0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.		0.15	1.0	1
06031	Chromium	7440-47-3	N.D.		0.70	4.0	1
06033	Copper	7440-50-8	N.D.		9.9	40.0	1
06035	Lead	7439-92-1	N.D.		1.1	3.0	1
06049	Zinc	7440-66-6	N.D.		6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,300		6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 11:19	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 11:18	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 22:13	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121718-03-SW-D-A-1 Grab Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 10:30
SDG#: RNS75-13

BASF Corporation
ELLE Sample #: WW 9945636
ELLE Group #: 2019707
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:46	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 14:01	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:46	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:46	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 14:01	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:46	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001101A	12/20/2018 10:28	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121718-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 10:30
SDG#: RNS75-14

BASF Corporation
ELLE Sample #: WW 9945637
ELLE Group #: 2019707
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D2	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D2	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D2	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183530007A	12/20/2018 22:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183530007A	12/19/2018 17:50	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:48	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 14:03	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:48	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:48	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183530705001A	12/20/2018 14:03	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183530705001A	12/21/2018 12:48	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183530571401	12/20/2018 15:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183530705001	12/20/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183530571401	12/20/2018 09:10	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121717-TB01-01 Water**
COC: 578323

Project Name: **Rensselaer**

Submittal Date/Time: 12/18/2018 11:00
Collection Date/Time: 12/17/2018 12:30
SDG#: RNS75-15TB

BASF Corporation
ELLE Sample #: WW 9945638
ELLE Group #: 2019707
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183542AA	12/20/2018 08:18	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183542AA	12/20/2018 08:17	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183542AA	Sample number(s): 9945618,9945620,9945622-9945624,9945630,9945632,9945634,9945636,9945638		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183530006A	Sample number(s): 9945618-9945624		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183530007A	Sample number(s): 9945626-9945628,9945630-9945637		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183530571401	Sample number(s): 9945618-9945625,9945636-9945637		
Mercury	N.D.	0.050	0.20
Batch number: 183530571402	Sample number(s): 9945626-9945635		
Mercury	N.D.	0.050	0.20
Batch number: 183530705001A	Sample number(s): 9945618-9945625,9945636-9945637		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183530705002A	Sample number(s): 9945626-9945635		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	1.0 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18354001101A	Sample number(s): 9945618,9945620,9945622-9945625,9945630,9945632,9945634,9945636		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183542AA	Sample number(s): 9945618,9945620,9945622-9945624,9945630,9945632,9945634,9945636,9945638								
Benzene	20	20.16			101		80-120		
Chlorobenzene	20	21.45			107		80-120		
1,2-Dichlorobenzene	20	22.06			110		80-120		
1,3-Dichlorobenzene	20	21.39			107		80-120		
1,4-Dichlorobenzene	20	21.85			109		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183530006A	Sample number(s): 9945618-9945624								
PCB-1016	5.01	3.62			72		50-140		
PCB-1260	5.00	4.46			89		50-140		
Batch number: 183530007A	Sample number(s): 9945626-9945628,9945630-9945637								
PCB-1016	5.01	3.89			78		50-140		
PCB-1260	5.00	4.21			84		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183530571401	Sample number(s): 9945618-9945625,9945636-9945637								
Mercury	1.00	0.852			85		85-115		
Batch number: 183530571402	Sample number(s): 9945626-9945635								
Mercury	1.00	0.868			87		85-115		
Batch number: 183530705001A	Sample number(s): 9945618-9945625,9945636-9945637								
Arsenic	10	10.19			102		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.13			103		85-115		
Chromium	50	57.59			115		85-115		
Copper	50	49.63			99		85-115		
Lead	15	14.82			99		85-115		
Zinc	500	509.32			102		85-115		
Batch number: 183530705002A	Sample number(s): 9945626-9945635								
Arsenic	10	10.13			101		85-115		
Cadmium	5.00	5.01			100		85-115		
Chromium	50	49.91			100		85-115		
Copper	50	51.3			103		85-115		
Lead	15	14.9			99		85-115		
Zinc	500	509.11			102		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18354001101A	Sample number(s): 9945618,9945620,9945622-9945625,9945630,9945632,9945634,9945636								
Total Hardness	40000	39520			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183542AA	Sample number(s): 9945618,9945620,9945622-9945624,9945630,9945632,9945634,9945636,9945638 UNSPK: 9945622									
Benzene	N.D.	20	21.89	20	22.25	109	111	80-120	2	30
Chlorobenzene	1.50	20	24.55	20	25.92	115	122*	80-120	5	30
1,2-Dichlorobenzene	N.D.	20	22.96	20	23.9	115	119	80-120	4	30
1,3-Dichlorobenzene	N.D.	20	22.02	20	22.25	110	111	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	22.74	20	24.15	114	121*	80-120	6	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183530006A	Sample number(s): 9945618-9945624 UNSPK: 9945622									
PCB-1016	N.D.	6.14	4.98	5.88	4.71	81	80	50-140	6	36
PCB-1260	N.D.	6.13	5.55	5.87	5.22	91	89	50-140	6	38
Batch number: 183530007A	Sample number(s): 9945626-9945628,9945630-9945637 UNSPK: 9945626									
PCB-1016	N.D.	5.82	4.39	6.08	5.78	75	95	50-140	27	36
PCB-1260	N.D.	5.81	5.17	6.07	6.09	89	100	50-140	16	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183530571401	Sample number(s): 9945618-9945625,9945636-9945637 UNSPK: 9945622									
Mercury	N.D.	1.00	0.857	1.00	0.846	86	85	80-120	1	20
Batch number: 183530571402	Sample number(s): 9945626-9945635 UNSPK: 9945626									
Mercury	N.D.	1.00	0.929	1.00	0.899	93	90	80-120	3	20
Batch number: 183530705001A	Sample number(s): 9945618-9945625,9945636-9945637 UNSPK: 9945622									
Arsenic	N.D.	10	10.62	10	10.31	106	103	70-130	3	20
Cadmium	N.D.	5.00	4.86	5.00	5.10	97	102	70-130	5	20
Chromium	N.D.	50	49.22	50	50.56	98	101	70-130	3	20
Copper	N.D.	50	49.47	50	50.66	99	101	70-130	2	20
Lead	N.D.	15	15.14	15	15.74	101	105	70-130	4	20
Zinc	N.D.	500	502.66	500	516.12	101	103	70-130	3	20
Batch number: 183530705002A	Sample number(s): 9945626-9945635 UNSPK: 9945626									
Arsenic	N.D.	10	10.21	10	9.80	102	98	70-130	4	20
Cadmium	N.D.	5.00	4.94	5.00	4.79	99	96	70-130	3	20
Chromium	N.D.	50	50.83	50	48.33	102	97	70-130	5	20
Copper	N.D.	50	53.41	50	52.74	107	105	70-130	1	20
Lead	N.D.	15	15.09	15	15.24	101	102	70-130	1	20
Zinc	N.D.	500	532.86	500	503.65	107	101	70-130	6	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18354001101A	Sample number(s): 9945618,9945620,9945622-9945625,9945630,9945632,9945634,9945636 UNSPK: 9945622									
Total Hardness	71240	80000	148900	80000	150640	97	99	85-110	1	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183530571401	Sample number(s): 9945618-9945625,9945636-9945637 BKG: 9945622			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183530571402	Sample number(s): 9945626-9945635 BKG: 9945626			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183530705001A	Sample number(s): 9945618-9945625,9945636-9945637 BKG: 9945622			
Arsenic	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	0.720	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183530705002A	Sample number(s): 9945626-9945635 BKG: 9945626			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18354001101A	Sample number(s): 9945618,9945620,9945622-9945625,9945630,9945632,9945634,9945636 BKG: 9945622			
Total Hardness	71240	72460	2 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183542AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9945618	92	101	113	103
9945620	92	103	112	104
9945622	92	103	113	104
9945623	94	105	105	101
9945624	94	105	105	101
9945630	93	102	113	105
9945632	92	102	112	104
9945634	93	103	113	104
9945636	93	102	113	104
9945638	94	103	113	104
Blank	93	103	113	104
LCS	94	105	106	101
MS	94	105	105	101
MSD	94	105	105	101

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/26/2018 10:24

Group Number: 2019707

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183542AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183530006A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9945618	81	81	68	74
9945619	75	89	66	82
9945620	81	95	71	86
9945621	78	92	70	84
9945622	83	98	73	92
9945623	59	85	51	80
9945624	52	89	46	77
Blank	72	32	65	30
LCS	31*	48	27*	43
MS	59	85	51	80
MSD	52	89	46	77
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183530007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9945626	79	96	67	89
9945627	70	94	63	85
9945628	81	101	73	91
9945630	41	24	36	23
9945631	79	56	65	53
9945632	73	86	59	79
9945633	78	100	62	90
9945634	73	91	60	84
9945635	81	97	70	90
9945636	74	91	61	82
9945637	67	86	59	80
Blank	53	28	50	25
LCS	34	68	30*	64
MS	70	94	63	85
MSD	81	101	73	91
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2019707 Sample # 9945618-38

COC # 578323

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	FN Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260C	Turbidity - SM 2130	Remarks
121518-01-SW-U-A-1	12/15/18	0925	✓		11	2	2	1	1	1	1		3		
121518-02-SW-A-A-1	12/15/18	0955	✓		11	2	2	1	1	1	1		3		
121518-03-SW-D-A-1	12/15/18	1025	✓		31	6	6	3	3	3	1		9		MS/MSD
121518-01-SW-U-A-3	12/15/18	1230	✓		16	2	2	1	1	1			3		Equipment Blank
121718-01-SW-U-C-1	12/17/18	0910	✓		11	2	2	1	1	1	1		3		
121718-02-SW-A-A-1	12/17/18	0930	✓		11	2	2	1	1	1	1		3		
121718-03-SW-D-A-1	12/17/18	1030	✓		11	2	2	1	1	1	1		3		
121718-TB01-01	12/17/18	1230	✓		1								1		

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/19/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	12/17/18	1600			
			E Smith	12-18-18	1100

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.6 to 3.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236505

Group Number(s): 2019707

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/18/2018 11:00
Number of Packages:	4	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 15:10 on 12/18/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	3.3	DT	Wet	Y	Bagged	N
2	DT131	2.1	DT	Wet	Y	Bagged	N
3	DT131	1.6	DT	Wet	Y	Bagged	N
4	DT131	3.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 27, 2018 18:00

Project: Rensselaer

Account #: 04285
Group Number: 2020284
SDG: RNS76
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121818-01-SW-U-A-1 Grab Surface Water	12/18/2018 13:50	9948146
121818-01-SW-U-A-1 Grab Filtered Surface Water	12/18/2018 13:50	9948147
121818-02-SW-A-B-1 Grab Surface Water	12/18/2018 14:45	9948148
121818-02-SW-A-B-1 Grab Filtered Surface Water	12/18/2018 14:45	9948149
121818-03-SW-D-A-1 Grab Surface Water	12/18/2018 15:05	9948150
121818-03-SW-D-A-1 Grab Filtered Surface Water	12/18/2018 15:05	9948151
121818-TB01-01 Water	12/18/2018 16:00	9948152

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121818-01-SW-U-A-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 13:50
SDG#: RNS76-01

BASF Corporation
ELLE Sample #: WW 9948146
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 09:13	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 09:12	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 00:11	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121818-01-SW-U-A-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 13:50
SDG#: RNS76-01

BASF Corporation
ELLE Sample #: WW 9948146
ELLE Group #: 2020284
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:49	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:49	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:49	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:49	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:16	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:49	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001103A	12/20/2018 21:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121818-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 13:50
SDG#: RNS76-02

BASF Corporation
ELLE Sample #: WW 9948147
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 00:22	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:50	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:50	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:50	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:50	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:18	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:50	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121818-02-SW-A-B-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 14:45
SDG#: RNS76-03

BASF Corporation
ELLE Sample #: WW 9948148
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 09:39	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 09:38	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 00:32	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121818-02-SW-A-B-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 14:45
SDG#: RNS76-03

BASF Corporation
ELLE Sample #: WW 9948148
ELLE Group #: 2020284
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:20	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001103A	12/20/2018 22:04	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121818-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 14:45
SDG#: RNS76-04

BASF Corporation
ELLE Sample #: WW 9948149
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 00:43	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:40	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:40	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:40	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:05	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:40	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121818-03-SW-D-A-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 15:05
SDG#: RNS76-05

BASF Corporation
ELLE Sample #: WW 9948150
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	3	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D. K4	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 10:05	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 10:04	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 00:53	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121818-03-SW-D-A-1 Grab Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 15:05
SDG#: RNS76-05

BASF Corporation
ELLE Sample #: WW 9948150
ELLE Group #: 2020284
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:27	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18354001103A	12/20/2018 22:12	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121818-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 15:05
SDG#: RNS76-06

BASF Corporation
ELLE Sample #: WW 9948151
ELLE Group #: 2020284
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D. K4	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183540002A	12/22/2018 01:04	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183540002A	12/20/2018 17:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:59	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:59	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:59	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:59	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183540705005A	12/21/2018 13:29	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183540705005A	12/22/2018 00:59	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571401	12/27/2018 12:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183540705005	12/20/2018 17:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571401	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121818-TB01-01 Water**
COC: 578324

Project Name: **Rensselaer**

Submittal Date/Time: 12/19/2018 11:15
Collection Date/Time: 12/18/2018 16:00
SDG#: RNS76-07TB

BASF Corporation
ELLE Sample #: WW 9948152
ELLE Group #: 2020284
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 08:20	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 08:19	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:00

Group Number: 2020284

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183551AA	Sample number(s): 9948146,9948148,9948150,9948152		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183540002A	Sample number(s): 9948146-9948151		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183540705005A	Sample number(s): 9948146-9948151		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183600571401	Sample number(s): 9948146-9948151		
Mercury	N.D.	0.050	0.20
Batch number: 18354001103A	Sample number(s): 9948146,9948148,9948150		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:00

Group Number: 2020284

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183551AA	Sample number(s): 9948146,9948148,9948150,9948152								
Benzene	20	21.08	20	20.99	105	105	80-120	0	30
Chlorobenzene	20	22.53	20	22.23	113	111	80-120	1	30
1,2-Dichlorobenzene	20	22.68	20	22.44	113	112	80-120	1	30
1,3-Dichlorobenzene	20	21.62	20	21.31	108	107	80-120	1	30
1,4-Dichlorobenzene	20	22.62	20	22.24	113	111	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183540002A	Sample number(s): 9948146-9948151								
PCB-1016	5.01	3.87	5.01	4.07	77	81	50-140	5	36
PCB-1260	5.00	4.56	5.00	4.76	91	95	50-140	4	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183540705005A	Sample number(s): 9948146-9948151								
Arsenic	10	10.14			101		85-115		
Cadmium	5.00	4.73			95		85-115		
Chromium	50	45.49			91		85-115		
Copper	50	47.49			95		85-115		
Lead	15	14.5			97		85-115		
Zinc	500	485.43			97		85-115		
Batch number: 183600571401	Sample number(s): 9948146-9948151								
Mercury	1.00	0.911			91		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18354001103A	Sample number(s): 9948146,9948148,9948150								
Total Hardness	40000	39680			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183540705005A	Sample number(s): 9948146-9948151 UNSPK: 9948149									
Arsenic	N.D.	10	9.43			94		70-130		
Cadmium	N.D.	5.00	4.80			96		70-130		
Chromium	N.D.	50	47.73			95		70-130		
Copper	N.D.	50	48.93			98		70-130		
Lead	N.D.	15	14.59			97		70-130		
Zinc	N.D.	500	492.32			98		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:00

Group Number: 2020284

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183540705005A	Sample number(s): 9948146-9948151 BKG: 9948149			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183551AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9948146	92	102	113	103
9948148	92	99	114	104
9948150	95	104	114	104
9948152	92	104	113	105
Blank	93	103	113	103
LCS	93	103	107	100
LCSD	94	107	106	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183540002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9948146	75	74	76	72

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:00

Group Number: 2020284

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183540002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9948147	71	81	71	78
9948148	76	77	75	76
9948149	73	89	73	83
9948150	74	82	75	79
9948151	76	80	77	76
Blank	55	25	56	23
LCS	63	36	63	35
LCSD	58	81	58	76
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2020281 Sample # 9948146-52

COC # 578324

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (unfiltered)	F/N Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
121818-01-SW-U-A-1	12/18/18	1350	✓		11	2	2	1	1	1	1		3	
121818-02-SW-A-B-1	12/18/18	1445	✓		11	2	2	1	1	1	1		3	
121818-03-SW-D-A-1	12/18/18	1505	✓		11	2	2	1	1	1	1		3	
121818-TB01-01	12/18/18	1600	✓		1								1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/20/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) per contract Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/18/18	1530			
			[signature]	12/19/18	1115

EDD Required? Yes No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 2.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236682

Group Number(s): 2020284

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/19/2018 11:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Katie Hartlove (2114) at 13:28 on 12/19/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 27, 2018 18:01

Project: Rensselaer

Account #: 04285
Group Number: 2020742
SDG: RNS77
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
121918-01-SW-U-A-1 Grab Surface Water	12/19/2018 11:00	9950046
121918-01-SW-U-A-1 Grab Filtered Surface Water	12/19/2018 11:00	9950047
121918-02-SW-A-A-1 Grab Surface Water	12/19/2018 11:40	9950048
121918-02-SW-A-A-1 Grab Filtered Surface Water	12/19/2018 11:40	9950049
121918-03-SW-D-B-1 Grab Surface Water	12/19/2018 12:15	9950050
121918-03-SW-D-B-1 Grab Filtered Surface Water	12/19/2018 12:15	9950051
121918-03-SW-D-B-2 Grab Surface Water	12/19/2018 12:25	9950052
121918-03-SW-D-B-2 Grab Filtered Surface Water	12/19/2018 12:25	9950053
121918-TB01-01 Water	12/19/2018 14:00	9950054

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **121918-01-SW-U-A-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:00
SDG#: RNS77-01

BASF Corporation
ELLE Sample #: WW 9950046
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.2 J	0.2	1	1
11997	Chlorobenzene	108-90-7	3	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.2 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 10:31	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 10:30	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 15:43	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-01-SW-U-A-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:00
SDG#: RNS77-01

BASF Corporation
ELLE Sample #: WW 9950046
ELLE Group #: 2020742
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 12:41	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121918-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:00
SDG#: RNS77-02

BASF Corporation
ELLE Sample #: WW 9950047
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 15:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:27	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-02-SW-A-A-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:40
SDG#: RNS77-03

BASF Corporation
ELLE Sample #: WW 9950048
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.4 J	0.2	1	1
11997	Chlorobenzene	108-90-7	5	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.3 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	0.250 JD1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	0.250 J	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.3	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 10:57	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 10:56	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 16:05	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-02-SW-A-A-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:40
SDG#: RNS77-03

BASF Corporation
ELLE Sample #: WW 9950048
ELLE Group #: 2020742
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 13:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121918-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 11:40
SDG#: RNS77-04

BASF Corporation
ELLE Sample #: WW 9950049
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.86 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 16:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:15	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-03-SW-D-B-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:15
SDG#: RNS77-05

BASF Corporation
ELLE Sample #: WW 9950050
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.3 J	0.2	1	1
11997	Chlorobenzene	108-90-7	3	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.98 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 11:23	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 11:22	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 16:26	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-03-SW-D-B-1 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:15
SDG#: RNS77-05

BASF Corporation
ELLE Sample #: WW 9950050
ELLE Group #: 2020742
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:34	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 13:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121918-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:15
SDG#: RNS77-06

BASF Corporation
ELLE Sample #: WW 9950051
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 16:37	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-03-SW-D-B-2 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:25
SDG#: RNS77-07

BASF Corporation
ELLE Sample #: WW 9950052
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.3 J	0.2	1	1
11997	Chlorobenzene	108-90-7	3	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	0.298 JD1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	0.298 J	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.0 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 11:45	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 11:44	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 16:48	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121918-03-SW-D-B-2 Grab Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:25
SDG#: RNS77-07

BASF Corporation
ELLE Sample #: WW 9950052
ELLE Group #: 2020742
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 08:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 13:21	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121918-03-SW-D-B-2 Grab Filtered Surface Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 12:25
SDG#: RNS77-08

BASF Corporation
ELLE Sample #: WW 9950053
ELLE Group #: 2020742
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183550031A	12/23/2018 17:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183550031A	12/22/2018 11:53	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183550705002A	12/21/2018 23:39	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183600571402	12/27/2018 09:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183550705002	12/21/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571402	12/26/2018 09:50	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **121918-TB01-01 Water**
COC: 578325

Project Name: **Rensselaer**

Submittal Date/Time: 12/20/2018 11:05
Collection Date/Time: 12/19/2018 14:00
SDG#: RNS77-09TB

BASF Corporation
ELLE Sample #: WW 9950054
ELLE Group #: 2020742
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183551AA	12/21/2018 08:47	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183551AA	12/21/2018 08:46	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:01

Group Number: 2020742

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183551AA	Sample number(s): 9950046,9950048,9950050,9950052,9950054		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183550031A	Sample number(s): 9950046-9950053		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183550705002A	Sample number(s): 9950046-9950053		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183600571402	Sample number(s): 9950046-9950053		
Mercury	N.D.	0.050	0.20
Batch number: 18356001101A	Sample number(s): 9950046,9950048,9950050,9950052		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:01

Group Number: 2020742

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183551AA	Sample number(s): 9950046,9950048,9950050,9950052,9950054								
Benzene	20	21.08	20	20.99	105	105	80-120	0	30
Chlorobenzene	20	22.53	20	22.23	113	111	80-120	1	30
1,2-Dichlorobenzene	20	22.68	20	22.44	113	112	80-120	1	30
1,3-Dichlorobenzene	20	21.62	20	21.31	108	107	80-120	1	30
1,4-Dichlorobenzene	20	22.62	20	22.24	113	111	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183550031A	Sample number(s): 9950046-9950053								
PCB-1016	5.01	3.42	5.01	4.19	68	84	50-140	20	36
PCB-1260	5.00	4.48	5.00	4.98	90	100	50-140	10	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183550705002A	Sample number(s): 9950046-9950053								
Arsenic	10	9.88			99		85-115		
Cadmium	5.00	5.20			104		85-115		
Chromium	50	50.83			102		85-115		
Copper	50	49.61			99		85-115		
Lead	15	15.06			100		85-115		
Zinc	500	496.91			99		85-115		
Batch number: 183600571402	Sample number(s): 9950046-9950053								
Mercury	1.00	0.853			85		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18356001101A	Sample number(s): 9950046,9950048,9950050,9950052								
Total Hardness	40000	38920			97		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183550705002A	Sample number(s): 9950046-9950053 UNSPK: 9950049									
Arsenic	N.D.	10	10.82			108		70-130		
Cadmium	N.D.	5.00	5.20			104		70-130		
Chromium	0.857	50	48.58			95		70-130		
Copper	N.D.	50	49.34			99		70-130		
Lead	N.D.	15	15.8			105		70-130		
Zinc	13.1	500	487.75			95		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:01

Group Number: 2020742

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18356001101A	Sample number(s): 9950046,9950048,9950050,9950052 UNSPK: 9950046									
Total Hardness	76280	80000	157280			101		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183550705002A	Sample number(s): 9950046-9950053 BKG: 9950049			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.857	2.30	91* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13.1	14.17	8 (1)	20
	ug/l	ug/l		
Batch number: 18356001101A	Sample number(s): 9950046,9950048,9950050,9950052 BKG: 9950046			
Total Hardness	76280	77160	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183551AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9950046	94	104	112	103
9950048	94	104	113	103
9950050	94	105	114	104
9950052	93	105	113	104
9950054	91	102	115	103
Blank	93	103	113	103

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/27/2018 18:01

Group Number: 2020742

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183551AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	93	103	107	100
LCSD	94	107	106	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183550031A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9950046	67	73	65	74
9950047	68	87	68	89
9950048	66	78	64	76
9950049	67	80	66	79
9950050	75	82	73	83
9950051	77	87	74	84
9950052	67	75	65	73
9950053	68	82	68	80
Blank	60	57	60	56
LCS	20*	46	18*	48
LCSD	43	52	42	53
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2020742 Sample # 9950046-54

COC # 578325

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (unfiltered) F	Metals (Filtered) F,N	Metals (unfiltered) N	Mercury N	Hardness N	TSS	VOCs – 8260c H	Turbidity – SM2130	
121918-01-SW-U-A-1	12/19/18	1100	✓		11	2	2	1	1	1	1		3		
121918-02-SW-A-A-1	12/19/18	1140	✓		11	2	2	1	1	1	1		3		
121918-03-SW-D-B-1	12/19/18	1215	✓		11	2	2	1	1	1	1		3		
121918-03-SW-D-B-2	12/19/18	1225	✓		11	2	2	1	1	1	1		3		
121918-TB01-01	12/19/18	1400	✓		1								1		

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/21/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/19/18	1600			
			[signature]	12/20/18	1105

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.0/2.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236812

Group Number(s): 2020742

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/20/2018 11:05
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 12:57 on 12/20/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-02	2.8	DT	Wet	Y	Bagged	N
2	DT42-02	1.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 28, 2018 18:26

Project: Rensselaer

Account #: 04285
Group Number: 2021302
SDG: RNS78
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
122018-01-SW-U-A-1 Grab Surface Water	12/20/2018 09:30	9952326
122018-01-SW-U-A-1 Grab Filtered Surface Water	12/20/2018 09:30	9952327
122018-02-SW-A-B-1 Grab Surface Water	12/20/2018 10:25	9952328
122018-02-SW-A-B-1 Grab Filtered Surface Water	12/20/2018 10:25	9952329
122018-03-SW-D-A-1 Grab Surface Water	12/20/2018 10:50	9952330
122018-03-SW-D-A-1 Grab Filtered Surface Water	12/20/2018 10:50	9952331
122018-01-SW-U-A-3 Grab Water	12/20/2018 12:30	9952332
122018-01-SW-U-A-3 Grab Filtered Water	12/20/2018 12:30	9952333
122018-TB01-01 Grab Water	12/20/2018 15:00	9952334

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **122018-01-SW-U-A-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:30
SDG#: RNS78-01

BASF Corporation
ELLE Sample #: WW 9952326
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	1	0.2	1	1
11997	Chlorobenzene	108-90-7	28	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	10	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	1 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	0.814 D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	0.814	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.3	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183611AA	12/27/2018 20:03	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183611AA	12/27/2018 20:02	Kevin A Sposito	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 23:11	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-01-SW-U-A-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:30
SDG#: RNS78-01

BASF Corporation
ELLE Sample #: WW 9952326
ELLE Group #: 2021302
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:05	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 13:29	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **122018-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 09:30
SDG#: RNS78-02

BASF Corporation
ELLE Sample #: WW 9952327
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	17.0	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 23:22	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:12	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-02-SW-A-B-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:25
SDG#: RNS78-03

BASF Corporation
ELLE Sample #: WW 9952328
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.8 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183611AA	12/27/2018 20:27	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183611AA	12/27/2018 20:26	Kevin A Sposito	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 23:33	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-02-SW-A-B-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:25
SDG#: RNS78-03

BASF Corporation
ELLE Sample #: WW 9952328
ELLE Group #: 2021302
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 16:50	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 13:37	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **122018-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:25
SDG#: RNS78-04

BASF Corporation
ELLE Sample #: WW 9952329
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 23:44	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:14	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-03-SW-D-A-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:50
SDG#: RNS78-05

BASF Corporation
ELLE Sample #: WW 9952330
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183611AA	12/27/2018 20:51	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183611AA	12/27/2018 20:50	Kevin A Sposito	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 23:55	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Sample Description: **122018-03-SW-D-A-1 Grab Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:50
SDG#: RNS78-05

BASF Corporation
ELLE Sample #: WW 9952330
ELLE Group #: 2021302
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:16	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18356001101A	12/22/2018 14:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **122018-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 10:50
SDG#: RNS78-06

BASF Corporation
ELLE Sample #: WW 9952331
ELLE Group #: 2021302
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.3 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/28/2018 00:06	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:18	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-01-SW-U-A-3 Grab Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 12:30
SDG#: RNS78-07EB

BASF Corporation
ELLE Sample #: WW 9952332
ELLE Group #: 2021302
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183611AA	12/27/2018 16:29	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183611AA	12/27/2018 16:28	Kevin A Sposito	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/28/2018 00:17	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-01-SW-U-A-3 Grab Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 12:30
SDG#: RNS78-07EB

BASF Corporation
ELLE Sample #: WW 9952332
ELLE Group #: 2021302
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:20	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-01-SW-U-A-3 Grab Filtered Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 12:30
SDG#: RNS78-08EB

BASF Corporation
ELLE Sample #: WW 9952333
ELLE Group #: 2021302
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.127	0.635	1
14188	PCB-1221	11104-28-2	N.D. D1	0.127	0.635	1
14188	PCB-1232	11141-16-5	N.D. D1	0.127	0.635	1
14188	PCB-1242	53469-21-9	N.D. D1	0.127	0.635	1
14188	PCB-1248	12672-29-6	N.D. D1	0.127	0.635	1
14188	PCB-1254	11097-69-1	N.D. D1	0.127	0.635	1
14188	PCB-1260	11096-82-5	N.D. D1	0.127	0.635	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0939	0.635	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0939	0.635	1
14188	Total PCBs	1336-36-3	N.D.	0.0939	0.635	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183600013A	12/28/2018 00:28	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183600013A	12/27/2018 08:00	David S Schrum	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183600705001A	12/26/2018 17:23	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183600571403	12/27/2018 13:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183600705001	12/26/2018 08:00	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183600571403	12/27/2018 07:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **122018-TB01-01 Grab Water**
COC: 578326

Project Name: **Rensselaer**

Submittal Date/Time: 12/21/2018 11:20
Collection Date/Time: 12/20/2018 15:00
SDG#: RNS78-09TB

BASF Corporation
ELLE Sample #: WW 9952334
ELLE Group #: 2021302
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183611AA	12/27/2018 16:53	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183611AA	12/27/2018 16:52	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/28/2018 18:26

Group Number: 2021302

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W183611AA	Sample number(s): 9952326,9952328,9952330,9952332,9952334		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183600013A	Sample number(s): 9952326-9952333		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183600571403	Sample number(s): 9952326-9952333		
Mercury	N.D.	0.050	0.20
Batch number: 183600705001A	Sample number(s): 9952326-9952333		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	1.1 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18356001101A	Sample number(s): 9952326,9952328,9952330		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/28/2018 18:26

Group Number: 2021302

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W183611AA	Sample number(s): 9952326,9952328,9952330,9952332,9952334								
Benzene	20	21.55	20	21	108	105	80-120	3	30
Chlorobenzene	20	21.77	20	21.68	109	108	80-120	0	30
1,2-Dichlorobenzene	20	21.95	20	21.28	110	106	80-120	3	30
1,3-Dichlorobenzene	20	21.71	20	21.17	109	106	80-120	3	30
1,4-Dichlorobenzene	20	21.81	20	21.32	109	107	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183600013A	Sample number(s): 9952326-9952333								
PCB-1016	5.01	5.10	5.01	5.36	102	107	50-140	5	36
PCB-1260	5.00	5.16	5.00	5.47	103	109	50-140	6	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183600571403	Sample number(s): 9952326-9952333								
Mercury	1.00	0.898			90		85-115		
Batch number: 183600705001A	Sample number(s): 9952326-9952333								
Arsenic	10	10.59			106		85-115		
Cadmium	5.00	5.22			104		85-115		
Chromium	50	49.16			98		85-115		
Copper	50	51.4			103		85-115		
Lead	15	15.03			100		85-115		
Zinc	500	528.41			106		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18356001101A	Sample number(s): 9952326,9952328,9952330								
Total Hardness	40000	38920			97		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183600705001A	Sample number(s): 9952326-9952333 UNSPK: 9952328									
Arsenic	N.D.	10	10.71			107		70-130		
Cadmium	N.D.	5.00	5.09			102		70-130		
Chromium	N.D.	50	48.9			98		70-130		
Copper	N.D.	50	50.22			100		70-130		
Lead	N.D.	15	15.31			102		70-130		
Zinc	10.82	500	516.68			101		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/28/2018 18:26

Group Number: 2021302

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183600705001A	Sample number(s): 9952326-9952333 BKG: 9952328			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	10.82	10.52	3 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9952326	104	99	96	93
9952328	103	100	97	91
9952330	103	97	97	92
9952332	105	101	95	90
9952334	104	100	96	92
Blank	105	101	96	91
LCS	104	101	98	97
LCSD	103	101	99	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183600013A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/28/2018 18:26

Group Number: 2021302

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183600013A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9952326	83	76	82	74
9952327	89	81	89	80
9952328	89	78	87	76
9952329	81	77	79	76
9952330	83	75	84	74
9952331	87	78	80	81
9952332	77	80	75	82
9952333	58	39	57	42
Blank	80	92	79	90
LCS	77	87	76	86
LCSD	78	82	74	79
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2021302 Sample # 9952326-34

COC # 578326

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patricia Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	F PCBs (unfiltered)	FN Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
122618-01-SW-U-A-1	12/20/18	0930	✓		11	2	2	1	1	1	1		3		
122018-02-SW-A-B-1	12/20/18	1025	✓		11	2	2	1	1	1	1		3		
122618-03-SW-D-A-1	12/20/18	1050	✓		11	2	2	1	1	1	1		3		
122018-01-SW-U-A-3	12/20/18	1230	✓		10	2	2	1	1	1			3		Equipment Blank
122018-TB01-01	12/20/18	1500	✓		1								1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/22/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/20/18	1530			
			[signature]	12/21/18	1120

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 01-27 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 236962

Group Number(s): 2021302

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/21/2018 11:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:59 on 12/21/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	2.8	DT	Wet	Y	Bagged	N
2	DT42-03	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/16/19 – 7/17/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (2 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Contaminants of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 sheetpile installation over the period 7/16/19 through 7/17/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde

was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan. The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were not any exceedances of the water quality criteria.

There was one deviation to the sampling program on 7/17/19. Due to severe thunderstorms (which included lightning), the chemistry sample associated with Buoy #3 (downstream) and the 600 ft TSS compliance sample were not collected. The entire Site (including the dredge operations) were in a Health and Safety "Stand Down" due to the hazardous weather conditions. All other obligations to the Water Quality program were met.

Field turbidity readings from the YSI EXO2 sonde were not observed to be greater than 10 NTU and were consistently highest in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the dredging operations.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Adirondack Environmental Services, Inc.

Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 19, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190717004

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 7/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
QA/QC Data

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *19-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190717004	

Sample containers were supplied by Adirondack Environmental Services.

The attached report contains analysis added subsequent to original report.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-03-SW-U-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 6:08:20 PM
Surr: Decachlorobiphenyl	**61.2**	57.1-135		%REC	1	7/17/2019 6:08:20 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**1.7**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Total Hardness (As CaCO3)	**85**	5		mg/L CaCO3	1	7/17/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/17/2019 1:02:00 PM
Barium	**0.022**	0.010		mg/L	1	7/17/2019 1:02:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/17/2019 1:02:00 PM
Chromium	**ND**	0.005		mg/L	1	7/17/2019 1:02:00 PM
Copper	**ND**	0.005		mg/L	1	7/17/2019 1:02:00 PM
Lead	**ND**	0.005		mg/L	1	7/17/2019 1:02:00 PM
Selenium	**ND**	0.005		mg/L	1	7/17/2019 1:02:00 PM
Silver	**ND**	0.010		mg/L	1	7/17/2019 1:02:00 PM
Zinc	**ND**	0.010		mg/L	1	7/17/2019 1:02:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:38:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/17/2019 2:38:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/17/2019 2:38:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:38:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:38:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:38:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-03-SW-U-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:38:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 2:38:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 2:38:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Acetone	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 1:05:00 PM
Surr: 1,2-Dichloroethane-d4	**93.4**	80.9-122		%REC	1	7/17/2019 1:05:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	7/17/2019 1:05:00 PM
Surr: Toluene-d8	**95.3**	80.4-121		%REC	1	7/17/2019 1:05:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-03-SW-U-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**6.2**	1.0		mg/L	1	7/17/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 6:21:41 PM
Surr: Decachlorobiphenyl	**99.8**	57.1-135		%REC	1	7/17/2019 6:21:41 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**2.5**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Total Hardness (As CaCO3)	**84**	5		mg/L CaCO3	1	7/17/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/17/2019 1:07:00 PM
Barium	**0.023**	0.010		mg/L	1	7/17/2019 1:07:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/17/2019 1:07:00 PM
Chromium	**ND**	0.005		mg/L	1	7/17/2019 1:07:00 PM
Copper	**ND**	0.005		mg/L	1	7/17/2019 1:07:00 PM
Lead	**ND**	0.005		mg/L	1	7/17/2019 1:07:00 PM
Selenium	**ND**	0.005		mg/L	1	7/17/2019 1:07:00 PM
Silver	**ND**	0.010		mg/L	1	7/17/2019 1:07:00 PM
Zinc	**ND**	0.010		mg/L	1	7/17/2019 1:07:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:45:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/17/2019 2:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/17/2019 2:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:45:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	7/17/2019 2:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/17/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 2:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 2:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 2:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Acetone	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 1:26:00 PM
Surr: 1,2-Dichloroethane-d4	**96.1**	80.9-122		%REC	1	7/17/2019 1:26:00 PM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	7/17/2019 1:26:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	7/17/2019 1:26:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**6.6**	1.0		mg/L	1	7/17/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-2
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 6:35:02 PM
Surr: Decachlorobiphenyl	**82.2**	57.1-135		%REC	1	7/17/2019 6:35:02 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**1.8**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Total Hardness (As CaCO3)	**82**	5		mg/L CaCO3	1	7/17/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/17/2019 1:12:00 PM
Barium	**0.022**	0.010		mg/L	1	7/17/2019 1:12:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/17/2019 1:12:00 PM
Chromium	**ND**	0.005		mg/L	1	7/17/2019 1:12:00 PM
Copper	**ND**	0.005		mg/L	1	7/17/2019 1:12:00 PM
Lead	**ND**	0.005		mg/L	1	7/17/2019 1:12:00 PM
Selenium	**ND**	0.005		mg/L	1	7/17/2019 1:12:00 PM
Silver	**ND**	0.010		mg/L	1	7/17/2019 1:12:00 PM
Zinc	**ND**	0.010		mg/L	1	7/17/2019 1:12:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:01:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/17/2019 3:01:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/17/2019 3:01:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:01:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:01:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:01:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-2
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/17/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:01:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:01:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:01:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Acetone	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 1:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 1:48:00 PM
Surr: 1,2-Dichloroethane-d4	**94.3**	80.9-122		%REC	1	7/17/2019 1:48:00 PM
Surr: 4-Bromofluorobenzene	**98.3**	76.5-125		%REC	1	7/17/2019 1:48:00 PM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	7/17/2019 1:48:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-04-SW-B-A-2
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	7/17/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-01-SW-D-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-004
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 6:48:22 PM
Surr: Decachlorobiphenyl	**86.6**	57.1-135		%REC	1	7/17/2019 6:48:22 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**4.4**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Total Hardness (As CaCO3)	**86**	5		mg/L CaCO3	1	7/17/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/17/2019 2:06:00 PM
Barium	**0.023**	0.010		mg/L	1	7/17/2019 2:06:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/17/2019 2:06:00 PM
Chromium	**ND**	0.005		mg/L	1	7/17/2019 2:06:00 PM
Copper	**ND**	0.005		mg/L	1	7/17/2019 2:06:00 PM
Lead	**ND**	0.005		mg/L	1	7/17/2019 2:06:00 PM
Selenium	**ND**	0.005		mg/L	1	7/17/2019 2:06:00 PM
Silver	**ND**	0.010		mg/L	1	7/17/2019 2:06:00 PM
Zinc	**ND**	0.010		mg/L	1	7/17/2019 2:06:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:05:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/17/2019 3:05:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/17/2019 3:05:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:05:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	7/17/2019 3:05:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:05:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-01-SW-D-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-004
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:05:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:05:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:05:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Acetone	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 2:09:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	7/17/2019 2:09:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	7/17/2019 2:09:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	7/17/2019 2:09:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-01-SW-D-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-004
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**13.2**	1.0		mg/L	1	7/17/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-02-SW-A-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-005
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 7:08:19 PM
Surr: Decachlorobiphenyl	**95.8**	57.1-135		%REC	1	7/17/2019 7:08:19 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**2.2**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Total Hardness (As CaCO3)	**85**	5		mg/L CaCO3	1	7/17/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/17/2019 2:10:00 PM
Barium	**0.022**	0.010		mg/L	1	7/17/2019 2:10:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/17/2019 2:10:00 PM
Chromium	**ND**	0.005		mg/L	1	7/17/2019 2:10:00 PM
Copper	**ND**	0.005		mg/L	1	7/17/2019 2:10:00 PM
Lead	**ND**	0.005		mg/L	1	7/17/2019 2:10:00 PM
Selenium	**ND**	0.005		mg/L	1	7/17/2019 2:10:00 PM
Silver	**ND**	0.010		mg/L	1	7/17/2019 2:10:00 PM
Zinc	**ND**	0.010		mg/L	1	7/17/2019 2:10:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/17/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:14:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/17/2019 3:14:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/17/2019 3:14:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:14:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:14:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:14:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-02-SW-A-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-005
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/17/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/17/2019 3:14:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:14:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/17/2019 3:14:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Acetone	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 2:31:00 PM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	7/17/2019 2:31:00 PM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	7/17/2019 2:31:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	7/17/2019 2:31:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-02-SW-A-B-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-005
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**5.1**	1.0		mg/L	1	7/17/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-05-SW-B-A-1
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-006
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/17/2019)						
TSS (Residue, Non-Filterable)	**10.1**	1.0		mg/L	1	7/17/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071619-TB01
Work Order:	**190717004**	**Collection Date:**	7/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717004-007
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/17/2019 2:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/17/2019 2:56:00 PM
Acetone	**20**	5.0		µg/L	1	7/17/2019 2:56:00 PM
Benzene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Methylene chloride	**1.6**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Toluene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/17/2019 2:56:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:56:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:56:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/17/2019 2:56:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	7/17/2019 2:56:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	7/17/2019 2:56:00 PM
Surr: Toluene-d8	**95.8**	80.4-121		%REC	1	7/17/2019 2:56:00 PM

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74501

mblk

SeqNo: **2661421** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173357**
Samp ID: **mb-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0928	0	0.1	0	92.8	48.8	140	0	0		

MBLK

SeqNo: **2661471** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **MB-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.06	0	0.1	0	60	51.5	144	0	0		

LCS

SeqNo: **2661474** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **LCS-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.07	0	0.1	0	70	51.5	144	0	0		

LCSD

SeqNo: **2661475** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **LCSDPEST** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.074	0	0.1	0	74	51.5	144	0	0	0	

lcs

SeqNo: **2662529** PrepDate:**7/17/2019** TestNo: **SW8082A** RunNo: **173357**
Samp ID: **lcs-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3986	0.0650	0.5	0	79.7	60	140	0	0		
Surr: Decachlorobiphenyl	0.1056	0	0.1	0	106	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74501

lcsd	SeqNo: **2662690**	**PrepDate:7/17/2019**	TestNo: **SW8082A**	RunNo: **173357**
	Samp ID: **lcsd-74501**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3736	0.0650	0.5	0	74.7	60	140	0.3986	6.48	30	
Surr: Decachlorobiphenyl	0.1086	0	0.1	0	109	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74504

MBLK

SeqNo: **2661024** PrepDate:**7/17/2019** TestNo: **E200.7F** RunNo: **173334**
Samp ID: **MB-74504** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2661025** PrepDate:**7/17/2019** TestNo: **E200.7F** RunNo: **173334**
Samp ID: **LCS-74504** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.046	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.031	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.126	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	1.992	0.00500	2	0	99.6	89.1	109	0	0		
Copper, Dissolved	2.042	0.00500	2	0	102	86.8	115	0	0		
Lead, Dissolved	2.179	0.00500	2	0	109	86.8	114	0	0		
Selenium, Dissolved	2.071	0.00500	2	0	104	85	115	0	0		
Silver, Dissolved	0.5183	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	2.079	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2661651** PrepDate:**7/17/2019** TestNo: **E200.7F** RunNo: **173334**
Samp ID: **190717004-005 (071619-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04475	0.00500	0.04	0.0004501	111	75	123	0	0		
Barium, Dissolved	2.156	0.0100	2	0.0224	107	75	124	0	0		
Cadmium, Dissolved	0.0511	0.00500	0.05	0.00000655	102	75	125	0	0		
Chromium, Dissolved	0.216	0.00500	0.2	0	108	77.2	117	0	0		
Copper, Dissolved	0.2781	0.00500	0.25	0.004289	110	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74504

MS

SeqNo: **2661651** **PrepDate:7/17/2019** TestNo: **E200.7F** RunNo: **173334**
Samp ID: **190717004-005 (071619-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02395	0.00500	0.02	0.000302	118	75	125	0	0		
Selenium, Dissolved	0.007698	0.00500	0.01	0	77	75	125	0	0		
Silver, Dissolved	0.03903	0.0100	0.05	0.00123	75.6	75	125	0	0		
Zinc, Dissolved	0.5779	0.0100	0.5	0.007255	114	75	121	0	0		

DUP

SeqNo: **2661650** **PrepDate:7/17/2019** TestNo: **E200.7F** RunNo: **173334**
Samp ID: **190717004-005** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0.0004501	0	17.3	
Barium, Dissolved	0.0216	0.0100	0	0	0	0	0	0.0224	3.67	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0.00000655	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0.004289	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0.000302	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.00123	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0.007255	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74506

MBLK

SeqNo: **2661637** PrepDate:**7/17/2019** TestNo: **E200.7** RunNo: **173334**
Samp ID: **MB-74506** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2661638** PrepDate:**7/17/2019** TestNo: **E200.7** RunNo: **173334**
Samp ID: **LCS-74506** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.159	0.00500	2	0	108	89.1	111	0	0		
Barium	2.048	0.0100	2	0	102	85	115	0	0		
Cadmium	2.01	0.00500	2	0	101	85	115	0	0		
Chromium	2.005	0.00500	2	0	100	89.7	109	0	0		
Copper	2.039	0.00500	2	0	102	85	115	0	0		
Lead	2.077	0.00500	2	0	104	88.1	112	0	0		
Selenium	1.924	0.00500	2	0	96.2	87.5	112	0	0		
Silver	0.5284	0.0100	0.5	0	106	85.2	115	0	0		
Zinc	2.172	0.0100	2	0	109	88.3	113	0	0		

MS

SeqNo: **2661642** PrepDate:**7/17/2019** TestNo: **E200.7** RunNo: **173334**
Samp ID: **190717004-005 (071619-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04565	0.00500	0.04	0	114	75	125	0	0		
Barium	2.164	0.0100	2	0.02215	107	75	119	0	0		
Cadmium	0.05117	0.00500	0.05	0	102	75	118	0	0		
Chromium	0.2117	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2762	0.00500	0.25	0	110	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74506

MS

SeqNo: **2661642** **PrepDate:7/17/2019** TestNo: **E200.7** RunNo: **173334**
Samp ID: **190717004-005 (071619-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02287	0.00500	0.02	0	114	75	125	0	0		
Selenium	0.007838	0.00500	0.01	0	78.4	75	125	0	0		
Silver	0.03896	0.0100	0.05	0	77.9	75	125	0	0		
Zinc	0.5804	0.0100	0.5	0	116	76.9	125	0	0		

DUP

SeqNo: **2661641** **PrepDate:7/17/2019** TestNo: **E200.7** RunNo: **173334**
Samp ID: **190717004-005** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02182	0.0100	0	0	0	0	0	0.02215	1.50	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	ND	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74509

LCS

SeqNo: **2661399** **PrepDate:7/17/2019** TestNo: **SM2540D** RunNo: **173354**
Samp ID: **LCS-74509** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	528	40.0	490	0	108	86.5	114	0	0		

LCS

SeqNo: **2662021** **PrepDate:7/17/2019** TestNo: **SM2540D** RunNo: **173394**
Samp ID: **LCS-74509** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	528	40.0	490	0	108	86.5	114	0	0		

DUP

SeqNo: **2662023** **PrepDate:7/17/2019** TestNo: **SM2540D** RunNo: **173394**
Samp ID: **190710060-005** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	5547	67.0	0	0	0	0	0	6167	10.6	10	Z

DUP

SeqNo: **2662025** **PrepDate:7/17/2019** TestNo: **SM2540D** RunNo: **173394**
Samp ID: **190711083-005** **PrepRef:** Units: **mg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1460	67.0	0	0	0	0	0	1340	8.57	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74518

MBLK

SeqNo: **2661886** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **MB-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2662225** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **MB-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2661887** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **LCS-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.51	0.500	10	0	95.1	77	123	0	0		

LCS

SeqNo: **2662226** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **LCS-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.09	0.500	10	0	90.9	77	123	0	0		

MS

SeqNo: **2662223** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190716061-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.9	0.500	12.5	0.553	82.8	71	125	0	0		

MS

SeqNo: **2662231** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190717059-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.67	0.500	12.5	1.08	68.7	71	125	0	0		S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 74518

MSD

SeqNo: **2662224** **PrepDate:7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190716061-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.8	0.500	12.5	0.553	82	71	125	10.9	0.922	24	

MSD

SeqNo: **2662232** **PrepDate:7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190717059-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.79	0.500	12.5	1.08	69.7	71	125	9.67	1.23	24	S

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

mblk

SeqNo: **2661243** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichloropropane	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	46.02	5.0	50	0	92	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.3	5.0	50	0	98.6	76.5	125	0	0		
Surr: Toluene-d8	48.72	5.0	50	0	97.4	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

mblk

SeqNo: **2662763** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									

lcs

SeqNo: **2661241** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.99	1.0	10	0	99.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.35	1.0	10	0	73.5	72.3	118	0	0		
1,1,2-Trichloroethane	9.06	1.0	10	0	90.6	73.1	123	0	0		
1,1-Dichloroethane	8.91	1.0	10	0	89.1	73.2	127	0	0		
1,1-Dichloroethene	8.48	1.0	10	0	84.8	70.3	128	0	0		
1,2,3-Trichloropropane	3.74	1.0	5	0	74.8	68.4	115	0	0		
1,2-Dichloroethane	8.09	1.0	10	0	80.9	72.5	127	0	0		
1,3-Dichloropropane	4.54	1.0	5	0	90.8	76	122	0	0		
2-Butanone	6.59	5.0	10	0	65.9	65.1	132	0	0		
4-Methyl-2-pentanone	7.57	5.0	10	0	75.7	68.7	118	0	0		
Acetone	6.44	5.0	10	0	64.4	69.2	133	0	0		S
Benzene	9.53	1.0	10	0	95.3	71.2	122	0	0		
Carbon disulfide	3.87	1.0	5	0	77.4	67.8	134	0	0		
Carbon tetrachloride	9.99	1.0	10	0	99.9	74.5	122	0	0		
Chlorobenzene	8.42	1.0	10	0	84.2	72.7	124	0	0		
Chloroethane	8.99	1.0	10	0	89.9	72.3	136	0	0		
Chloroform	8.04	1.0	10	0	80.4	71.6	133	0	0		
Dibromochloromethane	9.02	1.0	10	0	90.2	70.6	124	0	0		
Ethylbenzene	8.44	1.0	10	0	84.4	70.9	126	0	0		
Methylene chloride	10.06	1.0	10	0	101	66.3	130	0	0		
Tetrachloroethene	9.64	1.0	10	0	96.4	72.4	119	0	0		
Toluene	9.12	1.0	10	0	91.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.05	1.0	10	0	90.5	70.3	120	0	0		
Trichloroethene	9.42	1.0	10	0	94.2	73	127	0	0		
Vinyl chloride	8.96	1.0	10	0	89.6	65.2	134	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

lcs

SeqNo: **2661241** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	25.99	1.0	30	0	86.6	0	0	0	0		S
Surr: 1,2-Dichloroethane-d4	48.34	5.0	50	0	96.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.55	5.0	50	0	95.1	76.5	125	0	0		
Surr: Toluene-d8	48.09	5.0	50	0	96.2	80.4	121	0	0		

lcs

SeqNo: **2662761** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	7.93	5.0	10	0	79.3	71	124	0	0		
1,3-Dichlorobenzene	8.28	5.0	10	0	82.8	72.2	121	0	0		
1,4-Dichlorobenzene	7.99	5.0	10	0	79.9	71.7	127	0	0		

lcsd

SeqNo: **2661242** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.44	1.0	10	0	94.4	72.3	121	9.99	5.66	25	
1,1,2,2-Tetrachloroethane	8.07	1.0	10	0	80.7	72.3	118	7.35	9.34	25	
1,1,2-Trichloroethane	9.29	1.0	10	0	92.9	73.1	123	9.06	2.51	25	
1,1-Dichloroethane	9.28	1.0	10	0	92.8	73.2	127	8.91	4.07	25	
1,1-Dichloroethene	9.17	1.0	10	0	91.7	70.3	128	8.48	7.82	25	
1,2,3-Trichloropropane	4.37	1.0	5	0	87.4	68.4	115	3.74	15.5	25	
1,2-Dichloroethane	8.03	1.0	10	0	80.3	72.5	127	8.09	0.744	25	
1,3-Dichloropropane	4.47	1.0	5	0	89.4	76	122	4.54	1.55	0	
2-Butanone	7.84	5.0	10	0	78.4	65.1	132	6.59	17.3	25	
4-Methyl-2-pentanone	8.44	5.0	10	0	84.4	68.7	118	7.57	10.9	25	
Acetone	7.98	5.0	10	0	79.8	69.2	133	6.44	21.4	25	
Benzene	9.09	1.0	10	0	90.9	71.2	122	9.53	4.73	25	
Carbon disulfide	4.11	1.0	5	0	82.2	67.8	134	3.87	6.02	25	
Carbon tetrachloride	9.76	1.0	10	0	97.6	74.5	122	9.99	2.33	25	
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	124	8.42	10.6	25	
Chloroethane	10.44	1.0	10	0	104	72.3	136	8.99	14.9	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

lcsd

SeqNo: **2661242** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	8.44	1.0	10	0	84.4	71.6	133	8.04	4.85	25	
Dibromochloromethane	9.54	1.0	10	0	95.4	70.6	124	9.02	5.60	25	
Ethylbenzene	9.29	1.0	10	0	92.9	70.9	126	8.44	9.59	25	
Methylene chloride	9.58	1.0	10	0	95.8	66.3	130	10.06	4.89	25	
Tetrachloroethene	9.25	1.0	10	0	92.5	72.4	119	9.64	4.13	25	
Toluene	9.16	1.0	10	0	91.6	71.8	116	9.12	0.438	25	
trans-1,2-Dichloroethene	8.83	1.0	10	0	88.3	70.3	120	9.05	2.46	25	
Trichloroethene	9.46	1.0	10	0	94.6	73	127	9.42	0.424	25	
Vinyl chloride	9.41	1.0	10	0	94.1	65.2	134	8.96	4.90	25	
Xylenes, Total	28.48	1.0	30	0	94.9	0	0	25.99	9.14	0	S
Surr: 1,2-Dichloroethane-d4	48.89	5.0	50	0	97.8	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	50.69	5.0	50	0	101	76.5	125	0	0	25	
Surr: Toluene-d8	48.37	5.0	50	0	96.7	80.4	121	0	0	25	

lcsd

SeqNo: **2662762** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	9.4	5.0	10	0	94	71	124	7.93	17.0	25	
1,3-Dichlorobenzene	9.08	5.0	10	0	90.8	72.2	121	8.28	9.22	25	
1,4-Dichlorobenzene	8.82	5.0	10	0	88.2	71.7	127	7.99	9.88	25	

ms

SeqNo: **2661700** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.92	1.0	10	0	99.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.27	1.0	10	0	82.7	70.1	123	0	0		
1,1,2-Trichloroethane	9.51	1.0	10	0	95.1	72.1	119	0	0		
1,1-Dichloroethane	8.91	1.0	10	0	89.1	70.4	126	0	0		
1,1-Dichloroethene	9.65	1.0	10	0	96.5	70.2	125	0	0		
1,2,3-Trichloropropane	4.88	1.0	5	0	97.6	53.7	101	0	0		
1,2-Dichloroethane	8.25	1.0	10	0	82.5	73.5	126	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

ms | SeqNo: **2661700** | TestNo: **SW8260C** | RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** | Units: **µg/L** | Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichloropropane	4.78	1.0	5	0	95.6	64	125	0	0		
2-Butanone	8.76	5.0	10	0	87.6	60.5	123	0	0		
4-Methyl-2-pentanone	8.91	5.0	10	0	89.1	52.8	133	0	0		
Acetone	7.54	5.0	10	0	75.4	56.3	135	0	0		
Benzene	9.22	1.0	10	0	92.2	70.2	127	0	0		
Carbon disulfide	4.39	1.0	5	0	87.8	62.2	130	0	0		
Carbon tetrachloride	9.9	1.0	10	0	99	56.4	137	0	0		
Chlorobenzene	9.48	1.0	10	0	94.8	72.7	128	0	0		
Chloroethane	10.95	1.0	10	0	110	71.3	135	0	0		
Chloroform	8.34	1.0	10	0	83.4	70.2	125	0	0		
Dibromochloromethane	9.22	1.0	10	0	92.2	69.5	123	0	0		
Ethylbenzene	10.42	1.0	10	0	104	71.9	129	0	0		
Methylene chloride	8.5	1.0	10	0	85	65.3	123	0	0		
Tetrachloroethene	9.71	1.0	10	0	97.1	74.5	121	0	0		
Toluene	9.2	1.0	10	0	92	73	122	0	0		
trans-1,2-Dichloroethene	8.77	1.0	10	0	87.7	69.1	133	0	0		
Trichloroethene	9.49	1.0	10	0	94.9	71.1	126	0	0		
Vinyl chloride	9.6	1.0	10	0	96	65	137	0	0		
Surr: 1,2-Dichloroethane-d4	48.74	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.11	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	47.3	5.0	50	0	94.6	80.4	121	0	0		

ms | SeqNo: **2662770** | TestNo: **SW8260C** | RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** | Units: **µg/L** | Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	9.15	5.0	10	0	91.5	70.2	123	0	0		
1,3-Dichlorobenzene	9.31	5.0	10	0	93.1	70.4	124	0	0		
1,4-Dichlorobenzene	9	5.0	10	0	90	70.8	127	0	0		

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

msd

SeqNo: **2661701** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.57	1.0	10	0	95.7	71.6	126	9.92	3.59	20.4	
1,1,2,2-Tetrachloroethane	8.07	1.0	10	0	80.7	70.1	123	8.27	2.45	18.6	
1,1,2-Trichloroethane	8.96	1.0	10	0	89.6	72.1	119	9.51	5.96	20	
1,1-Dichloroethane	8.66	1.0	10	0	86.6	70.4	126	8.91	2.85	19.2	
1,1-Dichloroethene	9.43	1.0	10	0	94.3	70.2	125	9.65	2.31	16.1	
1,2,3-Trichloropropane	4.36	1.0	5	0	87.2	53.7	101	4.88	11.3	20	
1,2-Dichloroethane	8.36	1.0	10	0	83.6	73.5	126	8.25	1.32	15.6	
1,3-Dichloropropane	4.53	1.0	5	0	90.6	64	125	4.78	5.37	0	
2-Butanone	8.96	5.0	10	0	89.6	60.5	123	8.76	2.26	15	
4-Methyl-2-pentanone	8.5	5.0	10	0	85	52.8	133	8.91	4.71	11.9	
Acetone	7.02	5.0	10	0	70.2	56.3	135	7.54	7.14	10.6	
Benzene	8.87	1.0	10	0	88.7	70.2	127	9.22	3.87	18.4	
Carbon disulfide	4.1	1.0	5	0	82	62.2	130	4.39	6.83	13.1	
Carbon tetrachloride	9.68	1.0	10	0	96.8	56.4	137	9.9	2.25	20.3	
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	128	9.48	1.27	19.6	
Chloroethane	9.99	1.0	10	0	99.9	71.3	135	10.95	9.17	27.8	
Chloroform	7.99	1.0	10	0	79.9	70.2	125	8.34	4.29	20.3	
Dibromochloromethane	9.16	1.0	10	0	91.6	69.5	123	9.22	0.653	18.8	
Ethylbenzene	9.53	1.0	10	0	95.3	71.9	129	10.42	8.92	16.3	
Methylene chloride	8.05	1.0	10	0	80.5	65.3	123	8.5	5.44	21.4	
Tetrachloroethene	9.61	1.0	10	0	96.1	74.5	121	9.71	1.04	20.9	
Toluene	9.38	1.0	10	0	93.8	73	122	9.2	1.94	19.4	
trans-1,2-Dichloroethene	8.98	1.0	10	0	89.8	69.1	133	8.77	2.37	16.1	
Trichloroethene	9.41	1.0	10	0	94.1	71.1	126	9.49	0.847	16.6	
Vinyl chloride	9.17	1.0	10	0	91.7	65	137	9.6	4.58	20.5	
Surr: 1,2-Dichloroethane-d4	49.24	5.0	50	0	98.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.57	5.0	50	0	101	76.5	125	0	0	0	
Surr: Toluene-d8	47.98	5.0	50	0	96	80.4	121	0	0	0	

msd

SeqNo: **2662771** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717004
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173343

msd

SeqNo: **2662771** TestNo: **SW8260C** RunNo: **173343**
Samp ID: **190717004-003f (071619-04-SW-B-** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.92	5.0	10	0	89.2	70.2	123	9.15	2.55	17.9	
1,3-Dichlorobenzene	9.43	5.0	10	0	94.3	70.4	124	9.31	1.28	14.3	
1,4-Dichlorobenzene	8.51	5.0	10	0	85.1	70.8	127	9	5.60	14.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190717004

Client Name:	Address:	
AECOM	36 Riverside Ave. Rensselaer, NY	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)** James Sirvent, Ryan McCarthy
Ryan.McCarthy@aecom.com	BASF Rensselaer, NY	
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	John.Bleiler@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	071619-03-SW-U-B-1	07-16-19	1621	P	W		✓	2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
002	071619-04-SW-B-A-1	07-16-19	1745	A/P	W		✓	1	metals (filtered)
				A/P				2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
003	071619-04-SW-B-A-2	071619	1745	A/P	W		✓	2	PCBs
				A/P				1	metals/hardness
				A/P				3	mecury
				A/P				1	TSS

Shipment Arrived Via: FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
~~☐ 1 Day~~ (5) ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/17/19 0700
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/17/19 8:01 AM

Temperature: Ambient or (Chilled) 4°C Notes:_____

AES Bottles: Y (☒) N (☐)

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190717004

Adirondack Environmental Services, Inc.

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CHAIN OF CUSTODY RECORD

AES Work Order # 19071 7004

Client Name:	Address:		
AECOM	36 Riverside Ave. Rensselaer, NY		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
RYan.McCarthy@aecom.com	BASF Rensselaer, NY	James Sirvent	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	John.Bleiler@aecom.com	229605	James Sirvent

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
004	071619-01-SW-D-B-1	07-16-19	1431	P	W		✓	1	metals (filtered)
								2	VOCs
								2	PCBs
								1	metals/hardness
								3	mercury
								1	TSS
005	071619-02-SW-A-B-1		1546	P				1	metals (filtered)
								2	VOCs
								2	PCBs
								1	metals/hardness
								3	mercury
								1	TSS
~~006~~ 001 J.M. 7/12/19	071619-03-SW-U-B-1		1621	P				1	metals (filtered)
								2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ ~~1 Day~~ (TS) ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/12/19 0700
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/12/19 8:01

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 4°C	☒	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190712004

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Client Name:	Address:		
AECOM	36 Riverside Ave. Rensselaer, NY		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)** James Sinnett	
Ryan.McCarthy@aecom.com	BASF Rensselaer, NY	Ryan McCarthy	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	John.Bleiler@aecom.com	229605	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
~~003007~~	071619-04-SW-B-A-2	07-16-19	1745	A ~~P~~	W		✓	1	metals (filtered)
		↓	↓	A P	↓		↓	2	VOCs
~~003008~~	071619-05-SW-B-A-1	07-16-19	1510	A (P)	W		✓	1	TSS
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

7/12/19

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/12/19 0700
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/12/19 8:01

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 4°C	Y ☒ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

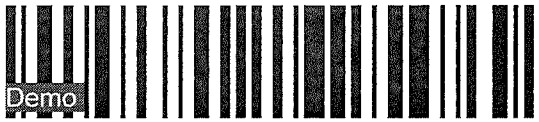
190717004

REPORTING INFORMATION: Ryan McCarthy — HardCopy-YES

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber:
ClientReferenceNo:

QClevel: STD+

☑ Hard Copy

7/17/2019

TAT: **1**

DateDue: 7/18/2019

☑ **RPT** QA/QC Data — Completed by_____

☑ **EDD** Jennifer Atkins — Completed by_____
jennifer.atkins@aecom.com PDF & Excel

☑ **EDD** Paul Kilchenstein — Completed by_____
paul.kilchenstein@aecom.com PDF & Excel

☑ **EDD** EFW-EQUIS — Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Ryan.McCarthy@aecom.com — Completed by_____
PDF & EFW EQuIS

☑ **EDD** Lori.Herberich@aecom.com — Completed by_____
PDF & EFW EQuIS

☑ **EDD** heather.wayne@aecom.com — Completed by_____
PDF & EFW EQuIS

☑ **EDD** kit.williams@aecom.com — Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190717004-001	071619-03-SW-U-B-1	Water	7/16/2019	7/18/2019	C	A	F	B	B	E	D
190717004-002	071619-04-SW-B-A-1	Water	7/16/2019	7/18/2019	E	C	B	D	D	A	F
190717004-003	071619-04-SW-B-A-2	Water	7/16/2019	7/18/2019	C	A	F	B	B	E	D
190717004-004	071619-01-SW-D-B-1	Water	7/16/2019	7/18/2019	E	C	B	D	D	A	F
190717004-005	071619-02-SW-A-B-1	Water	7/16/2019	7/18/2019	E	C	B	D	D	A	F
190717004-006	071619-05-SW-B-A-1	Water	7/16/2019	7/18/2019							A

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 19, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190717070

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 4 samples on 7/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *19-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190717070	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-04-SW-B-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 7:21:40 PM
Surr: Decachlorobiphenyl	**104**	57.1-135		%REC	1	7/17/2019 7:21:40 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**2.1**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Total Hardness (As CaCO3)	**76**	5		mg/L CaCO3	1	7/18/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/18/2019 12:07:00 PM
Barium	**0.020**	0.010		mg/L	1	7/18/2019 12:07:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/18/2019 12:07:00 PM
Chromium	**ND**	0.005		mg/L	1	7/18/2019 12:07:00 PM
Copper	**ND**	0.005		mg/L	1	7/18/2019 12:07:00 PM
Lead	**ND**	0.005		mg/L	1	7/18/2019 12:07:00 PM
Selenium	**ND**	0.005		mg/L	1	7/18/2019 12:07:00 PM
Silver	**ND**	0.010		mg/L	1	7/18/2019 12:07:00 PM
Zinc	**ND**	0.010		mg/L	1	7/18/2019 12:07:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:28:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/18/2019 1:28:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/18/2019 1:28:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:28:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:28:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:28:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-04-SW-B-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/18/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:28:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:28:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:28:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 11:55:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	7/19/2019 11:55:00 AM
Surr: 1,2-Dichloroethane-d4	**99.5**	80.9-122		%REC	1	7/19/2019 11:55:00 AM
Surr: 4-Bromofluorobenzene	**98.2**	76.5-125		%REC	1	7/19/2019 11:55:00 AM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	7/19/2019 11:55:00 AM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-04-SW-B-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-001
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**8.6**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-01-SW-U-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 7:35:01 PM
Surr: Decachlorobiphenyl	**112**	57.1-135		%REC	1	7/17/2019 7:35:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**2.3**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Total Hardness (As CaCO3)	**74**	5		mg/L CaCO3	1	7/18/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/18/2019 12:16:00 PM
Barium	**0.020**	0.010		mg/L	1	7/18/2019 12:16:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/18/2019 12:16:00 PM
Chromium	**ND**	0.005		mg/L	1	7/18/2019 12:16:00 PM
Copper	**0.005**	0.005		mg/L	1	7/18/2019 12:16:00 PM
Lead	**ND**	0.005		mg/L	1	7/18/2019 12:16:00 PM
Selenium	**ND**	0.005		mg/L	1	7/18/2019 12:16:00 PM
Silver	**ND**	0.010		mg/L	1	7/18/2019 12:16:00 PM
Zinc	**ND**	0.010		mg/L	1	7/18/2019 12:16:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:31:00 PM
Barium, Dissolved	**0.019**	0.010		mg/L	1	7/18/2019 1:31:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/18/2019 1:31:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:31:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:31:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:31:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-01-SW-U-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:31:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:31:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:31:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 12:16:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:16:00 PM
Xylenes, Total	**1.9**	1.0		µg/L	1	7/19/2019 12:16:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	7/19/2019 12:16:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	7/19/2019 12:16:00 PM
Surr: Toluene-d8	**98.9**	80.4-121		%REC	1	7/19/2019 12:16:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-01-SW-U-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-002
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**9.6**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-02-SW-A-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/17/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
PCB, Total	**ND**	0.065		µg/L	1	7/17/2019 7:48:21 PM
Surr: Decachlorobiphenyl	**122**	57.1-135		%REC	1	7/17/2019 7:48:21 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/17/2019)						
Mercury	**1.9**	0.5		ng/L	1	7/18/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Total Hardness (As CaCO3)	**72**	5		mg/L CaCO3	1	7/18/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/18/2019 12:30:00 PM
Barium	**0.019**	0.010		mg/L	1	7/18/2019 12:30:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/18/2019 12:30:00 PM
Chromium	**0.006**	0.005		mg/L	1	7/18/2019 12:30:00 PM
Copper	**ND**	0.005		mg/L	1	7/18/2019 12:30:00 PM
Lead	**0.012**	0.005		mg/L	1	7/18/2019 12:30:00 PM
Selenium	**ND**	0.005		mg/L	1	7/18/2019 12:30:00 PM
Silver	**ND**	0.010		mg/L	1	7/18/2019 12:30:00 PM
Zinc	**ND**	0.010		mg/L	1	7/18/2019 12:30:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/18/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:38:00 PM
Barium, Dissolved	**0.019**	0.010		mg/L	1	7/18/2019 1:38:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/18/2019 1:38:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:38:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:38:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:38:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-02-SW-A-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/18/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/18/2019 1:38:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:38:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/18/2019 1:38:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 12:38:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:38:00 PM
Xylenes, Total	**1.7**	1.0		µg/L	1	7/19/2019 12:38:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	7/19/2019 12:38:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	7/19/2019 12:38:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	7/19/2019 12:38:00 PM

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-02-SW-A-A-1
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-003
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**5.7**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *19-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071719-TB01
Work Order:	**190717070**	**Collection Date:**	7/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190717070-004
PO#:		**Matrix:**	WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Methylene chloride	**2.9**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Acetone	**24**	5.0		µg/L	1	7/19/2019 12:59:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 12:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 12:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:59:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:59:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 12:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/19/2019 12:59:00 PM
Surr: 1,2-Dichloroethane-d4	**95.5**	80.9-122		%REC	1	7/19/2019 12:59:00 PM
Surr: 4-Bromofluorobenzene	**94.0**	76.5-125		%REC	1	7/19/2019 12:59:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	7/19/2019 12:59:00 PM

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74501

mblk

SeqNo: **2661421** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173357**
Samp ID: **mb-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0928	0	0.1	0	92.8	48.8	140	0	0		

MBLK

SeqNo: **2661471** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **MB-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.06	0	0.1	0	60	51.5	144	0	0		

LCS

SeqNo: **2661474** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **LCS-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.07	0	0.1	0	70	51.5	144	0	0		

LCSD

SeqNo: **2661475** PrepDate:**7/17/2019** TestNo: **E608** RunNo: **173360**
Samp ID: **LCSDPEST** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.074	0	0.1	0	74	51.5	144	0	0	0	

lcs

SeqNo: **2662529** PrepDate:**7/17/2019** TestNo: **SW8082A** RunNo: **173357**
Samp ID: **lcs-74501** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3986	0.0650	0.5	0	79.7	60	140	0	0		
Surr: Decachlorobiphenyl	0.1056	0	0.1	0	106	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74501

lcsd	SeqNo: **2662690**	**PrepDate:7/17/2019**	TestNo: **SW8082A**	RunNo: **173357**
	Samp ID: **lcsd-74501**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **7/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3736	0.0650	0.5	0	74.7	60	140	0.3986	6.48	30	
Surr: Decachlorobiphenyl	0.1086	0	0.1	0	109	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74518

MBLK

SeqNo: **2661886** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **MB-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2662225** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **MB-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2661887** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **LCS-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.51	0.500	10	0	95.1	77	123	0	0		

LCS

SeqNo: **2662226** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **LCS-74518** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.09	0.500	10	0	90.9	77	123	0	0		

MS

SeqNo: **2662223** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190716061-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.9	0.500	12.5	0.553	82.8	71	125	0	0		

MS

SeqNo: **2662231** PrepDate:**7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190717059-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.67	0.500	12.5	1.08	68.7	71	125	0	0		S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74518

MSD

SeqNo: **2662224** **PrepDate:7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190716061-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.8	0.500	12.5	0.553	82	71	125	10.9	0.922	24	

MSD

SeqNo: **2662232** **PrepDate:7/17/2019** TestNo: **E1631** RunNo: **173384**
Samp ID: **190717059-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.79	0.500	12.5	1.08	69.7	71	125	9.67	1.23	24	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74528

LCS

SeqNo: **2662043** **PrepDate:7/18/2019** TestNo: **SM2540D** RunNo: **173395**
Samp ID: **LCS-74528** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	490	0	95.5	86.5	114	0	0		

LCS

SeqNo: **2662564** **PrepDate:7/18/2019** TestNo: **SM2540D** RunNo: **173435**
Samp ID: **LCS-74528** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	490	0	95.5	86.5	114	0	0		

DUP

SeqNo: **2662574** **PrepDate:7/18/2019** TestNo: **SM2540D** RunNo: **173435**
Samp ID: **190716028-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	390	20.0	0	0	0	0	0	346	12.0	10	Z

DUP

SeqNo: **2662577** **PrepDate:7/18/2019** TestNo: **SM2540D** RunNo: **173435**
Samp ID: **190716038-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	138	20.0	0	0	0	0	0	128	7.52	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74531

MBLK

SeqNo: **2661968** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **MB-74531** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

MBLK

SeqNo: **2662372** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **MB-74531** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2661969** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **LCS-74531** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.019	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	1.991	0.0100	2	0	99.6	89	112	0	0		
Cadmium, Dissolved	2.103	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.994	0.00500	2	0	99.7	89.1	109	0	0		
Copper, Dissolved	2.003	0.00500	2	0	100	86.8	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74531

LCS

SeqNo: **2661969** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **LCS-74531** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	2.144	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.035	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5149	0.0100	0.5	0	103	85	115	0	0		
Zinc, Dissolved	2.064	0.0100	2	0	103	85	115	0	0		

LCS

SeqNo: **2662373** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **LCS-74531** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.019	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	1.991	0.0100	2	0	99.6	89	112	0	0		
Cadmium, Dissolved	2.103	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.994	0.00500	2	0	99.7	89.1	109	0	0		
Copper, Dissolved	2.003	0.00500	2	0	100	86.8	115	0	0		
Lead, Dissolved	2.144	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.035	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5149	0.0100	0.5	0	103	85	115	0	0		
Zinc, Dissolved	2.064	0.0100	2	0	103	85	115	0	0		

MS

SeqNo: **2661974** PrepDate:**7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **190717070-003 (071719-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04095	0.00500	0.04	0	102	75	123	0	0		
Barium, Dissolved	2.152	0.0100	2	0.01866	107	75	124	0	0		
Cadmium, Dissolved	0.0546	0.00500	0.05	0	109	75	125	0	0		
Chromium, Dissolved	0.2175	0.00500	0.2	0	109	77.2	117	0	0		
Copper, Dissolved	0.2705	0.00500	0.25	0.002506	107	75	125	0	0		
Lead, Dissolved	0.02154	0.00500	0.02	0.0003771	106	75	125	0	0		
Selenium, Dissolved	0.009771	0.00500	0.01	0	97.7	75	125	0	0		
Silver, Dissolved	0.04438	0.0100	0.05	0.00342	81.9	75	125	0	0		
Zinc, Dissolved	0.5635	0.0100	0.5	0.002747	112	75	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74531

MS

SeqNo: **2662378** **PrepDate:7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **190717070-003 (071719-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04095	0.00500	0.04	0	102	75	123	0	0		
Barium, Dissolved	2.152	0.0100	2	0.01866	107	75	124	0	0		
Cadmium, Dissolved	0.0546	0.00500	0.05	0	109	75	125	0	0		
Chromium, Dissolved	0.2175	0.00500	0.2	0	109	77.2	117	0	0		
Copper, Dissolved	0.2705	0.00500	0.25	0.002506	107	75	125	0	0		
Lead, Dissolved	0.02154	0.00500	0.02	0.0003771	106	75	125	0	0		
Selenium, Dissolved	0.009771	0.00500	0.01	0	97.7	75	125	0	0		
Silver, Dissolved	0.04438	0.0100	0.05	0.00342	81.9	75	125	0	0		
Zinc, Dissolved	0.5635	0.0100	0.5	0.002747	112	75	121	0	0		

DUP

SeqNo: **2661973** **PrepDate:7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **190717070-003** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.01803	0.0100	0	0	0	0	0	0.01866	3.43	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0.002506	0	20.1	
Lead, Dissolved	0.005373	0.00500	0	0	0	0	0	0.0003771	174	22	Z
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.00342	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0.002747	0	15.4	

DUP

SeqNo: **2662377** **PrepDate:7/18/2019** TestNo: **E200.7F** RunNo: **173389**
Samp ID: **190717070-003** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.01803	0.0100	0	0	0	0	0	0.01866	3.43	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0.002506	0	20.1	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74531

DUP					
SeqNo: **2662377**	**PrepDate:7/18/2019**	TestNo: **E200.7F**	RunNo: **173389**
Samp ID: **190717070-003**	**PrepRef:**	Units: **mg/L**	Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.005373	0.00500	0	0	0	0	0	0.0003771	174	22	Z
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.00342	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0.002747	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74532

MBLK

SeqNo: **2661958** PrepDate:**7/18/2019** TestNo: **E200.7** RunNo: **173389**
Samp ID: **MB-74532** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2661959** PrepDate:**7/18/2019** TestNo: **E200.7** RunNo: **173389**
Samp ID: **LCS-74532** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.981	0.00500	2	0	99	89.1	111	0	0		
Barium	1.974	0.0100	2	0	98.7	85	115	0	0		
Cadmium	2.076	0.00500	2	0	104	85	115	0	0		
Chromium	1.965	0.00500	2	0	98.2	89.7	109	0	0		
Copper	1.986	0.00500	2	0	99.3	85	115	0	0		
Lead	2.116	0.00500	2	0	106	88.1	112	0	0		
Selenium	1.994	0.00500	2	0	99.7	87.5	112	0	0		
Silver	0.5171	0.0100	0.5	0	103	85.2	115	0	0		
Zinc	2.04	0.0100	2	0	102	88.3	113	0	0		

MS

SeqNo: **2661965** PrepDate:**7/18/2019** TestNo: **E200.7** RunNo: **173389**
Samp ID: **190717070-003 (071719-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03978	0.00500	0.04	0	99.4	75	125	0	0		
Barium	2.114	0.0100	2	0.01873	105	75	119	0	0		
Cadmium	0.05271	0.00500	0.05	0	105	75	118	0	0		
Chromium	0.2159	0.00500	0.2	0.006043	105	75	124	0	0		
Copper	0.266	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74532

MS

SeqNo: **2661965** **PrepDate:7/18/2019** TestNo: **E200.7** RunNo: **173389**
Samp ID: **190717070-003 (071719-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02119	0.00500	0.02	0.01243	43.8	75	125	0	0		S
Selenium	0.01045	0.00500	0.01	0	104	75	125	0	0		
Silver	0.03901	0.0100	0.05	0	78	75	125	0	0		
Zinc	0.5486	0.0100	0.5	0	110	76.9	125	0	0		

DUP

SeqNo: **2661964** **PrepDate:7/18/2019** TestNo: **E200.7** RunNo: **173389**
Samp ID: **190717070-003** **PrepRef:** Units: **mg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.0199	0.0100	0	0	0	0	0	0.01873	6.06	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.008219	0.00500	0	0	0	0	0	0.006043	30.5	20	Z
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	0.00947	0.00500	0	0	0	0	0	0.01243	27.0	18.9	Z
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	ND	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

mblk

SeqNo: **2662704** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichloropropane	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.53	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.07	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.93	5.0	50	0	99.9	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

mblk

SeqNo: **2662756** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									

lcs

SeqNo: **2662702** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.54	1.0	10	0	85.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.16	1.0	10	0	81.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.11	1.0	10	0	91.1	73.1	123	0	0		
1,1-Dichloroethane	9.15	1.0	10	0	91.5	73.2	127	0	0		
1,1-Dichloroethene	7.44	1.0	10	0	74.4	70.3	128	0	0		
1,2,3-Trichloropropane	4.13	1.0	5	0	82.6	68.4	115	0	0		
1,2-Dichloroethane	8.72	1.0	10	0	87.2	72.5	127	0	0		
1,3-Dichloropropane	4.79	1.0	5	0	95.8	76	122	0	0		
2-Butanone	7.4	5.0	10	0	74	65.1	132	0	0		
4-Methyl-2-pentanone	8.27	5.0	10	0	82.7	68.7	118	0	0		
Acetone	7.34	5.0	10	0	73.4	69.2	133	0	0		
Benzene	8.98	1.0	10	0	89.8	71.2	122	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	67.8	134	0	0		
Carbon tetrachloride	8.71	1.0	10	0	87.1	74.5	122	0	0		
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	124	0	0		
Chloroethane	9.34	1.0	10	0	93.4	72.3	136	0	0		
Chloroform	8.31	1.0	10	0	83.1	71.6	133	0	0		
Dibromochloromethane	8.76	1.0	10	0	87.6	70.6	124	0	0		
Ethylbenzene	9.06	1.0	10	0	90.6	70.9	126	0	0		
Methylene chloride	10.26	1.0	10	0	103	66.3	130	0	0		
Tetrachloroethene	9.18	1.0	10	0	91.8	72.4	119	0	0		
Toluene	8.93	1.0	10	0	89.3	71.8	116	0	0		
trans-1,2-Dichloroethene	8.67	1.0	10	0	86.7	70.3	120	0	0		
Trichloroethene	8.91	1.0	10	0	89.1	73	127	0	0		
Vinyl chloride	9.46	1.0	10	0	94.6	65.2	134	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

lcs

SeqNo: **2662702** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	27.57	1.0	30	0	91.9	0	0	0	0		S
Surr: 1,2-Dichloroethane-d4	49.63	5.0	50	0	99.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.11	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.06	5.0	50	0	98.1	80.4	121	0	0		

lcs

SeqNo: **2662754** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.65	5.0	10	0	86.5	71	124	0	0		
1,3-Dichlorobenzene	8.56	5.0	10	0	85.6	72.2	121	0	0		
1,4-Dichlorobenzene	8.51	5.0	10	0	85.1	71.7	127	0	0		

lcsd

SeqNo: **2662703** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.97	1.0	10	0	89.7	72.3	121	8.54	4.91	25	
1,1,2,2-Tetrachloroethane	8.2	1.0	10	0	82	72.3	118	8.16	0.489	25	
1,1,2-Trichloroethane	8.74	1.0	10	0	87.4	73.1	123	9.11	4.15	25	
1,1-Dichloroethane	9.61	1.0	10	0	96.1	73.2	127	9.15	4.90	25	
1,1-Dichloroethene	9.49	1.0	10	0	94.9	70.3	128	7.44	24.2	25	
1,2,3-Trichloropropane	3.87	1.0	5	0	77.4	68.4	115	4.13	6.50	25	
1,2-Dichloroethane	8.93	1.0	10	0	89.3	72.5	127	8.72	2.38	25	
1,3-Dichloropropane	4.55	1.0	5	0	91	76	122	4.79	5.14	0	
2-Butanone	8.54	5.0	10	0	85.4	65.1	132	7.4	14.3	25	
4-Methyl-2-pentanone	7.93	5.0	10	0	79.3	68.7	118	8.27	4.20	25	
Acetone	8.36	5.0	10	0	83.6	69.2	133	7.34	13.0	25	
Benzene	9.24	1.0	10	0	92.4	71.2	122	8.98	2.85	25	
Carbon disulfide	4.62	1.0	5	0	92.4	67.8	134	4.21	9.29	25	
Carbon tetrachloride	9.07	1.0	10	0	90.7	74.5	122	8.71	4.05	25	
Chlorobenzene	9.26	1.0	10	0	92.6	72.7	124	9.36	1.07	25	
Chloroethane	8.98	1.0	10	0	89.8	72.3	136	9.34	3.93	25	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190717070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

lcsd

SeqNo: **2662703** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	8.8	1.0	10	0	88	71.6	133	8.31	5.73	25	
Dibromochloromethane	8.62	1.0	10	0	86.2	70.6	124	8.76	1.61	25	
Ethylbenzene	9.24	1.0	10	0	92.4	70.9	126	9.06	1.97	25	
Methylene chloride	10.82	1.0	10	0	108	66.3	130	10.26	5.31	25	
Tetrachloroethene	9.14	1.0	10	0	91.4	72.4	119	9.18	0.437	25	
Toluene	9.09	1.0	10	0	90.9	71.8	116	8.93	1.78	25	
trans-1,2-Dichloroethene	9.23	1.0	10	0	92.3	70.3	120	8.67	6.26	25	
Trichloroethene	8.84	1.0	10	0	88.4	73	127	8.91	0.789	25	
Vinyl chloride	9.67	1.0	10	0	96.7	65.2	134	9.46	2.20	25	
Xylenes, Total	28.4	1.0	30	0	94.7	0	0	27.57	2.97	0	S
Surr: 1,2-Dichloroethane-d4	50.68	5.0	50	0	101	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.53	5.0	50	0	99.1	76.5	125	0	0	25	
Surr: Toluene-d8	49.81	5.0	50	0	99.6	80.4	121	0	0	25	

lcsd

SeqNo: **2662755** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.81	5.0	10	0	88.1	71	124	8.65	1.83	25	
1,3-Dichlorobenzene	9.09	5.0	10	0	90.9	72.2	121	8.56	6.01	25	
1,4-Dichlorobenzene	8.73	5.0	10	0	87.3	71.7	127	8.51	2.55	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190717070

Client Name: AECOM	Address: 36 Riverside Ave. Rensselaer, NY	
Send Report To: Ryan.McCarthy@aecom.com	Project Name (Location) BASF Rensselaer, NY	Samplers: (Names) John Angelone, Ryan McCarthy
Client Phone No: 978-905-2124 Client Email: John.Bleiler@aecom.com	PO Number: 229608	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	071719-04-SW-B-A-1	07/17/19	1140 A	W		X	1	Metals (filtered)
			P				2	VOCs
							2	PCBs
							1	Metals/hardness
							3	Mercury
							1	TSS
002	071719-01-SW-1-A-1		1220				1	Metals (filtered)
							2	VOCs
							2	PCBs
							1	Metals/Hardness
							3	Mercury
							1	TSS
003	071719-02-SW-A-A-1		1255				1	Metals (filtered)
							2	VOCs

Shipment Arrived Via:
FedEx UPS Client AES Other: _____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 7/17/19 345
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 7/17/19 4:40 pm

Temperature: Ambient or Chilled Notes: 18°C

AES Bottles: Y ☒ N ☐

Properly Preserved: Y N Notes: _____

Received Within Holding Times: Y N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo 190717070

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19071707G

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Client Name: AECOM	Address: 36 Riverside Ave. Rensselaer, NY	
Send Report To: Ryan.McCarthy@aecom.com	Project Name (Location) BASF Rensselaer, NY	Samplers: (Names) John Angelone, Ryan McCarthy
Client Phone No: 978-905-2124	Client Email: John.Bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	071719-02-SW-A-A-1	07/17/19	DSS	A	W		X	2	PCBs
				P				1	Metals/Hardness
				A				3	Mercury
				P				1	TSS
				A					
				P					
				A					
				P					
				A					
				P					
				A					
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				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 7/17/19 3:45
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 7/17/19 4:10pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	Y N	Y N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190717070

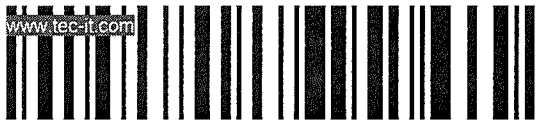
REPORTING INFORMATION: Ryan McCarthy

HardCopy-YES

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber:
ClientReferenceNo:

QClevel: STD+

☑ Hard Copy

TAT: **2**

DateDue: 7/19/2019

7/17/2019

☑ **RPT** MS/MSD/DUP Report — Completed by_____

☑ **EDD** EFW-EQUIS — Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal — Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190717070-001	071719-04-SW-B-A-1	Water	7/17/2019	7/19/2019	E	C	B	D	D	A	F
190717070-002	071719-01-SW-U-A-1	Water	7/17/2019	7/19/2019	E	C	B	D	D	A	F
190717070-003	071719-02-SW-A-A-1	Water	7/17/2019	7/19/2019	E	C	B	D	D	A	F

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/18/19 – 7/22/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (2 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Contaminants of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 7/18/19 through 7/22/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan. The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were two exceedances of the water quality criteria (one each for chlorobenzene and sum of dichlorobenzenes). Upon receipt of the exceedance data, an immediate project stand down occurred and the production rate was reduced. This was all communicated to the NYSDEC in accordance with the Plan. Additionally, there has not been a PCB Aroclor detection during the program to date.

Typically, field turbidity readings from the YSI EXO2 sonde were not observed to be greater than 10 NTU, with the exception of the 7/22/19 readings where the probe may have bumped the bottom. The associated buoy turbidity and lab TSS values collected at the same time were in the single digits. Overall, the turbidity readings continued to be in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the dredging operations.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE (ug/L)	RESULT (ug/L)	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAIN MENT	TIME DREDGING COMMNECED
071819-01-SW-U-A-1	9:15	CHROMIUM	D	mg/l	0.16	0.004	J		U	16	8.13	1.32	Falling (ebb)	17.7	Moon Pool	7:30
071819-02-SW-A-A-1	9:45	CHROMIUM	D	mg/l	0.16	0.004	J		A	26	8.4	0.96	Falling (ebb)	12.6	Moon Pool	7:30
071819-02-SW-A-A-1	9:45	COPPER	D	mg/l	0.01	0.004	J		A	26	8.4	0.96	Falling (ebb)	12.6	Moon Pool	7:30
071819-02-SW-A-A-1	9:45	ZINC	D	mg/l	0.02	0.008	J		A	26	8.4	0.96	Falling (ebb)	12.6	Moon Pool	7:30
071819-03-SW-D-A-1	10:20	BENZENE	T	ug/l	10	1.4			D	31.5	10.9	0.54	Falling (ebb)	17.7	Moon Pool	7:30
071819-03-SW-D-A-1	10:20	CHLOROBENZENE	T	ug/l	5	1.8			D	31.5	10.9	0.54	Falling (ebb)	17.7	Moon Pool	7:30
071819-04-SW-B-B-1	8:30	ARSENIC	D	mg/l	0.15	0.004	J		B	9	7.01	1.91	Falling (ebb)	13	Moon Pool	7:30
071919-01-SW-D-B-1	14:15	BENZENE	T	ug/l	10	5.2			D	13.5	5.82	2.96	Low tide	16.6	Moon Pool	7:30
071919-01-SW-D-B-1	14:15	CHLOROBENZENE	T	ug/l	5	95		X	D	13.5	5.82	2.96	Low tide	16.6	Moon Pool	7:30
071919-01-SW-D-B-1	14:15	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	29		X	D	13.5	5.82	2.96	Low tide	16.6	Moon Pool	7:30
071919-02-SW-A-A-1	13:25	ZINC	D	mg/l	0.02	0.005	J		A	16	7.82	0.68	Rising (flood)	17.1	Moon Pool	7:30
071919-03-SW-U-A-1	12:55	COPPER	D	mg/l	0.01	0.004	J		U	14	8.3	0.68	Rising (flood)	9.6	Moon Pool	7:30
072219-02-SW-A-A-1	13:00	COPPER	D	mg/l	0.01	0.005	J		A	17	54.01	-0.08	Falling (ebb)	8	Moon Pool	7:30
072219-03-SW-D-A-1	13:25	ZINC	D	mg/l	0.02	0.005	J		D	27	54.72	-0.38	Falling (ebb)	7.3	Moon Pool	7:30

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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July 22, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190718083
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 7/18/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *22-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190718083	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-04-SW-B-B-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
PCB, Total	**ND**	0.065		µg/L	1	7/18/2019 6:33:33 PM
Surr: Decachlorobiphenyl	**107**	57.1-135		%REC	1	7/18/2019 6:33:33 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/19/2019)						
Mercury	**3.0**	0.5		ng/L	1	7/22/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Total Hardness (As CaCO3)	**79**	5		mg/L CaCO3	1	7/19/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/19/2019 11:51:00 AM
Barium	**0.024**	0.010		mg/L	1	7/19/2019 11:51:00 AM
Cadmium	**ND**	0.001		mg/L	1	7/19/2019 11:51:00 AM
Chromium	**ND**	0.005		mg/L	1	7/19/2019 11:51:00 AM
Copper	**ND**	0.005		mg/L	1	7/19/2019 11:51:00 AM
Lead	**ND**	0.005		mg/L	1	7/19/2019 11:51:00 AM
Selenium	**ND**	0.005		mg/L	1	7/19/2019 11:51:00 AM
Silver	**ND**	0.010		mg/L	1	7/19/2019 11:51:00 AM
Zinc	**ND**	0.010		mg/L	1	7/19/2019 11:51:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 12:58:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/19/2019 12:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/19/2019 12:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 12:58:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 12:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 12:58:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT: AECOM Environment
Work Order: **190718083**
Reference: BASF Rensselaer – Hudson River OU-2 /
PO#: 115954
Project# : 60323713

Client Sample ID: 071819-04-SW-B-B-1
Collection Date: 7/18/2019
Lab Sample ID: 190718083-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 12:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 12:58:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 12:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 1:21:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:21:00 PM
Xylenes, Total	**2.0**	1.0		µg/L	1	7/19/2019 1:21:00 PM
Surr: 1,2-Dichloroethane-d4	**98.5**	80.9-122		%REC	1	7/19/2019 1:21:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	7/19/2019 1:21:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	7/19/2019 1:21:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-04-SW-B-B-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**13.0**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-01-SW-U-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-002
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
PCB, Total	**ND**	0.065		µg/L	1	7/18/2019 6:46:54 PM
Surr: Decachlorobiphenyl	**108**	57.1-135		%REC	1	7/18/2019 6:46:54 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/19/2019)						
Mercury	**2.8**	0.5		ng/L	1	7/22/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Total Hardness (As CaCO3)	**78**	5		mg/L CaCO3	1	7/19/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/19/2019 12:14:00 PM
Barium	**0.025**	0.010		mg/L	1	7/19/2019 12:14:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/19/2019 12:14:00 PM
Chromium	**ND**	0.005		mg/L	1	7/19/2019 12:14:00 PM
Copper	**ND**	0.005		mg/L	1	7/19/2019 12:14:00 PM
Lead	**ND**	0.005		mg/L	1	7/19/2019 12:14:00 PM
Selenium	**ND**	0.005		mg/L	1	7/19/2019 12:14:00 PM
Silver	**ND**	0.010		mg/L	1	7/19/2019 12:14:00 PM
Zinc	**ND**	0.010		mg/L	1	7/19/2019 12:14:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:41:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	7/19/2019 1:41:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/19/2019 1:41:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:41:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:41:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:41:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-01-SW-U-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-002
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/19/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:41:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:41:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:41:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 1:42:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 1:42:00 PM
Xylenes, Total	**1.5**	1.0		µg/L	1	7/19/2019 1:42:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	7/19/2019 1:42:00 PM
Surr: 4-Bromofluorobenzene	**99.1**	76.5-125		%REC	1	7/19/2019 1:42:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	7/19/2019 1:42:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-01-SW-U-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**17.7**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-02-SW-A-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-003
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
PCB, Total	**ND**	0.065		µg/L	1	7/18/2019 7:00:14 PM
Surr: Decachlorobiphenyl	**105**	57.1-135		%REC	1	7/18/2019 7:00:14 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/19/2019)						
Mercury	**3.3**	0.5		ng/L	1	7/22/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Total Hardness (As CaCO3)	**76**	5		mg/L CaCO3	1	7/19/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/19/2019 12:18:00 PM
Barium	**0.025**	0.010		mg/L	1	7/19/2019 12:18:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/19/2019 12:18:00 PM
Chromium	**ND**	0.005		mg/L	1	7/19/2019 12:18:00 PM
Copper	**ND**	0.005		mg/L	1	7/19/2019 12:18:00 PM
Lead	**ND**	0.005		mg/L	1	7/19/2019 12:18:00 PM
Selenium	**ND**	0.005		mg/L	1	7/19/2019 12:18:00 PM
Silver	**ND**	0.010		mg/L	1	7/19/2019 12:18:00 PM
Zinc	**ND**	0.010		mg/L	1	7/19/2019 12:18:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:45:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/19/2019 1:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/19/2019 1:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:45:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:45:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-02-SW-A-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 2:04:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:04:00 PM
Xylenes, Total	**1.5**	1.0		µg/L	1	7/19/2019 2:04:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	7/19/2019 2:04:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	7/19/2019 2:04:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	7/19/2019 2:04:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-02-SW-A-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**12.6**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-03-SW-D-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
PCB, Total	**ND**	0.065		µg/L	1	7/18/2019 7:13:35 PM
Surr: Decachlorobiphenyl	**86.8**	57.1-135		%REC	1	7/18/2019 7:13:35 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/19/2019)						
Mercury	**10.7**	0.5	N	ng/L	1	7/22/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Total Hardness (As CaCO3)	**77**	5		mg/L CaCO3	1	7/19/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/19/2019 12:26:00 PM
Barium	**0.025**	0.010		mg/L	1	7/19/2019 12:26:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/19/2019 12:26:00 PM
Chromium	**ND**	0.005		mg/L	1	7/19/2019 12:26:00 PM
Copper	**ND**	0.005		mg/L	1	7/19/2019 12:26:00 PM
Lead	**ND**	0.005		mg/L	1	7/19/2019 12:26:00 PM
Selenium	**ND**	0.005		mg/L	1	7/19/2019 12:26:00 PM
Silver	**ND**	0.010		mg/L	1	7/19/2019 12:26:00 PM
Zinc	**ND**	0.010		mg/L	1	7/19/2019 12:26:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:51:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/19/2019 1:51:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/19/2019 1:51:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:51:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:51:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:51:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-03-SW-D-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/19/2019 1:51:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:51:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/19/2019 1:51:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Acetone	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Benzene	**1.4**	1.0		µg/L	1	7/19/2019 2:25:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Chlorobenzene	**1.8**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 2:25:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:25:00 PM
Xylenes, Total	**3.2**	1.0		µg/L	1	7/19/2019 2:25:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	7/19/2019 2:25:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	7/19/2019 2:25:00 PM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	7/19/2019 2:25:00 PM

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-03-SW-D-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**17.7**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071819-05-SW-B-A-1
Work Order:	**190718083**	**Collection Date:**	7/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190718083-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/18/2019)						
TSS (Residue, Non-Filterable)	**15.7**	1.0		mg/L	1	7/18/2019

Adirondack Environmental Services, Inc

Date: *22-Jul-19*

CLIENT: AECOM Environment
Work Order: **190718083**
Reference: BASF Rensselaer – Hudson River OU-2 /
PO#: 115954
Project# : 60323713

Client Sample ID: 071819-TB01
Collection Date: 7/18/2019
Lab Sample ID: 190718083-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,2-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,3-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
1,4-Dichlorobenzene	**ND**	5.0		µg/L	1	7/19/2019 2:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/19/2019 2:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/19/2019 2:47:00 PM
Acetone	**23**	5.0		µg/L	1	7/19/2019 2:47:00 PM
Benzene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Methylene chloride	**3.0**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Toluene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/19/2019 2:47:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	7/19/2019 2:47:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	7/19/2019 2:47:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	7/19/2019 2:47:00 PM

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74542

mblk

SeqNo: **2662265** PrepDate:**7/18/2019** TestNo: **E608** RunNo: **173410**
Samp ID: **mb-74542** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.1048	0	0.1	0	105	48.8	140	0	0		

lcs

SeqNo: **2662266** PrepDate:**7/18/2019** TestNo: **E608** RunNo: **173410**
Samp ID: **lcs-74542** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1318	0.0650	0.1	0	132	59	141	0	0		
Surr: Decachlorobiphenyl	0.0864	0	0.1	0	86.4	48.8	140	0	0		

lcsd

SeqNo: **2662267** PrepDate:**7/18/2019** TestNo: **E608** RunNo: **173410**
Samp ID: **lcsd-74542** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1066	0.0650	0.1	0	107	59	141	0.1318	21.1	36.4	
Surr: Decachlorobiphenyl	0.117	0	0.1	0	117	48.8	140	0	0	0	

dup

SeqNo: **2662269** PrepDate:**7/18/2019** TestNo: **E608** RunNo: **173410**
Samp ID: **190718080-001a** PrepRef: Units: **µg/L** Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	ND	0.0650	0	0	0	0	0	0.0358	0	31.2	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74542

dup	SeqNo: **2662269**	**PrepDate:7/18/2019**	TestNo: **E608**	RunNo: **173410**
	Samp ID: **190718080-001a**	**PrepRef:**	Units: **µg/L**	Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.1314	0	0.1	0	131	48.8	140	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74547

LCS				
SeqNo: **2662691**	**PrepDate:7/18/2019**	TestNo: **SM2540D**	RunNo: **173439**
Samp ID: **LCS-74547**	**PrepRef:(Gen Prep)**	Units: **mg/L**	Analysis Date: **7/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	456	40.0	490	0	93.1	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74556

MBLK

SeqNo: **2663089** PrepDate:**7/19/2019** TestNo: **E200.7F** RunNo: **173461**
Samp ID: **MB-74556** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2663090** PrepDate:**7/19/2019** TestNo: **E200.7F** RunNo: **173461**
Samp ID: **LCS-74556** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.047	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.015	0.0100	2	0	101	89	112	0	0		
Cadmium, Dissolved	2.114	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	2.003	0.00500	2	0	100	89.1	109	0	0		
Copper, Dissolved	2.03	0.00500	2	0	102	86.8	115	0	0		
Lead, Dissolved	2.153	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.063	0.00500	2	0	103	85	115	0	0		
Silver, Dissolved	0.5125	0.0100	0.5	0	102	85	115	0	0		
Zinc, Dissolved	2.061	0.0100	2	0	103	85	115	0	0		

MS

SeqNo: **2663093** PrepDate:**7/19/2019** TestNo: **E200.7F** RunNo: **173461**
Samp ID: **190718083-001 (071819-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04586	0.00500	0.04	0.003721	105	75	123	0	0		
Barium, Dissolved	2.179	0.0100	2	0.02135	108	75	124	0	0		
Cadmium, Dissolved	0.05404	0.00500	0.05	0.0001236	108	75	125	0	0		
Chromium, Dissolved	0.2187	0.00500	0.2	0.001273	109	77.2	117	0	0		
Copper, Dissolved	0.2731	0.00500	0.25	0.001356	109	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74556

MS

SeqNo: **2663093** **PrepDate:7/19/2019** TestNo: **E200.7F** RunNo: **173461**
Samp ID: **190718083-001 (071819-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02117	0.00500	0.02	0	106	75	125	0	0		
Selenium, Dissolved	0.009184	0.00500	0.01	0	91.8	75	125	0	0		
Silver, Dissolved	0.04075	0.0100	0.05	0.00175	78	75	125	0	0		
Zinc, Dissolved	0.5566	0.0100	0.5	0.002711	111	75	121	0	0		

DUP

SeqNo: **2663092** **PrepDate:7/19/2019** TestNo: **E200.7F** RunNo: **173461**
Samp ID: **190718083-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0.003721	0	17.3	
Barium, Dissolved	0.01988	0.0100	0	0	0	0	0	0.02135	7.12	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0.0001236	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0.001273	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0.001356	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.00175	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0.002711	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74557

MBLK

SeqNo: **2663079** PrepDate:**7/19/2019** TestNo: **E200.7** RunNo: **173461**
Samp ID: **MB-74557** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2663080** PrepDate:**7/19/2019** TestNo: **E200.7** RunNo: **173461**
Samp ID: **LCS-74557** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.035	0.00500	2	0	102	89.1	111	0	0		
Barium	2.022	0.0100	2	0	101	85	115	0	0		
Cadmium	2.11	0.00500	2	0	105	85	115	0	0		
Chromium	1.99	0.00500	2	0	99.5	89.7	109	0	0		
Copper	2.04	0.00500	2	0	102	85	115	0	0		
Lead	2.146	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.052	0.00500	2	0	103	87.5	112	0	0		
Silver	0.5155	0.0100	0.5	0	103	85.2	115	0	0		
Zinc	2.055	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2663083** PrepDate:**7/19/2019** TestNo: **E200.7** RunNo: **173461**
Samp ID: **190718083-001 (071819-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04278	0.00500	0.04	0.003671	97.8	75	125	0	0		
Barium	2.161	0.0100	2	0.02402	107	75	119	0	0		
Cadmium	0.05352	0.00500	0.05	0	107	75	118	0	0		
Chromium	0.215	0.00500	0.2	0	107	75	124	0	0		
Copper	0.2697	0.00500	0.25	0	108	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74557

MS

SeqNo: **2663083** **PrepDate:7/19/2019** TestNo: **E200.7** RunNo: **173461**
Samp ID: **190718083-001 (071819-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0212	0.00500	0.02	0	106	75	125	0	0		
Selenium	0.009677	0.00500	0.01	0	96.8	75	125	0	0		
Silver	0.03606	0.0100	0.05	0	72.1	75	125	0	0		S
Zinc	0.5526	0.0100	0.5	0.006545	109	76.9	125	0	0		

DUP

SeqNo: **2663082** **PrepDate:7/19/2019** TestNo: **E200.7** RunNo: **173461**
Samp ID: **190718083-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0.003671	0	20	
Barium	0.02492	0.0100	0	0	0	0	0	0.02402	3.66	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	ND	0.0100	0	0	0	0	0	0.006545	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74567

MBLK

SeqNo: **2663271** PrepDate:**7/19/2019** TestNo: **E1631** RunNo: **173471**
Samp ID: **MB-74567** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2663272** PrepDate:**7/19/2019** TestNo: **E1631** RunNo: **173471**
Samp ID: **LCS-74567** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.2	0.500	10	0	102	77	123	0	0		

MS

SeqNo: **2663274** PrepDate:**7/19/2019** TestNo: **E1631** RunNo: **173471**
Samp ID: **190718083-001 (071819-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.1	0.500	12.5	2.98	89	71	125	0	0		

MS

SeqNo: **2663280** PrepDate: TestNo: **E1631** RunNo: **173471**
Samp ID: **190718033-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.23	0.500	12.5	1.43	22.4	71	125	0	0		S

MSD

SeqNo: **2663275** PrepDate:**7/19/2019** TestNo: **E1631** RunNo: **173471**
Samp ID: **190718083-001 (071819-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.4	0.500	12.5	2.98	91.4	71	125	14.1	2.11	24	

MSD

SeqNo: **2663281** PrepDate: TestNo: **E1631** RunNo: **173471**
Samp ID: **190718033-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.26	0.500	12.5	1.43	22.6	71	125	4.23	0.707	24	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

mblk

SeqNo: **2662704** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichloropropane	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.53	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.07	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.93	5.0	50	0	99.9	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

mblk

SeqNo: **2662756** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									

lcs

SeqNo: **2662702** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.54	1.0	10	0	85.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.16	1.0	10	0	81.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.11	1.0	10	0	91.1	73.1	123	0	0		
1,1-Dichloroethane	9.15	1.0	10	0	91.5	73.2	127	0	0		
1,1-Dichloroethene	7.44	1.0	10	0	74.4	70.3	128	0	0		
1,2,3-Trichloropropane	4.13	1.0	5	0	82.6	68.4	115	0	0		
1,2-Dichloroethane	8.72	1.0	10	0	87.2	72.5	127	0	0		
1,3-Dichloropropane	4.79	1.0	5	0	95.8	76	122	0	0		
2-Butanone	7.4	5.0	10	0	74	65.1	132	0	0		
4-Methyl-2-pentanone	8.27	5.0	10	0	82.7	68.7	118	0	0		
Acetone	7.34	5.0	10	0	73.4	69.2	133	0	0		
Benzene	8.98	1.0	10	0	89.8	71.2	122	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	67.8	134	0	0		
Carbon tetrachloride	8.71	1.0	10	0	87.1	74.5	122	0	0		
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	124	0	0		
Chloroethane	9.34	1.0	10	0	93.4	72.3	136	0	0		
Chloroform	8.31	1.0	10	0	83.1	71.6	133	0	0		
Dibromochloromethane	8.76	1.0	10	0	87.6	70.6	124	0	0		
Ethylbenzene	9.06	1.0	10	0	90.6	70.9	126	0	0		
Methylene chloride	10.26	1.0	10	0	103	66.3	130	0	0		
Tetrachloroethene	9.18	1.0	10	0	91.8	72.4	119	0	0		
Toluene	8.93	1.0	10	0	89.3	71.8	116	0	0		
trans-1,2-Dichloroethene	8.67	1.0	10	0	86.7	70.3	120	0	0		
Trichloroethene	8.91	1.0	10	0	89.1	73	127	0	0		
Vinyl chloride	9.46	1.0	10	0	94.6	65.2	134	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

lcs

SeqNo: **2662702** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Xylenes, Total	27.57	1.0	30	0	91.9	0	0	0	0		S
Surr: 1,2-Dichloroethane-d4	49.63	5.0	50	0	99.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.11	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.06	5.0	50	0	98.1	80.4	121	0	0		

lcs

SeqNo: **2662754** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.65	5.0	10	0	86.5	71	124	0	0		
1,3-Dichlorobenzene	8.56	5.0	10	0	85.6	72.2	121	0	0		
1,4-Dichlorobenzene	8.51	5.0	10	0	85.1	71.7	127	0	0		

lcsd

SeqNo: **2662703** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.97	1.0	10	0	89.7	72.3	121	8.54	4.91	25	
1,1,2,2-Tetrachloroethane	8.2	1.0	10	0	82	72.3	118	8.16	0.489	25	
1,1,2-Trichloroethane	8.74	1.0	10	0	87.4	73.1	123	9.11	4.15	25	
1,1-Dichloroethane	9.61	1.0	10	0	96.1	73.2	127	9.15	4.90	25	
1,1-Dichloroethene	9.49	1.0	10	0	94.9	70.3	128	7.44	24.2	25	
1,2,3-Trichloropropane	3.87	1.0	5	0	77.4	68.4	115	4.13	6.50	25	
1,2-Dichloroethane	8.93	1.0	10	0	89.3	72.5	127	8.72	2.38	25	
1,3-Dichloropropane	4.55	1.0	5	0	91	76	122	4.79	5.14	0	
2-Butanone	8.54	5.0	10	0	85.4	65.1	132	7.4	14.3	25	
4-Methyl-2-pentanone	7.93	5.0	10	0	79.3	68.7	118	8.27	4.20	25	
Acetone	8.36	5.0	10	0	83.6	69.2	133	7.34	13.0	25	
Benzene	9.24	1.0	10	0	92.4	71.2	122	8.98	2.85	25	
Carbon disulfide	4.62	1.0	5	0	92.4	67.8	134	4.21	9.29	25	
Carbon tetrachloride	9.07	1.0	10	0	90.7	74.5	122	8.71	4.05	25	
Chlorobenzene	9.26	1.0	10	0	92.6	72.7	124	9.36	1.07	25	
Chloroethane	8.98	1.0	10	0	89.8	72.3	136	9.34	3.93	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

lcsd SeqNo: **2662703** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	8.8	1.0	10	0	88	71.6	133	8.31	5.73	25	
Dibromochloromethane	8.62	1.0	10	0	86.2	70.6	124	8.76	1.61	25	
Ethylbenzene	9.24	1.0	10	0	92.4	70.9	126	9.06	1.97	25	
Methylene chloride	10.82	1.0	10	0	108	66.3	130	10.26	5.31	25	
Tetrachloroethene	9.14	1.0	10	0	91.4	72.4	119	9.18	0.437	25	
Toluene	9.09	1.0	10	0	90.9	71.8	116	8.93	1.78	25	
trans-1,2-Dichloroethene	9.23	1.0	10	0	92.3	70.3	120	8.67	6.26	25	
Trichloroethene	8.84	1.0	10	0	88.4	73	127	8.91	0.789	25	
Vinyl chloride	9.67	1.0	10	0	96.7	65.2	134	9.46	2.20	25	
Xylenes, Total	28.4	1.0	30	0	94.7	0	0	27.57	2.97	0	S
Surr: 1,2-Dichloroethane-d4	50.68	5.0	50	0	101	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.53	5.0	50	0	99.1	76.5	125	0	0	25	
Surr: Toluene-d8	49.81	5.0	50	0	99.6	80.4	121	0	0	25	

lcsd SeqNo: **2662755** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.81	5.0	10	0	88.1	71	124	8.65	1.83	25	
1,3-Dichlorobenzene	9.09	5.0	10	0	90.9	72.2	121	8.56	6.01	25	
1,4-Dichlorobenzene	8.73	5.0	10	0	87.3	71.7	127	8.51	2.55	25	

ms SeqNo: **2663054** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.54	5.0	10	0	85.4	70.2	123	0	0		
1,3-Dichlorobenzene	8.59	5.0	10	0	85.9	70.4	124	0	0		
1,4-Dichlorobenzene	7.96	5.0	10	0	79.6	70.8	127	0	0		

ms SeqNo: **2663056** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

ms

SeqNo: **2663056** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.13	1.0	10	0	91.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	70.1	123	0	0		
1,1,2-Trichloroethane	8.97	1.0	10	0	89.7	72.1	119	0	0		
1,1-Dichloroethane	9.26	1.0	10	0	92.6	70.4	126	0	0		
1,1-Dichloroethene	9.05	1.0	10	0	90.5	70.2	125	0	0		
1,2,3-Trichloropropane	4.32	1.0	5	0	86.4	53.7	101	0	0		
1,2-Dichloroethane	8.56	1.0	10	0	85.6	73.5	126	0	0		
1,3-Dichloropropane	4.86	1.0	5	0	97.2	64	125	0	0		
2-Butanone	9.31	5.0	10	0	93.1	60.5	123	0	0		
4-Methyl-2-pentanone	9.13	5.0	10	0	91.3	52.8	133	0	0		
Acetone	8.45	5.0	10	0	84.5	56.3	135	0	0		
Benzene	9.29	1.0	10	0	92.9	70.2	127	0	0		
Carbon disulfide	4.63	1.0	5	0	92.6	62.2	130	0	0		
Carbon tetrachloride	9.26	1.0	10	0	92.6	56.4	137	0	0		
Chlorobenzene	9.61	1.0	10	0	96.1	72.7	128	0	0		
Chloroethane	8.38	1.0	10	0	83.8	71.3	135	0	0		
Chloroform	8.63	1.0	10	0	86.3	70.2	125	0	0		
Dibromochloromethane	8.62	1.0	10	0	86.2	69.5	123	0	0		
Ethylbenzene	9.8	1.0	10	0	98	71.9	129	0	0		
Methylene chloride	9.06	1.0	10	0	90.6	65.3	123	0	0		
Tetrachloroethene	9.63	1.0	10	0	96.3	74.5	121	0	0		
Toluene	9.11	1.0	10	0	91.1	73	122	0	0		
trans-1,2-Dichloroethene	9.03	1.0	10	0	90.3	69.1	133	0	0		
Trichloroethene	9.59	1.0	10	0	95.9	71.1	126	0	0		
Vinyl chloride	9.42	1.0	10	0	94.2	65	137	0	0		
Surr: 1,2-Dichloroethane-d4	50.2	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.68	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	50.3	5.0	50	0	101	80.4	121	0	0		

msd

SeqNo: **2663055** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

msd

SeqNo: **2663055** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	9.15	5.0	10	0	91.5	70.2	123	8.54	6.90	17.9	
1,3-Dichlorobenzene	8.85	5.0	10	0	88.5	70.4	124	8.59	2.98	14.3	
1,4-Dichlorobenzene	9.13	5.0	10	0	91.3	70.8	127	7.96	13.7	14.4	

msd

SeqNo: **2663057** TestNo: **SW8260C** RunNo: **173441**
Samp ID: **190718083-002b (071819-01-SW-U-** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.96	1.0	10	0	89.6	71.6	126	9.13	1.88	20.4	
1,1,2,2-Tetrachloroethane	8.74	1.0	10	0	87.4	70.1	123	8.46	3.26	18.6	
1,1,2-Trichloroethane	9.27	1.0	10	0	92.7	72.1	119	8.97	3.29	20	
1,1-Dichloroethane	9.45	1.0	10	0	94.5	70.4	126	9.26	2.03	19.2	
1,1-Dichloroethene	8.99	1.0	10	0	89.9	70.2	125	9.05	0.665	16.1	
1,2,3-Trichloropropane	4.42	1.0	5	0	88.4	53.7	101	4.32	2.29	20	
1,2-Dichloroethane	8.71	1.0	10	0	87.1	73.5	126	8.56	1.74	15.6	
1,3-Dichloropropane	4.87	1.0	5	0	97.4	64	125	4.86	0.206	0	
2-Butanone	10.37	5.0	10	0	104	60.5	123	9.31	10.8	15	
4-Methyl-2-pentanone	9.35	5.0	10	0	93.5	52.8	133	9.13	2.38	11.9	
Acetone	7.72	5.0	10	0	77.2	56.3	135	8.45	9.03	10.6	
Benzene	9.16	1.0	10	0	91.6	70.2	127	9.29	1.41	18.4	
Carbon disulfide	4.49	1.0	5	0	89.8	62.2	130	4.63	3.07	13.1	
Carbon tetrachloride	8.99	1.0	10	0	89.9	56.4	137	9.26	2.96	20.3	
Chlorobenzene	9.21	1.0	10	0	92.1	72.7	128	9.61	4.25	19.6	
Chloroethane	8.79	1.0	10	0	87.9	71.3	135	8.38	4.78	27.8	
Chloroform	8.93	1.0	10	0	89.3	70.2	125	8.63	3.42	20.3	
Dibromochloromethane	8.29	1.0	10	0	82.9	69.5	123	8.62	3.90	18.8	
Ethylbenzene	9.23	1.0	10	0	92.3	71.9	129	9.8	5.99	16.3	
Methylene chloride	9.59	1.0	10	0	95.9	65.3	123	9.06	5.68	21.4	
Tetrachloroethene	9.58	1.0	10	0	95.8	74.5	121	9.63	0.521	20.9	
Toluene	9.12	1.0	10	0	91.2	73	122	9.11	0.110	19.4	
trans-1,2-Dichloroethene	9.26	1.0	10	0	92.6	69.1	133	9.03	2.52	16.1	
Trichloroethene	9.38	1.0	10	0	93.8	71.1	126	9.59	2.21	16.6	
Vinyl chloride	9.29	1.0	10	0	92.9	65	137	9.42	1.39	20.5	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190718083
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173441

msd	SeqNo: **2663057**	TestNo: **SW8260C**	RunNo: **173441**
	Samp ID: **190718083-002b (071819-01-SW-U-**	Units: **µg/L**	Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	50.74	5.0	50	0	101	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.54	5.0	50	0	101	76.5	125	0	0	0	
Surr: Toluene-d8	49.31	5.0	50	0	98.6	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190718083

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	Address: 36 Riverside Ave Rensselaer NY 12144		
Send Report To: Ryan.McCarthy@aecom.com	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) John Angelone, Thomas Quackenbush	
Client Phone No: 978-905-2124	Client Email: John.Bleiler@aecom.com	PO Number: 229608	Samplers: (Signature) Thomas Quackenbush

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	071819-04-SW-B-B-1	07/18/19	0830 A	W		X	1	Metals (filtered)
			P				2	VOCs
			A				2	PCBs
			P				1	Metals/Hardness
			A				3	Mercury
			P				1	TSS
			A					
002	071819-01-SW-U-A-1		0915 A				1	Metals (filtered)
			P				2	VOCs
			A				2	PCBs
			P				1	Metals/Hardness
			A				3	Mercury
			P				1	TSS
			A					
003	071819-02-SW-A-A-1		0945 A				1	Metals (filtered)
			P				2	VOCs
			A					

Shipment Arrived Via:
FedEx UPS Client AES Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature) Thomas Quackenbush	Received by: (Signature)	Date/Time 7/18/19 900
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 7/18/19 4:22

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

Demo
190718083

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190718083

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	**Address:** 36 Riverside Ave Rensselaer NY		
Send Report To: Ryan.McCarthy@aecom.com	**Project Name (Location)** BASF Rensselaer, NY	**Samplers: (Names)** John Angelone, Thomas Quakenbush	
Client Phone No: 978-905-2124	**Client Email:** John.Bieler@aecom.com	**PO Number:** 2296.08	**Samplers: (Signature)**

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	071819-02-SW-A-A-1	07/18/19	0945	A	W		X	2	PCBs
	↓	↓	↓	A	↓		↓	1	Metals/Hardness
				A				3	Mercury
		↓	↓	A				1	TSS
004	071819-03-SW-D-A-1	07/18/19	1020	A				1	TSS
	↓	↓	↓	A				1	Metals (filtered)
				A				2	VOCs
				A				2	PCBs
				A				1	Metals/Hardness
	↓		↓	A				3	Mercury
005	071819-05-SW-B-A-1	↓	1035	A	↓		↓	1	TSS
006	071819-TB01			A	TB				Trip Blank
				A					
				A					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature) Thomas Quakenbush	**Received by: (Signature)**	**Date/Time** 7/18/19 4:00pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 7/18/19 4:27

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190718083

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO



190718083

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber:
ClientReferenceNo:

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 7/22/2019

7/18/2019

☑ **RPT** MS/MSD/DUP Report — Completed by_____

☑ **EDD** Portal — Completed by_____
PDF & EFW EQuIS

☑ **EDD** EFW-EQUIS — Completed by_____
Must Go in 48 Hour TAT

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190718083-001	071819-04-SW-B-B-1	Water	7/18/2019	7/22/2019	E	C	B	D	D	A	F
190718083-002	071819-01-SW-U-A-1	Water	7/18/2019	7/22/2019	E	C	B	D	D	A	F
190718083-003	071819-02-SW-A-A-1	Water	7/18/2019	7/22/2019	E	C	B	D	D	A	F
190718083-004	071819-03-SW-D-A-1	Water	7/18/2019	7/22/2019	E	C	B	D	D	A	F
190718083-005	071819-05-SW-B-A-1	Water	7/18/2019	7/22/2019							A
190718083-006	071819-TB01	Trip Blank	7/18/2019	7/22/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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July 23, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190719089
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 7/19/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *23-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190719089	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-01-SW-D-B-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/19/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
PCB, Total	**ND**	0.065		µg/L	1	7/19/2019 9:52:54 PM
Surr: Decachlorobiphenyl	**72.8**	57.1-135		%REC	1	7/19/2019 9:52:54 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**39.4**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	7/22/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/22/2019 12:59:00 PM
Barium	**0.029**	0.010		mg/L	1	7/22/2019 12:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/22/2019 12:59:00 PM
Chromium	**ND**	0.005		mg/L	1	7/22/2019 12:59:00 PM
Copper	**ND**	0.005		mg/L	1	7/22/2019 12:59:00 PM
Lead	**ND**	0.005		mg/L	1	7/22/2019 12:59:00 PM
Selenium	**ND**	0.005		mg/L	1	7/22/2019 12:59:00 PM
Silver	**ND**	0.010		mg/L	1	7/22/2019 12:59:00 PM
Zinc	**ND**	0.010		mg/L	1	7/22/2019 12:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:23:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	7/22/2019 2:23:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/22/2019 2:23:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:23:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:23:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:23:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-01-SW-D-B-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:23:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:23:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:23:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 1:25:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,2-Dichloroethane	**1.4**	1.0		µg/L	1	7/23/2019 1:25:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 1:25:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Benzene	**5.2**	1.0		µg/L	1	7/23/2019 1:25:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 1:25:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Chlorobenzene	**95**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,3-Dichlorobenzene	**1.2**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,2-Dichlorobenzene	**24**	1.0		µg/L	1	7/23/2019 1:25:00 PM
1,4-Dichlorobenzene	**3.4**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Xylenes, Total	**1.5**	1.0		µg/L	1	7/23/2019 1:25:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	7/23/2019 1:25:00 PM
Surr: 4-Bromofluorobenzene	**96.9**	76.5-125		%REC	1	7/23/2019 1:25:00 PM
Surr: Toluene-d8	**97.1**	80.4-121		%REC	1	7/23/2019 1:25:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-01-SW-D-B-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/22/2019)						
TSS (Residue, Non-Filterable)	**16.6**	1.0		mg/L	1	7/22/2019

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-02-SW-A-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/19/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
PCB, Total	**ND**	0.065		µg/L	1	7/19/2019 8:04:37 PM
Surr: Decachlorobiphenyl	**74.6**	57.1-135		%REC	1	7/19/2019 8:04:37 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**3.3**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	7/22/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/22/2019 1:19:00 PM
Barium	**0.027**	0.010		mg/L	1	7/22/2019 1:19:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/22/2019 1:19:00 PM
Chromium	**ND**	0.005		mg/L	1	7/22/2019 1:19:00 PM
Copper	**ND**	0.005		mg/L	1	7/22/2019 1:19:00 PM
Lead	**ND**	0.005		mg/L	1	7/22/2019 1:19:00 PM
Selenium	**ND**	0.005		mg/L	1	7/22/2019 1:19:00 PM
Silver	**ND**	0.010		mg/L	1	7/22/2019 1:19:00 PM
Zinc	**ND**	0.010		mg/L	1	7/22/2019 1:19:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:27:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/22/2019 2:27:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/22/2019 2:27:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:27:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:27:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:27:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-02-SW-A-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/22/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:27:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:27:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:27:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 11:59:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 11:59:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 11:59:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 11:59:00 AM
Surr: 1,2-Dichloroethane-d4	**97.9**	80.9-122		%REC	1	7/23/2019 11:59:00 AM
Surr: 4-Bromofluorobenzene	**96.8**	76.5-125		%REC	1	7/23/2019 11:59:00 AM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	7/23/2019 11:59:00 AM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-02-SW-A-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/22/2019)						
TSS (Residue, Non-Filterable)	**17.1**	1.0		mg/L	1	7/22/2019

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-03-SW-U-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/19/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
PCB, Total	**ND**	0.065		µg/L	1	7/19/2019 8:17:57 PM
Surr: Decachlorobiphenyl	**69.8**	57.1-135		%REC	1	7/19/2019 8:17:57 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**2.1**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	7/22/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/22/2019 1:31:00 PM
Barium	**0.026**	0.010		mg/L	1	7/22/2019 1:31:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/22/2019 1:31:00 PM
Chromium	**ND**	0.005		mg/L	1	7/22/2019 1:31:00 PM
Copper	**0.005**	0.005		mg/L	1	7/22/2019 1:31:00 PM
Lead	**ND**	0.005		mg/L	1	7/22/2019 1:31:00 PM
Selenium	**ND**	0.005		mg/L	1	7/22/2019 1:31:00 PM
Silver	**ND**	0.010		mg/L	1	7/22/2019 1:31:00 PM
Zinc	**ND**	0.010		mg/L	1	7/22/2019 1:31:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:33:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/22/2019 2:33:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/22/2019 2:33:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:33:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:33:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:33:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-03-SW-U-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:33:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:33:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:33:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 12:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 12:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 12:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 12:21:00 PM
Surr: 1,2-Dichloroethane-d4	**98.9**	80.9-122		%REC	1	7/23/2019 12:21:00 PM
Surr: 4-Bromofluorobenzene	**98.3**	76.5-125		%REC	1	7/23/2019 12:21:00 PM
Surr: Toluene-d8	**97.1**	80.4-121		%REC	1	7/23/2019 12:21:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-03-SW-U-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/22/2019)						
TSS (Residue, Non-Filterable)	**9.6**	1.1		mg/L	1	7/22/2019

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-04-SW-B-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/19/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
PCB, Total	**ND**	0.065		µg/L	1	7/19/2019 10:06:15 PM
Surr: Decachlorobiphenyl	**75.0**	57.1-135		%REC	1	7/19/2019 10:06:15 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**3.7**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	7/22/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/22/2019 1:41:00 PM
Barium	**0.027**	0.010		mg/L	1	7/22/2019 1:41:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/22/2019 1:41:00 PM
Chromium	**ND**	0.005		mg/L	1	7/22/2019 1:41:00 PM
Copper	**ND**	0.005		mg/L	1	7/22/2019 1:41:00 PM
Lead	**ND**	0.005		mg/L	1	7/22/2019 1:41:00 PM
Selenium	**ND**	0.005		mg/L	1	7/22/2019 1:41:00 PM
Silver	**ND**	0.010		mg/L	1	7/22/2019 1:41:00 PM
Zinc	**ND**	0.010		mg/L	1	7/22/2019 1:41:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:45:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/22/2019 2:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/22/2019 2:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:45:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-04-SW-B-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/22/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/22/2019 2:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/22/2019 2:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 12:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 12:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 12:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 12:42:00 PM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	7/23/2019 12:42:00 PM
Surr: 4-Bromofluorobenzene	**95.6**	76.5-125		%REC	1	7/23/2019 12:42:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	7/23/2019 12:42:00 PM

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-04-SW-B-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/22/2019)						
TSS (Residue, Non-Filterable)	**18.9**	1.0		mg/L	1	7/22/2019

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-05-SW-B-A-1
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/22/2019)						
TSS (Residue, Non-Filterable)	**9.7**	1.0		mg/L	1	7/22/2019

Adirondack Environmental Services, Inc

Date: *23-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	071919-TB01
Work Order:	**190719089**	**Collection Date:**	7/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190719089-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Methylene chloride	**2.8**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Acetone	**15**	5.0		µg/L	1	7/23/2019 1:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 1:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 1:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 1:04:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	7/23/2019 1:04:00 PM
Surr: 4-Bromofluorobenzene	**98.6**	76.5-125		%REC	1	7/23/2019 1:04:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	7/23/2019 1:04:00 PM

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74573

mblk

SeqNo: **2662931** PrepDate:**7/19/2019** TestNo: **SW8082A** RunNo: **173453**
Samp ID: **mb-74573** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.09	0	0.1	0	90	57.1	135	0	0		

lcs

SeqNo: **2662932** PrepDate:**7/19/2019** TestNo: **SW8082A** RunNo: **173453**
Samp ID: **lcs-74573** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3408	0.0650	0.5	0	68.2	60	140	0	0		
Aroclor 1260	0.3358	0.0650	0.5	0	67.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0634	0	0.1	0	63.4	57.1	135	0	0		

ms

SeqNo: **2662963** PrepDate:**7/19/2019** TestNo: **SW8082A** RunNo: **173453**
Samp ID: **190719089-004c (071919-04-SW-B-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.4198	0.0650	0.5	0	84	51	150	0	0		
Aroclor 1260	0.4104	0.0650	0.5	0	82.1	51	150	0	0		
Surr: Decachlorobiphenyl	0.0544	0	0.1	0	54.4	57.1	135	0	0		S

msd

SeqNo: **2662964** PrepDate:**7/19/2019** TestNo: **SW8082A** RunNo: **173453**
Samp ID: **190719089-004c (071919-04-SW-B-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74573

msd	SeqNo: **2662964**	**PrepDate:7/19/2019**	TestNo: **SW8082A**	RunNo: **173453**
	Samp ID: **190719089-004c (071919-04-SW-B-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **7/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.4878	0.0650	0.5	0	97.6	51	150	0.4198	15.0	30	
Aroclor 1260	0.47	0.0650	0.5	0	94	51	150	0.4104	13.5	30	
Surr: Decachlorobiphenyl	0.0764	0	0.1	0	76.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74574

LCS				
SeqNo: **2663463**	**PrepDate:7/22/2019**	TestNo: **SM2540D**	RunNo: **173486**
Samp ID: **LCS-74574**	**PrepRef:(Gen Prep)**	Units: **mg/L**	Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	490	0	101	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74576

MBLK

SeqNo: **2663826** PrepDate: TestNo: **E200.7** RunNo: **173509**
Samp ID: **MB-74756** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2663827** PrepDate: TestNo: **E200.7** RunNo: **173509**
Samp ID: **LCS-74756** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.971	0.00500	2	0	98.5	89.1	111	0	0		
Barium	2	0.0100	2	0	100	85	115	0	0		
Cadmium	2.078	0.00500	2	0	104	85	115	0	0		
Chromium	1.941	0.00500	2	0	97	89.7	109	0	0		
Copper	2.028	0.00500	2	0	101	85	115	0	0		
Lead	2.104	0.00500	2	0	105	88.1	112	0	0		
Selenium	1.991	0.00500	2	0	99.5	87.5	112	0	0		
Silver	0.5176	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	2.049	0.0100	2	0	102	88.3	113	0	0		

MS

SeqNo: **2663833** PrepDate:**7/22/2019** TestNo: **E200.7** RunNo: **173509**
Samp ID: **190719089-004 (071919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04062	0.00500	0.04	0	102	75	125	0	0		
Barium	2.069	0.0100	2	0.02674	102	75	119	0	0		
Cadmium	0.05099	0.00500	0.05	0	102	75	118	0	0		
Chromium	0.2004	0.00500	0.2	0	100	75	124	0	0		
Copper	0.2678	0.00500	0.25	0	107	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74576

MS

SeqNo: **2663833** **PrepDate:7/22/2019** TestNo: **E200.7** RunNo: **173509**
Samp ID: **190719089-004 (071919-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0212	0.00500	0.02	0	106	75	125	0	0		
Selenium	0.009026	0.00500	0.01	0	90.3	75	125	0	0		
Silver	0.05293	0.0100	0.05	0	106	75	125	0	0		
Zinc	0.5302	0.0100	0.5	0	106	76.9	125	0	0		

DUP

SeqNo: **2663832** **PrepDate:7/22/2019** TestNo: **E200.7** RunNo: **173509**
Samp ID: **190719089-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02691	0.0100	0	0	0	0	0	0.02674	0.637	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	ND	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74577

MBLK

SeqNo: **2663836** PrepDate:**7/22/2019** TestNo: **E200.7F** RunNo: **173509**
Samp ID: **MB-74577** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2663837** PrepDate:**7/22/2019** TestNo: **E200.7F** RunNo: **173509**
Samp ID: **LCS-74577** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.988	0.00500	2	0	99.4	85	115	0	0		
Barium, Dissolved	2.002	0.0100	2	0	100	89	112	0	0		
Cadmium, Dissolved	2.086	0.00500	2	0	104	85.3	112	0	0		
Chromium, Dissolved	1.96	0.00500	2	0	98	89.1	109	0	0		
Copper, Dissolved	2.022	0.00500	2	0	101	86.8	115	0	0		
Lead, Dissolved	2.102	0.00500	2	0	105	86.8	114	0	0		
Selenium, Dissolved	1.995	0.00500	2	0	99.8	85	115	0	0		
Silver, Dissolved	0.5218	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	2.049	0.0100	2	0	102	85	115	0	0		

MS

SeqNo: **2663843** PrepDate:**7/22/2019** TestNo: **E200.7F** RunNo: **173509**
Samp ID: **190719089-004 (071919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04021	0.00500	0.04	0.001097	97.8	75	123	0	0		
Barium, Dissolved	2.077	0.0100	2	0.02376	103	75	124	0	0		
Cadmium, Dissolved	0.0513	0.00500	0.05	0.00008898	102	75	125	0	0		
Chromium, Dissolved	0.2075	0.00500	0.2	0	104	77.2	117	0	0		
Copper, Dissolved	0.2591	0.00500	0.25	0.001201	103	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74577

MS

SeqNo: **2663843** **PrepDate:7/22/2019** TestNo: **E200.7F** RunNo: **173509**
Samp ID: **190719089-004 (071919-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02118	0.00500	0.02	0.001353	99.2	75	125	0	0		
Selenium, Dissolved	0.009102	0.00500	0.01	0	91	75	125	0	0		
Silver, Dissolved	0.05262	0.0100	0.05	0.001917	101	75	125	0	0		
Zinc, Dissolved	0.5243	0.0100	0.5	0.00233	104	75	121	0	0		

DUP

SeqNo: **2663842** **PrepDate:7/22/2019** TestNo: **E200.7F** RunNo: **173509**
Samp ID: **190719089-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0.001097	0	17.3	
Barium, Dissolved	0.02467	0.0100	0	0	0	0	0	0.02376	3.77	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0.00008898	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0.001201	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0.001353	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.001917	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0.00233	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74598

MBLK

SeqNo: **2663949** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **MB-74598** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2663950** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **LCS-74598** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.68	0.500	10	0	96.8	77	123	0	0		

MS

SeqNo: **2663955** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719089-004 (071919-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	3.7	78.4	71	125	0	0		

MS

SeqNo: **2663958** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190722043-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	2.81	85.5	71	125	0	0		

MSD

SeqNo: **2663956** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719089-004 (071919-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15.2	0.500	12.5	3.7	92	71	125	13.5	11.8	24	

MSD

SeqNo: **2663959** PrepDate:**7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190722043-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.5	0.500	12.5	2.81	77.5	71	125	13.5	7.69	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

mblk	SeqNo: **2664055**	TestNo: **SW8260C**	RunNo: **173487**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.19	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.19	5.0	50	0	98.4	76.5	125	0	0		
Surr: Toluene-d8	48.59	5.0	50	0	97.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

lcs

SeqNo: **2664045** TestNo: **SW8260C** RunNo: **173487**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.34	1.0	10	0	93.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.9	1.0	10	0	69	72.3	118	0	0		S
1,1,2-Trichloroethane	8.57	1.0	10	0	85.7	73.1	123	0	0		
1,1-Dichloroethane	9.93	1.0	10	0	99.3	73.2	127	0	0		
1,1-Dichloroethene	8.54	1.0	10	0	85.4	70.3	128	0	0		
1,2,3-Trichloropropane	3.75	1.0	5	0	75	68.4	115	0	0		
1,2-Dichlorobenzene	9.14	1.0	10	0	91.4	71	124	0	0		
1,2-Dichloroethane	8.89	1.0	10	0	88.9	72.5	127	0	0		
1,3-Dichlorobenzene	9.54	1.0	10	0	95.4	72.2	121	0	0		
1,3-Dichloropropane	4.64	1.0	5	0	92.8	76	122	0	0		
1,4-Dichlorobenzene	9.21	1.0	10	0	92.1	71.7	127	0	0		
2-Butanone	7.98	5.0	10	0	79.8	65.1	132	0	0		
4-Methyl-2-pentanone	7.65	5.0	10	0	76.5	68.7	118	0	0		
Acetone	11.45	5.0	10	0	114	69.2	133	0	0		
Benzene	9.44	1.0	10	0	94.4	71.2	122	0	0		
Carbon disulfide	4.22	1.0	5	0	84.4	67.8	134	0	0		
Carbon tetrachloride	8.86	1.0	10	0	88.6	74.5	122	0	0		
Chlorobenzene	9.02	1.0	10	0	90.2	72.7	124	0	0		
Chloroethane	9.61	1.0	10	0	96.1	72.3	136	0	0		
Chloroform	8.8	1.0	10	0	88	71.6	133	0	0		
Dibromochloromethane	7.88	1.0	10	0	78.8	70.6	124	0	0		
Ethylbenzene	9.12	1.0	10	0	91.2	70.9	126	0	0		
Methylene chloride	10.79	1.0	10	0	108	66.3	130	0	0		
Tetrachloroethene	10.24	1.0	10	0	102	72.4	119	0	0		
Toluene	9.14	1.0	10	0	91.4	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	9.82	1.0	10	0	98.2	73	127	0	0		
Vinyl chloride	9.4	1.0	10	0	94	65.2	134	0	0		
Xylenes, Total	28.01	1.0	30	0	93.4	0	0	0	0		S
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.09	5.0	50	0	96.2	76.5	125	0	0		
Surr: Toluene-d8	48.44	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

ms	SeqNo: **2664053**	TestNo: **SW8260C**	RunNo: **173487**
	Samp ID: **190719089-004b (071919-04-SW-B-**	Units: **µg/L**	Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.86	1.0	10	0	88.6	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.73	1.0	10	0	67.3	70.1	123	0	0		S
1,1,2-Trichloroethane	8.14	1.0	10	0	81.4	72.1	119	0	0		
1,1-Dichloroethane	9.76	1.0	10	0	97.6	70.4	126	0	0		
1,1-Dichloroethene	9.39	1.0	10	0	93.9	70.2	125	0	0		
1,2,3-Trichloropropane	3.46	1.0	5	0	69.2	53.7	101	0	0		
1,2-Dichlorobenzene	9.93	1.0	10	0	99.3	70.2	123	0	0		
1,2-Dichloroethane	8.75	1.0	10	0	87.5	73.5	126	0	0		
1,3-Dichlorobenzene	8.08	1.0	10	0	80.8	70.4	124	0	0		
1,3-Dichloropropane	4.51	1.0	5	0	90.2	64	125	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	70.8	127	0	0		
2-Butanone	9.49	5.0	10	0	94.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.03	5.0	10	0	80.3	52.8	133	0	0		
Acetone	8.59	5.0	10	0	85.9	56.3	135	0	0		
Benzene	8.75	1.0	10	0	87.5	70.2	127	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	62.2	130	0	0		
Carbon tetrachloride	8.67	1.0	10	0	86.7	56.4	137	0	0		
Chlorobenzene	9.6	1.0	10	0	96	72.7	128	0	0		
Chloroethane	8.5	1.0	10	0	85	71.3	135	0	0		
Chloroform	8.58	1.0	10	0	85.8	70.2	125	0	0		
Dibromochloromethane	7.47	1.0	10	0	74.7	69.5	123	0	0		
Ethylbenzene	8.45	1.0	10	0	84.5	71.9	129	0	0		
Methylene chloride	9.95	1.0	10	0	99.5	65.3	123	0	0		
Tetrachloroethene	9.3	1.0	10	0	93	74.5	121	0	0		
Toluene	8.99	1.0	10	0	89.9	73	122	0	0		
trans-1,2-Dichloroethene	9.65	1.0	10	0	96.5	69.1	133	0	0		
Trichloroethene	9.13	1.0	10	0	91.3	71.1	126	0	0		
Vinyl chloride	8.82	1.0	10	0	88.2	65	137	0	0		
Xylenes, Total	25.93	1.0	30	0.63	84.3	0	0	0	0		S
Surr: 1,2-Dichloroethane-d4	52.16	5.0	50	0	104	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.85	5.0	50	0	93.7	76.5	125	0	0		
Surr: Toluene-d8	48.55	5.0	50	0	97.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190719089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

msd

SeqNo: **2664054** TestNo: **SW8260C** RunNo: **173487**
Samp ID: **190719089-004b (071919-04-SW-B-** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.64	1.0	10	0	86.4	71.6	126	8.86	2.51	20.4	
1,1,2,2-Tetrachloroethane	7.77	1.0	10	0	77.7	70.1	123	6.73	14.3	18.6	
1,1,2-Trichloroethane	8.55	1.0	10	0	85.5	72.1	119	8.14	4.91	20	
1,1-Dichloroethane	9.31	1.0	10	0	93.1	70.4	126	9.76	4.72	19.2	
1,1-Dichloroethene	9.27	1.0	10	0	92.7	70.2	125	9.39	1.29	16.1	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	3.46	9.37	20	
1,2-Dichlorobenzene	9.26	1.0	10	0	92.6	70.2	123	9.93	6.98	17.9	
1,2-Dichloroethane	8.65	1.0	10	0	86.5	73.5	126	8.75	1.15	15.6	
1,3-Dichlorobenzene	8.82	1.0	10	0	88.2	70.4	124	8.08	8.76	14.3	
1,3-Dichloropropane	4.52	1.0	5	0	90.4	64	125	4.51	0.221	0	
1,4-Dichlorobenzene	8.76	1.0	10	0	87.6	70.8	127	8.12	7.58	14.4	
2-Butanone	9.64	5.0	10	0	96.4	60.5	123	9.49	1.57	15	
4-Methyl-2-pentanone	8.39	5.0	10	0	83.9	52.8	133	8.03	4.38	11.9	
Acetone	9.01	5.0	10	0	90.1	56.3	135	8.59	4.77	10.6	
Benzene	8.92	1.0	10	0	89.2	70.2	127	8.75	1.92	18.4	
Carbon disulfide	4.24	1.0	5	0	84.8	62.2	130	4.21	0.710	13.1	
Carbon tetrachloride	8.72	1.0	10	0	87.2	56.4	137	8.67	0.575	20.3	
Chlorobenzene	8.97	1.0	10	0	89.7	72.7	128	9.6	6.79	19.6	
Chloroethane	9.22	1.0	10	0	92.2	71.3	135	8.5	8.13	27.8	
Chloroform	8.63	1.0	10	0	86.3	70.2	125	8.58	0.581	20.3	
Dibromochloromethane	8.11	1.0	10	0	81.1	69.5	123	7.47	8.22	18.8	
Ethylbenzene	8.69	1.0	10	0	86.9	71.9	129	8.45	2.80	16.3	
Methylene chloride	9.23	1.0	10	0	92.3	65.3	123	9.95	7.51	21.4	
Tetrachloroethene	9.42	1.0	10	0	94.2	74.5	121	9.3	1.28	20.9	
Toluene	8.82	1.0	10	0	88.2	73	122	8.99	1.91	19.4	
trans-1,2-Dichloroethene	9.26	1.0	10	0	92.6	69.1	133	9.65	4.12	16.1	
Trichloroethene	9.11	1.0	10	0	91.1	71.1	126	9.13	0.219	16.6	
Vinyl chloride	8.53	1.0	10	0	85.3	65	137	8.82	3.34	20.5	
Xylenes, Total	27.33	1.0	30	0.63	89	0	0	25.93	5.26	0	S
Surr: 1,2-Dichloroethane-d4	50.61	5.0	50	0	101	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.39	5.0	50	0	96.8	76.5	125	0	0	0	
Surr: Toluene-d8	47.86	5.0	50	0	95.7	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order #: 190719089

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
ryan.mccarthy@aecom.com	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	071919-01-SW-D-B-1	7/19/19	1415	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
002	071919-02-SW-A-A-1	7/19/19	1325	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
003	071919-03-SW-U-A-1	7/19/19	1255	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/19/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/19/19 4:24

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi



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CHAIN OF CUSTODY RECORD

AES Work Order # 190719089

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
ryan.mccarthy@aecom.com	BASF Rensselaer NY	Patrick Geham	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	071919-03-SW-U-A-1	7/19/19	1255	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
004	071919-04-SW-B-A-1	7/19/19	1155	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
005	071919-05-SW-B-A-1	7/19/19	1435	A/P	W		✓	1	TSS
006	071919-TB01	↓		A/P	TB			1	trip blank
	071919-TB01			A/P	TB			1	trip blank
				A/P					

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/19/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
		7/19/19 4:24

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled 4c	Y ☒ N ☐	Y N	Y N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190719089

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo



190719089

TAT: **2**

DateDue: 7/23/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS Completed by_____
Must Go in 48 Hour TAT

☑ EDD Portal Completed by_____
PDF & EFW EQuIS

7/19/2019

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190719089-001	071919-01-SW-D-B-1	Water	7/19/2019	7/23/2019	E	C	B	D	D	A	F
190719089-002	071919-02-SW-A-A-1	Water	7/19/2019	7/23/2019	E	C	B	D	D	A	F
190719089-003	071919-03-SW-U-A-1	Water	7/19/2019	7/23/2019	E	C	B	D	D	A	F
190719089-004	071919-04-SW-B-A-1	Water	7/19/2019	7/23/2019	E	C	B	D	D	A	F
190719089-005	071919-05-SW-B-A-1	Water	7/19/2019	7/23/2019							A
190719089-006	071919-TB01	Trip Blank	7/19/2019	7/23/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 24, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190722043
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 7/22/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *24-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190722043	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-01-SW-U-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 2:57:26 PM
Surr: Decachlorobiphenyl	**76.8**	57.1-135		%REC	1	7/23/2019 2:57:26 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**2.8**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	7/24/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/24/2019 1:47:00 PM
Barium	**0.025**	0.010		mg/L	1	7/24/2019 1:47:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/24/2019 1:47:00 PM
Chromium	**ND**	0.005		mg/L	1	7/24/2019 1:47:00 PM
Copper	**ND**	0.005		mg/L	1	7/24/2019 1:47:00 PM
Lead	**ND**	0.005		mg/L	1	7/24/2019 1:47:00 PM
Selenium	**ND**	0.005		mg/L	1	7/24/2019 1:47:00 PM
Silver	**ND**	0.010		mg/L	1	7/24/2019 1:47:00 PM
Zinc	**ND**	0.010		mg/L	1	7/24/2019 1:47:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:27:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	7/24/2019 3:27:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/24/2019 3:27:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:27:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:27:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:27:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-01-SW-U-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:27:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:27:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:27:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 3:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 3:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 3:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:13:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/23/2019 3:13:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	7/23/2019 3:13:00 PM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	7/23/2019 3:13:00 PM
Surr: Toluene-d8	**97.3**	80.4-121		%REC	1	7/23/2019 3:13:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-01-SW-U-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/23/2019)						
TSS (Residue, Non-Filterable)	**8.7**	1.0		mg/L	1	7/23/2019

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-02-SW-A-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 3:10:50 PM
Surr: Decachlorobiphenyl	**64.0**	57.1-135		%REC	1	7/23/2019 3:10:50 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**2.1**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	7/24/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/24/2019 1:55:00 PM
Barium	**0.023**	0.010		mg/L	1	7/24/2019 1:55:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/24/2019 1:55:00 PM
Chromium	**ND**	0.005		mg/L	1	7/24/2019 1:55:00 PM
Copper	**0.007**	0.005		mg/L	1	7/24/2019 1:55:00 PM
Lead	**ND**	0.005		mg/L	1	7/24/2019 1:55:00 PM
Selenium	**ND**	0.005		mg/L	1	7/24/2019 1:55:00 PM
Silver	**0.004**	0.010	J	mg/L	1	7/24/2019 1:55:00 PM
Zinc	**ND**	0.010		mg/L	1	7/24/2019 1:55:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:36:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	7/24/2019 3:36:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/24/2019 3:36:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:36:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	7/24/2019 3:36:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:36:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-02-SW-A-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:36:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:36:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:36:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 3:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 3:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 3:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 3:34:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	7/23/2019 3:34:00 PM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	7/23/2019 3:34:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	7/23/2019 3:34:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-02-SW-A-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/23/2019)						
TSS (Residue, Non-Filterable)	**8.0**	1.1		mg/L	1	7/23/2019

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-03-SW-D-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 3:24:10 PM
Surr: Decachlorobiphenyl	**69.2**	57.1-135		%REC	1	7/23/2019 3:24:10 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**2.4**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	7/24/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/24/2019 1:59:00 PM
Barium	**0.026**	0.010		mg/L	1	7/24/2019 1:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/24/2019 1:59:00 PM
Chromium	**ND**	0.005		mg/L	1	7/24/2019 1:59:00 PM
Copper	**ND**	0.005		mg/L	1	7/24/2019 1:59:00 PM
Lead	**ND**	0.005		mg/L	1	7/24/2019 1:59:00 PM
Selenium	**ND**	0.005		mg/L	1	7/24/2019 1:59:00 PM
Silver	**ND**	0.010		mg/L	1	7/24/2019 1:59:00 PM
Zinc	**ND**	0.010		mg/L	1	7/24/2019 1:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:45:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/24/2019 3:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/24/2019 3:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:45:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:45:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-03-SW-D-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:45:00 PM
Zinc, Dissolved	**0.005**	0.010	J	mg/L	1	7/24/2019 3:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 3:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 3:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 3:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 3:56:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/23/2019 3:56:00 PM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	7/23/2019 3:56:00 PM
Surr: 4-Bromofluorobenzene	**96.8**	76.5-125		%REC	1	7/23/2019 3:56:00 PM
Surr: Toluene-d8	**97.2**	80.4-121		%REC	1	7/23/2019 3:56:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-03-SW-D-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/23/2019)						
TSS (Residue, Non-Filterable)	**7.3**	1.0		mg/L	1	7/23/2019

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-04-SW-B-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 3:37:31 PM
Surr: Decachlorobiphenyl	**67.4**	57.1-135		%REC	1	7/23/2019 3:37:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/22/2019)						
Mercury	**3.2**	0.5		ng/L	1	7/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	7/24/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/24/2019 2:08:00 PM
Barium	**0.024**	0.010		mg/L	1	7/24/2019 2:08:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/24/2019 2:08:00 PM
Chromium	**ND**	0.005		mg/L	1	7/24/2019 2:08:00 PM
Copper	**ND**	0.005		mg/L	1	7/24/2019 2:08:00 PM
Lead	**ND**	0.005		mg/L	1	7/24/2019 2:08:00 PM
Selenium	**ND**	0.005		mg/L	1	7/24/2019 2:08:00 PM
Silver	**ND**	0.010		mg/L	1	7/24/2019 2:08:00 PM
Zinc	**ND**	0.010		mg/L	1	7/24/2019 2:08:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:55:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/24/2019 3:55:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/24/2019 3:55:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:55:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:55:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:55:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-04-SW-B-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/24/2019 3:55:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	7/24/2019 3:55:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/24/2019 3:55:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 4:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 4:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 4:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 4:17:00 PM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	7/23/2019 4:17:00 PM
Surr: 4-Bromofluorobenzene	**96.1**	76.5-125		%REC	1	7/23/2019 4:17:00 PM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	7/23/2019 4:17:00 PM

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-04-SW-B-A-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/23/2019)						
TSS (Residue, Non-Filterable)	**6.6**	1.0		mg/L	1	7/23/2019

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-05-SW-B-B-1
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/23/2019)						
TSS (Residue, Non-Filterable)	**7.0**	1.0		mg/L	1	7/23/2019

Adirondack Environmental Services, Inc

Date: *24-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072219-TB01
Work Order:	**190722043**	**Collection Date:**	7/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190722043-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Acetone	**ND**	5.0		µg/L	1	7/23/2019 4:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/23/2019 4:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Benzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/23/2019 4:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Toluene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/23/2019 4:39:00 PM
Surr: 1,2-Dichloroethane-d4	**99.6**	80.9-122		%REC	1	7/23/2019 4:39:00 PM
Surr: 4-Bromofluorobenzene	**97.1**	76.5-125		%REC	1	7/23/2019 4:39:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	7/23/2019 4:39:00 PM

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74598

MBLK

SeqNo: **2663949** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **MB-74598** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2664240** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **MB-74598** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2663950** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **LCS-74598** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.68	0.500	10	0	96.8	77	123	0	0		

LCS

SeqNo: **2664241** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **LCS-74598** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.59	0.500	10	0	95.9	77	123	0	0		

MS

SeqNo: **2663955** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719089-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	3.7	78.4	71	125	0	0		

MS

SeqNo: **2663958** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190722043-001 (072219-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	2.81	85.5	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74598

MS

SeqNo: **2664243** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719081-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13	0.500	12.5	3.27	77.8	71	125	0	0		

MSD

SeqNo: **2663956** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719089-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15.2	0.500	12.5	3.7	92	71	125	13.5	11.8	24	

MSD

SeqNo: **2663959** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190722043-001** **(072219-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.5	0.500	12.5	2.81	77.5	71	125	13.5	7.69	24	

MSD

SeqNo: **2664244** **PrepDate:7/22/2019** TestNo: **E1631** RunNo: **173516**
Samp ID: **190719081-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.8	0.500	12.5	3.27	76.2	71	125	13	1.55	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74604

MBLK

SeqNo: **2665090** PrepDate:**7/23/2019** TestNo: **E200.7F** RunNo: **173569**
Samp ID: **MB-74604** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2665096** PrepDate:**7/23/2019** TestNo: **E200.7F** RunNo: **173569**
Samp ID: **LCS-74604** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.046	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	1.979	0.0100	2	0	99	89	112	0	0		
Cadmium, Dissolved	2.122	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	2.011	0.00500	2	0	101	89.1	109	0	0		
Copper, Dissolved	1.998	0.00500	2	0	99.9	86.8	115	0	0		
Lead, Dissolved	2.153	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.074	0.00500	2	0	104	85	115	0	0		
Silver, Dissolved	0.5184	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	2.05	0.0100	2	0	103	85	115	0	0		

MS

SeqNo: **2665104** PrepDate:**7/23/2019** TestNo: **E200.7F** RunNo: **173569**
Samp ID: **190722043-004 (072219-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04113	0.00500	0.04	0	103	75	123	0	0		
Barium, Dissolved	2.013	0.0100	2	0.02421	99.4	75	124	0	0		
Cadmium, Dissolved	0.05142	0.00100	0.05	0	103	75	125	0	0		
Chromium, Dissolved	0.2031	0.00500	0.2	0	102	77.2	117	0	0		
Copper, Dissolved	0.257	0.00500	0.25	0	103	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74604

MS

SeqNo: **2665104** **PrepDate:7/23/2019** TestNo: **E200.7F** RunNo: **173569**
Samp ID: **190722043-004 (072219-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02161	0.00500	0.02	0	108	75	125	0	0		
Selenium, Dissolved	0.008595	0.00500	0.01	0	85.9	75	125	0	0		
Silver, Dissolved	0.05342	0.0100	0.05	0.004383	98.1	75	125	0	0		
Zinc, Dissolved	0.525	0.0100	0.5	0	105	75	121	0	0		

DUP

SeqNo: **2665103** **PrepDate:7/23/2019** TestNo: **E200.7F** RunNo: **173569**
Samp ID: **190722043-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02359	0.0100	0	0	0	0	0	0.02421	2.63	15.4	
Cadmium, Dissolved	ND	0.00100	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0.004383	0	17.6	
Zinc, Dissolved	ND	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74605

MBLK

SeqNo: **2664253** PrepDate: TestNo: **E200.8** RunNo: **173534**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									
Barium	ND	0.00200									
Cadmium	ND	0.00100									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00100									
Selenium	ND	0.00100									
Silver	ND	0.00500									
Zinc	ND	0.0100									

LCS

SeqNo: **2664254** PrepDate: TestNo: **E200.8** RunNo: **173534**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.01921	0.00100	0.02	0	96	85	115	0	0		
Barium	0.0183	0.00200	0.02	0	91.5	85	115	0	0		
Cadmium	0.01849	0.00100	0.02	0	92.4	85	115	0	0		
Chromium	0.01873	0.00500	0.02	0	93.7	85	115	0	0		
Copper	0.02057	0.00500	0.02	0	103	85	115	0	0		
Lead	0.01824	0.00100	0.02	0	91.2	85	115	0	0		
Selenium	0.02139	0.00100	0.02	0	107	85	115	0	0		
Silver	ND	0.00500	0.005	0	97.3	85	115	0	0		
Zinc	0.01845	0.0100	0.02	0	92.2	85	115	0	0		

MS

SeqNo: **2664257** PrepDate: TestNo: **E200.8** RunNo: **173534**
Samp ID: **190723009-001** PrepRef: Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04017	0.00100	0.04	0.0005934	98.9	70	130	0	0		
Barium	1.896	0.00200	2	0.002209	94.7	70	130	0	0		
Cadmium	0.04663	0.00100	0.05	0	93.3	70	130	0	0		
Chromium	0.1824	0.00500	0.2	0.002232	90.1	70	130	0	0		
Copper	0.2518	0.00500	0.25	0.008262	97.4	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74605

MS

SeqNo: **2664257** PrepDate: TestNo: **E200.8** RunNo: **173534**
Samp ID: **190723009-001** PrepRef: Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02035	0.00100	0.02	0	102	70	130	0	0		
Selenium	0.01124	0.00100	0.01	0	112	70	130	0	0		
Silver	0.03349	0.00500	0.05	0	67	70	130	0	0		S
Zinc	0.4715	0.0100	0.5	0.003704	93.6	70	130	0	0		

DUP

SeqNo: **2664256** PrepDate: TestNo: **E200.8** RunNo: **173534**
Samp ID: **190723009-001** PrepRef: Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100	0	0	0	0	0	0.0005934	0	20	
Barium	0.002235	0.00200	0	0	0	0	0	0.002209	1.14	20	
Cadmium	ND	0.00100	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0.002232	0	20	
Copper	0.007652	0.00500	0	0	0	0	0	0.008262	7.66	20	
Lead	ND	0.00100	0	0	0	0	0	0	0	20	
Selenium	ND	0.00100	0	0	0	0	0	0	0	20	
Silver	ND	0.00500	0	0	0	0	0	0	0	20	
Zinc	ND	0.0100	0	0	0	0	0	0.003704	0	20	

MBLK

SeqNo: **2664985** PrepDate:**7/23/2019** TestNo: **E200.7** RunNo: **173569**
Samp ID: **MB-74605** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74605

LCS

SeqNo: **2664986** PrepDate:**7/23/2019** TestNo: **E200.7** RunNo: **173569**
Samp ID: **LCS-74605** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.051	0.00500	2	0	103	89.1	111	0	0		
Barium	1.998	0.0100	2	0	99.9	85	115	0	0		
Cadmium	2.127	0.00500	2	0	106	85	115	0	0		
Chromium	2.019	0.00500	2	0	101	89.7	109	0	0		
Copper	1.997	0.00500	2	0	99.9	85	115	0	0		
Lead	2.133	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.068	0.00500	2	0	103	87.5	112	0	0		
Silver	0.5229	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.043	0.0100	2	0	102	88.3	113	0	0		

MS

SeqNo: **2664994** PrepDate:**7/23/2019** TestNo: **E200.7** RunNo: **173569**
Samp ID: **190722043-004 (072219-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04125	0.00500	0.04	0	103	75	125	0	0		
Barium	1.992	0.0100	2	0.02404	98.4	75	119	0	0		
Cadmium	0.05044	0.00100	0.05	0	101	75	118	0	0		
Chromium	0.1985	0.00500	0.2	0	99.2	75	124	0	0		
Copper	0.2551	0.00500	0.25	0	102	75	125	0	0		
Lead	0.0213	0.00500	0.02	0	106	75	125	0	0		
Selenium	0.009259	0.00500	0.01	0	92.6	75	125	0	0		
Silver	0.0539	0.0100	0.05	0	108	75	125	0	0		
Zinc	0.5158	0.0100	0.5	0	103	76.9	125	0	0		

DUP

SeqNo: **2664993** PrepDate:**7/23/2019** TestNo: **E200.7** RunNo: **173569**
Samp ID: **190722043-004** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02436	0.0100	0	0	0	0	0	0.02404	1.33	20	
Cadmium	ND	0.00100	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74605

DUP

SeqNo: **2664993** **PrepDate:7/23/2019** TestNo: **E200.7** RunNo: **173569**
Samp ID: **190722043-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	ND	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74612

LCS

SeqNo: **2664917** **PrepDate:7/23/2019** TestNo: **SM2540D** RunNo: **173567**
Samp ID: **LCS-74612** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	490	0	95.5	86.5	114	0	0		

DUP

SeqNo: **2664921** **PrepDate:7/23/2019** TestNo: **SM2540D** RunNo: **173567**
Samp ID: **190718036-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	60	10.0	0	0	0	0	0	53	12.4	10	Z

DUP

SeqNo: **2664923** **PrepDate:7/23/2019** TestNo: **SM2540D** RunNo: **173567**
Samp ID: **190718037-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	195	10.0	0	0	0	0	0	199	2.03	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74622

mblk

SeqNo: **2664228** PrepDate:**7/23/2019** TestNo: **SW8082A** RunNo: **173533**
Samp ID: **mb-74622** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0644	0.0100	0.1	0	64.4	57.1	135	0	0		

lcs

SeqNo: **2664229** PrepDate:**7/23/2019** TestNo: **SW8082A** RunNo: **173533**
Samp ID: **lcs-74622** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.431	0.0650	0.5	0	86.2	60	140	0	0		
Aroclor 1260	0.4798	0.0650	0.5	0	96	60	140	0	0		
Surr: Decachlorobiphenyl	0.0758	0.0650	0.1	0	75.8	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

mblk

SeqNo: **2664055** TestNo: **SW8260C** RunNo: **173487**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.19	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.19	5.0	50	0	98.4	76.5	125	0	0		
Surr: Toluene-d8	48.59	5.0	50	0	97.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

lcs

SeqNo: **2664045** TestNo: **SW8260C** RunNo: **173487**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.34	1.0	10	0	93.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.9	1.0	10	0	69	72.3	118	0	0		S
1,1,2-Trichloroethane	8.57	1.0	10	0	85.7	73.1	123	0	0		
1,1-Dichloroethane	9.93	1.0	10	0	99.3	73.2	127	0	0		
1,1-Dichloroethene	8.54	1.0	10	0	85.4	70.3	128	0	0		
1,2,3-Trichloropropane	3.75	1.0	5	0	75	68.4	115	0	0		
1,2-Dichlorobenzene	9.14	1.0	10	0	91.4	71	124	0	0		
1,2-Dichloroethane	8.89	1.0	10	0	88.9	72.5	127	0	0		
1,3-Dichlorobenzene	9.54	1.0	10	0	95.4	72.2	121	0	0		
1,3-Dichloropropane	4.64	1.0	5	0	92.8	76	122	0	0		
1,4-Dichlorobenzene	9.21	1.0	10	0	92.1	71.7	127	0	0		
2-Butanone	7.98	5.0	10	0	79.8	65.1	132	0	0		
4-Methyl-2-pentanone	7.65	5.0	10	0	76.5	68.7	118	0	0		
Acetone	11.45	5.0	10	0	114	69.2	133	0	0		
Benzene	9.44	1.0	10	0	94.4	71.2	122	0	0		
Carbon disulfide	4.22	1.0	5	0	84.4	67.8	134	0	0		
Carbon tetrachloride	8.86	1.0	10	0	88.6	74.5	122	0	0		
Chlorobenzene	9.02	1.0	10	0	90.2	72.7	124	0	0		
Chloroethane	9.61	1.0	10	0	96.1	72.3	136	0	0		
Chloroform	8.8	1.0	10	0	88	71.6	133	0	0		
Dibromochloromethane	7.88	1.0	10	0	78.8	70.6	124	0	0		
Ethylbenzene	9.12	1.0	10	0	91.2	70.9	126	0	0		
Methylene chloride	10.79	1.0	10	0	108	66.3	130	0	0		
Tetrachloroethene	10.24	1.0	10	0	102	72.4	119	0	0		
Toluene	9.14	1.0	10	0	91.4	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	9.82	1.0	10	0	98.2	73	127	0	0		
Vinyl chloride	9.4	1.0	10	0	94	65.2	134	0	0		
Xylenes, Total	28.01	1.0	30	0	93.4	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.09	5.0	50	0	96.2	76.5	125	0	0		
Surr: Toluene-d8	48.44	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

ms	SeqNo: **2664053**	TestNo: **SW8260C**	RunNo: **173487**
	Samp ID: **190719089-004b**	Units: **µg/L**	Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.86	1.0	10	0	88.6	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.73	1.0	10	0	67.3	70.1	123	0	0		S
1,1,2-Trichloroethane	8.14	1.0	10	0	81.4	72.1	119	0	0		
1,1-Dichloroethane	9.76	1.0	10	0	97.6	70.4	126	0	0		
1,1-Dichloroethene	9.39	1.0	10	0	93.9	70.2	125	0	0		
1,2,3-Trichloropropane	3.46	1.0	5	0	69.2	53.7	101	0	0		
1,2-Dichlorobenzene	9.93	1.0	10	0	99.3	70.2	123	0	0		
1,2-Dichloroethane	8.75	1.0	10	0	87.5	73.5	126	0	0		
1,3-Dichlorobenzene	8.08	1.0	10	0	80.8	70.4	124	0	0		
1,3-Dichloropropane	4.51	1.0	5	0	90.2	64	125	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	70.8	127	0	0		
2-Butanone	9.49	5.0	10	0	94.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.03	5.0	10	0	80.3	52.8	133	0	0		
Acetone	8.59	5.0	10	0	85.9	56.3	135	0	0		
Benzene	8.75	1.0	10	0	87.5	70.2	127	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	62.2	130	0	0		
Carbon tetrachloride	8.67	1.0	10	0	86.7	56.4	137	0	0		
Chlorobenzene	9.6	1.0	10	0	96	72.7	128	0	0		
Chloroethane	8.5	1.0	10	0	85	71.3	135	0	0		
Chloroform	8.58	1.0	10	0	85.8	70.2	125	0	0		
Dibromochloromethane	7.47	1.0	10	0	74.7	69.5	123	0	0		
Ethylbenzene	8.45	1.0	10	0	84.5	71.9	129	0	0		
Methylene chloride	9.95	1.0	10	0	99.5	65.3	123	0	0		
Tetrachloroethene	9.3	1.0	10	0	93	74.5	121	0	0		
Toluene	8.99	1.0	10	0	89.9	73	122	0	0		
trans-1,2-Dichloroethene	9.65	1.0	10	0	96.5	69.1	133	0	0		
Trichloroethene	9.13	1.0	10	0	91.3	71.1	126	0	0		
Vinyl chloride	8.82	1.0	10	0	88.2	65	137	0	0		
Xylenes, Total	25.93	1.0	30	0.63	84.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	52.16	5.0	50	0	104	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.85	5.0	50	0	93.7	76.5	125	0	0		
Surr: Toluene-d8	48.55	5.0	50	0	97.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190722043
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173487

msd

SeqNo: **2664054** TestNo: **SW8260C** RunNo: **173487**
Samp ID: **190719089-004b** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.64	1.0	10	0	86.4	71.6	126	8.86	2.51	20.4	
1,1,2,2-Tetrachloroethane	7.77	1.0	10	0	77.7	70.1	123	6.73	14.3	18.6	
1,1,2-Trichloroethane	8.55	1.0	10	0	85.5	72.1	119	8.14	4.91	20	
1,1-Dichloroethane	9.31	1.0	10	0	93.1	70.4	126	9.76	4.72	19.2	
1,1-Dichloroethene	9.27	1.0	10	0	92.7	70.2	125	9.39	1.29	16.1	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	3.46	9.37	20	
1,2-Dichlorobenzene	9.26	1.0	10	0	92.6	70.2	123	9.93	6.98	17.9	
1,2-Dichloroethane	8.65	1.0	10	0	86.5	73.5	126	8.75	1.15	15.6	
1,3-Dichlorobenzene	8.82	1.0	10	0	88.2	70.4	124	8.08	8.76	14.3	
1,3-Dichloropropane	4.52	1.0	5	0	90.4	64	125	4.51	0.221	0	
1,4-Dichlorobenzene	8.76	1.0	10	0	87.6	70.8	127	8.12	7.58	14.4	
2-Butanone	9.64	5.0	10	0	96.4	60.5	123	9.49	1.57	15	
4-Methyl-2-pentanone	8.39	5.0	10	0	83.9	52.8	133	8.03	4.38	11.9	
Acetone	9.01	5.0	10	0	90.1	56.3	135	8.59	4.77	10.6	
Benzene	8.92	1.0	10	0	89.2	70.2	127	8.75	1.92	18.4	
Carbon disulfide	4.24	1.0	5	0	84.8	62.2	130	4.21	0.710	13.1	
Carbon tetrachloride	8.72	1.0	10	0	87.2	56.4	137	8.67	0.575	20.3	
Chlorobenzene	8.97	1.0	10	0	89.7	72.7	128	9.6	6.79	19.6	
Chloroethane	9.22	1.0	10	0	92.2	71.3	135	8.5	8.13	27.8	
Chloroform	8.63	1.0	10	0	86.3	70.2	125	8.58	0.581	20.3	
Dibromochloromethane	8.11	1.0	10	0	81.1	69.5	123	7.47	8.22	18.8	
Ethylbenzene	8.69	1.0	10	0	86.9	71.9	129	8.45	2.80	16.3	
Methylene chloride	9.23	1.0	10	0	92.3	65.3	123	9.95	7.51	21.4	
Tetrachloroethene	9.42	1.0	10	0	94.2	74.5	121	9.3	1.28	20.9	
Toluene	8.82	1.0	10	0	88.2	73	122	8.99	1.91	19.4	
trans-1,2-Dichloroethene	9.26	1.0	10	0	92.6	69.1	133	9.65	4.12	16.1	
Trichloroethene	9.11	1.0	10	0	91.1	71.1	126	9.13	0.219	16.6	
Vinyl chloride	8.53	1.0	10	0	85.3	65	137	8.82	3.34	20.5	
Xylenes, Total	27.33	1.0	30	0.63	89	72	130	25.93	5.26	16	
Surr: 1,2-Dichloroethane-d4	50.61	5.0	50	0	101	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.39	5.0	50	0	96.8	76.5	125	0	0	0	
Surr: Toluene-d8	47.86	5.0	50	0	95.7	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190722043

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave. Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
ryan.mccarthy@aecom.com	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072219-01-SW-U-A-1	7/22/19	1150	A	W		✓	1	metals (filtered)
				P				2	VOCs
				P				2	PCBs
				P				1	metals/hardness
				P				3	mercury
				P				1	TSS
002	072219-02-SW-A-A-1	7/22/19	1300	A	W		✓	1	metals (filtered)
				P				2	VOCs
				P				2	PCBs
				P				1	metals/hardness
				P				3	mercury
				P				1	TSS
003	072219-03-SW-D-A-1	7/22/19	1325	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/22/19 1620
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	J. M	7/22/19 4:39 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☐ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190722043

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 19072043

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
ryan.mccarthy@aecom.com	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072219-03-SW-D-A-1	7/22/19	1325	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	072219-04-SW-B-A-1	7/22/19	1125	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	072219-05-SW-B-B-1	7/22/19	1355	A	W		✓	1	TSS
006	072219-TB01	7/22/19		A	TB				trip blank
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/22/19 1620
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/22/19 4:59 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: Ice		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190722043

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

7/22/2019

TAT: **2**

DateDue: 7/24/2019

☑ **RPT** MS/MSD/DUP Report — Completed by_____

☑ **EDD** EFW-EQUIS — Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal — Completed by_____
PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190722043-001	072219-01-SW-U-A-1	Water	7/22/2019	7/24/2019	E	C	B	D	D	A	F
190722043-002	072219-02-SW-A-A-1	Water	7/22/2019	7/24/2019	E	C	B	D	D	A	F
190722043-003	072219-03-SW-D-A-1	Water	7/22/2019	7/24/2019	E	C	B	D	D	A	F
190722043-004	072219-04-SW-B-A-1	Water	7/22/2019	7/24/2019	E	C	B	D	D	A	F
190722043-005	072219-05-SW-B-B-1	Water	7/22/2019	7/24/2019							A
190722043-006	072219-TB01	Trip Blank	7/22/2019	7/24/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

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All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/23/19 – 7/29/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 7/23/19 through 7/29/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were two low level exceedances of the water quality criteria (both PCB Aroclor 1242). One of these exceedences (0.26 µg/l vs threshold of 0.2 µg/l) was at the newly installed (Buoy 4) upstream background locations, whereas the 2nd Acoclor 1242 exceedance was adjacent to the Site (0.27 µg/l vs threshold of 0.2 µg/l). Given that these concentrations are virtually identical, both near-Site and at upstream background, it is assumed that this is a background condition and not related to dredging activities.

Typically, field turbidity readings from the YSI EXO2 sonde were not observed to be greater than 10 NTU. The associated buoy turbidity and lab TSS values collected at the same time were in the single digits. Overall, the turbidity readings continued to be in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the dredging operations.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
072419-04-SW-B-A-1	11:45	COPPER	D	mg/l	0.01	0.006			B	17	7.84	2.2	High	16.1	Moon Pool	7:30
072519-03-SW-D-A-1	12:50	COPPER	D	mg/l	0.01	0.004	J		D	29	4.69	1.46	High	15.4	Moon Pool	7:30
072519-03-SW-D-A-1	12:50	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.7			D	29	4.69	1.46	High	15.4	Moon Pool	7:30
072619-01-SW-D-A-2	09:20	COPPER	D	mg/l	0.01	0.005	J		D	15	4.65	3.2	Rising (flood)	13.8	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	AROCLOR-1242	T	ug/l	0.2	0.169			U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	ARSENIC	D	mg/l	0.15	0.003	J		U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	CHROMIUM, TOTAL	D	mg/l	0.17	0.005			U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	COPPER	D	mg/l	0.01	0.005	J		U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-01-SW-U-A-1	13:20	ZINC	D	mg/l	0.02	0.006	J		U	17	5.92	3.67	Rising (flood)	13.5	Moon Pool	7:30
072919-02-SW-A-A-1	13:40	AROCLOR-1242	T	ug/l	0.2	0.275		X	A	18	7.24	3.7	Rising (flood)	12.9	Moon Pool	7:30
072919-02-SW-A-A-1	13:40	ARSENIC	D	mg/l	0.15	0.004	J		A	18	7.24	3.7	Rising (flood)	12.9	Moon Pool	7:30
072919-02-SW-A-A-1	13:40	CHROMIUM, TOTAL	D	mg/l	0.17	0.008			A	18	7.24	3.7	Rising (flood)	12.9	Moon Pool	7:30
072919-03-SW-D-A-1	14:00	AROCLOR-1242	T	ug/l	0.2	0.04	J		D	28	2.94	3.73	Rising (flood)	8.2	Moon Pool	7:30
072919-03-SW-D-A-1	14:00	COPPER	D	mg/l	0.01	0.005	J		D	28	2.94	3.73	Rising (flood)	8.2	Moon Pool	7:30
072919-04-SW-B-A-1	13:00	AROCLOR-1242	T	ug/l	0.2	0.256		X	B	15.5	4.26	3.55	Rising (flood)	10.3	Moon Pool	7:30
072919-04-SW-B-A-1	13:00	COPPER	D	mg/l	0.01	0.005	J		B	15.5	4.26	3.55	Rising (flood)	10.3	Moon Pool	7:30

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 25, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190723055
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 7/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *25-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190723055	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-01-SW-U-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 7:20:03 PM
Surr: Decachlorobiphenyl	**87.2**	57.1-135		%REC	1	7/23/2019 7:20:03 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**4.7**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 12:50:00 PM
Barium	**0.030**	0.010		mg/L	1	7/25/2019 12:50:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 12:50:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 12:50:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 12:50:00 PM
Lead	**0.002**	0.005	J	mg/L	1	7/25/2019 12:50:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 12:50:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/25/2019 12:50:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/25/2019 12:50:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:20:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/25/2019 2:20:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 2:20:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:20:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:20:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:20:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-01-SW-U-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:20:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 2:20:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 2:20:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 1:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 1:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 1:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:15:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/24/2019 1:15:00 PM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	7/24/2019 1:15:00 PM
Surr: 4-Bromofluorobenzene	**99.0**	76.5-125		%REC	1	7/24/2019 1:15:00 PM
Surr: Toluene-d8	**96.0**	80.4-121		%REC	1	7/24/2019 1:15:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-01-SW-U-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/24/2019)						
TSS (Residue, Non-Filterable)	**19.7**	1.0		mg/L	1	7/24/2019

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-02-SW-A-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 7:33:23 PM
Surr: Decachlorobiphenyl	**90.8**	57.1-135		%REC	1	7/23/2019 7:33:23 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**3.1**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 1:20:00 PM
Barium	**0.029**	0.010		mg/L	1	7/25/2019 1:20:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 1:20:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 1:20:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 1:20:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 1:20:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 1:20:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/25/2019 1:20:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 1:20:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:57:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/25/2019 2:57:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 2:57:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:57:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:57:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:57:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-02-SW-A-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 2:57:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 2:57:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 2:57:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 1:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 1:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 1:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:37:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/24/2019 1:37:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	7/24/2019 1:37:00 PM
Surr: 4-Bromofluorobenzene	**95.0**	76.5-125		%REC	1	7/24/2019 1:37:00 PM
Surr: Toluene-d8	**95.8**	80.4-121		%REC	1	7/24/2019 1:37:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-02-SW-A-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/24/2019)						
TSS (Residue, Non-Filterable)	**21.2**	1.0		mg/L	1	7/24/2019

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-03-SW-D-B-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 7:46:44 PM
Surr: Decachlorobiphenyl	**95.6**	57.1-135		%REC	1	7/23/2019 7:46:44 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**5.0**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 1:29:00 PM
Barium	**0.029**	0.010		mg/L	1	7/25/2019 1:29:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 1:29:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 1:29:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 1:29:00 PM
Lead	**0.002**	0.005	J	mg/L	1	7/25/2019 1:29:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 1:29:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/25/2019 1:29:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	7/25/2019 1:29:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:03:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/25/2019 3:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 3:03:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:03:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:03:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-03-SW-D-B-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/24/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:03:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	7/25/2019 3:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 3:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 2:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 2:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 2:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 2:20:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/24/2019 2:20:00 PM
Surr: 1,2-Dichloroethane-d4	**97.1**	80.9-122		%REC	1	7/24/2019 2:20:00 PM
Surr: 4-Bromofluorobenzene	**96.7**	76.5-125		%REC	1	7/24/2019 2:20:00 PM
Surr: Toluene-d8	**94.8**	80.4-121		%REC	1	7/24/2019 2:20:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-03-SW-D-B-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/24/2019)						
TSS (Residue, Non-Filterable)	**22.1**	1.0		mg/L	1	7/24/2019

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-04-SW-B-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
PCB, Total	**ND**	0.065		µg/L	1	7/23/2019 8:00:07 PM
Surr: Decachlorobiphenyl	**92.2**	57.1-135		%REC	1	7/23/2019 8:00:07 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**3.8**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 1:36:00 PM
Barium	**0.031**	0.010		mg/L	1	7/25/2019 1:36:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 1:36:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 1:36:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 1:36:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 1:36:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 1:36:00 PM
Silver	**ND**	0.010		mg/L	1	7/25/2019 1:36:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/25/2019 1:36:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/24/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:11:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/25/2019 3:11:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 3:11:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:11:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:11:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:11:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-04-SW-B-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/24/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 3:11:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 3:11:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 3:11:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 1:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 1:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 1:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 1:58:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/24/2019 1:58:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	7/24/2019 1:58:00 PM
Surr: 4-Bromofluorobenzene	**91.2**	76.5-125		%REC	1	7/24/2019 1:58:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	7/24/2019 1:58:00 PM

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-04-SW-B-A-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/24/2019)						
TSS (Residue, Non-Filterable)	**26.0**	1.3		mg/L	1	7/24/2019

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-05-SW-B-B-1
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/24/2019)						
TSS (Residue, Non-Filterable)	**25.2**	1.3		mg/L	1	7/24/2019

Adirondack Environmental Services, Inc

Date: *25-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072319-TB01
Work Order:	**190723055**	**Collection Date:**	7/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190723055-006
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Methylene chloride	**3.1**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Acetone	**20**	5.0		µg/L	1	7/24/2019 12:54:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 12:54:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 12:54:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 12:54:00 PM
Surr: 1,2-Dichloroethane-d4	**96.8**	80.9-122		%REC	1	7/24/2019 12:54:00 PM
Surr: 4-Bromofluorobenzene	**95.8**	76.5-125		%REC	1	7/24/2019 12:54:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	7/24/2019 12:54:00 PM

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74622

mblk

SeqNo: **2664228** PrepDate:**7/23/2019** TestNo: **SW8082A** RunNo: **173533**
Samp ID: **mb-74622** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0644	0.0100	0.1	0	64.4	57.1	135	0	0		

lcs

SeqNo: **2664229** PrepDate:**7/23/2019** TestNo: **SW8082A** RunNo: **173533**
Samp ID: **lcs-74622** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.431	0.0650	0.5	0	86.2	60	140	0	0		
Aroclor 1260	0.4798	0.0650	0.5	0	96	60	140	0	0		
Surr: Decachlorobiphenyl	0.0758	0.0650	0.1	0	75.8	57.1	135	0	0		

lcsd

SeqNo: **2664230** PrepDate:**7/23/2019** TestNo: **SW8082A** RunNo: **173533**
Samp ID: **lcsd-74622** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.4022	0.0650	0.5	0	80.4	60	140	0.431	6.91	30	
Aroclor 1260	0.4362	0.0650	0.5	0	87.2	60	140	0.4798	9.52	30	
Surr: Decachlorobiphenyl	0.061	0.0100	0.1	0	61	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74627

MBLK

SeqNo: **2665850** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **MB-74627** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2665860** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **MB-74627** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2665851** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **LCS-74627** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.6	0.500	10	0	96	77	123	0	0		

LCS

SeqNo: **2665861** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **LCS-74627** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.97	0.500	10	0	99.7	77	123	0	0		

MS

SeqNo: **2665853** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190723055-001 (072319-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.2	0.500	12.5	4.74	75.7	71	125	0	0		

MS

SeqNo: **2665863** PrepDate:**7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190724079-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.8	0.500	12.5	4.62	81.4	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 74627

MSD

SeqNo: **2665854** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190723055-001 (072319-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	4.74	73.3	71	125	14.2	2.14	24	

MSD

SeqNo: **2665864** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190724079-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.1	0.500	12.5	4.62	67.8	71	125	14.8	12.2	24	S

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74633

MBLK

SeqNo: **2665399** PrepDate: TestNo: **E200.7** RunNo: **173601**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

MBLK

SeqNo: **2665797** PrepDate:**7/24/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **MB-74633** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2665400** PrepDate: TestNo: **E200.7** RunNo: **173601**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.868	0.00500	2	0	93.4	89.1	111	0	0		
Barium	1.915	0.0100	2	0	95.8	85	115	0	0		
Cadmium	1.919	0.00500	2	0	96	85	115	0	0		
Chromium	1.936	0.00500	2	0	96.8	89.7	109	0	0		
Copper	1.937	0.00500	2	0	96.9	85	115	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74633

LCS

SeqNo: **2665400** PrepDate: TestNo: **E200.7** RunNo: **173601**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.949	0.00500	2	0	97.5	88.1	112	0	0		
Selenium	1.896	0.00500	2	0	94.8	87.5	112	0	0		
Silver	0.4932	0.0100	0.5	0	98.6	85.2	115	0	0		
Zinc	2.025	0.0100	2	0	101	88.3	113	0	0		

LCS

SeqNo: **2665798** PrepDate:**7/24/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **LCS-74633** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.049	0.00500	2	0	102	89.1	111	0	0		
Barium	2.029	0.0100	2	0	101	85	115	0	0		
Cadmium	2.104	0.00500	2	0	105	85	115	0	0		
Chromium	2.007	0.00500	2	0	100	89.7	109	0	0		
Copper	2.042	0.00500	2	0	102	85	115	0	0		
Lead	2.132	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.057	0.00500	2	0	103	87.5	112	0	0		
Silver	0.5172	0.0100	0.5	0	103	85.2	115	0	0		
Zinc	2.082	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2665801** PrepDate:**7/24/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **190723055-001 (072319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04	0.00500	0.04	0	100	75	125	0	0		
Barium	2.089	0.0100	2	0.03014	103	75	119	0	0		
Cadmium	0.0506	0.00100	0.05	0	101	75	118	0	0		
Chromium	0.2142	0.00500	0.2	0	107	75	124	0	0		
Copper	0.2681	0.00500	0.25	0	107	75	125	0	0		
Lead	0.02194	0.00500	0.02	0.002065	99.4	75	125	0	0		
Selenium	0.008218	0.00500	0.01	0	82.2	75	125	0	0		
Silver	0.05507	0.0100	0.05	0.004982	100	75	125	0	0		
Zinc	0.5301	0.0100	0.5	0.005568	105	76.9	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74633

DUP

SeqNo: **2665800** **PrepDate:7/24/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **190723055-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0002474	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02931	0.0100	0	0	0	0	0	0.03014	2.79	20	
Cadmium	ND	0.00100	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.002477	0.00500	0	0	0	0	0	0	0	20	
Lead	0.0007598	0.00500	0	0	0	0	0	0.002065	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.004099	0.0100	0	0	0	0	0	0.004982	0	10.8	
Zinc	0.005108	0.0100	0	0	0	0	0	0.005568	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74634

MBLK

SeqNo: **2665809** PrepDate:**7/24/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **MB-74634** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2665810** PrepDate:**7/24/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **LCS-74634** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.018	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	2.034	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.086	0.00500	2	0	104	85.3	112	0	0		
Chromium, Dissolved	2.01	0.00500	2	0	100	89.1	109	0	0		
Copper, Dissolved	2.056	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.127	0.00500	2	0	106	86.8	114	0	0		
Selenium, Dissolved	2.04	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5208	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	2.072	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2665813** PrepDate:**7/24/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190723055-001 (072319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03966	0.00500	0.04	0	99.1	75	123	0	0		
Barium, Dissolved	2.076	0.0100	2	0.02504	103	75	124	0	0		
Cadmium, Dissolved	0.05032	0.00100	0.05	0	101	75	125	0	0		
Chromium, Dissolved	0.2036	0.00500	0.2	0	102	77.2	117	0	0		
Copper, Dissolved	0.2639	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74634

MS

SeqNo: **2665813** **PrepDate:7/24/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190723055-001 (072319-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.01968	0.00500	0.02	0	98.4	75	125	0	0		
Selenium, Dissolved	0.01037	0.00500	0.01	0	104	75	125	0	0		
Silver, Dissolved	0.05632	0.0100	0.05	0	113	75	125	0	0		
Zinc, Dissolved	0.5248	0.0100	0.5	0	105	75	121	0	0		

DUP

SeqNo: **2665812** **PrepDate:7/24/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190723055-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02533	0.0100	0	0	0	0	0	0.02504	1.14	15.4	
Cadmium, Dissolved	ND	0.00100	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.004948	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.002956	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.000173	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.005172	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002416	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74635

LCS

SeqNo: **2665543** PrepDate:**7/24/2019** TestNo: **SM2540D** RunNo: **173609**
Samp ID: **LCS-74635** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	490	0	96.3	86.5	114	0	0		

DUP

SeqNo: **2665547** PrepDate:**7/24/2019** TestNo: **SM2540D** RunNo: **173609**
Samp ID: **190718046-008** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	2293	67.0	0	0	0	0	0	2307	0.580	10	

DUP

SeqNo: **2665550** PrepDate:**7/24/2019** TestNo: **SM2540D** RunNo: **173609**
Samp ID: **190722025-002** PrepRef: Units: **mg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	630	100	0	0	0	0	0	580	8.26	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

mblk

SeqNo: **2665070** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.74	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.74	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.8	5.0	50	0	97.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.18	5.0	50	0	94.4	76.5	125	0	0		
Surr: Toluene-d8	47.75	5.0	50	0	95.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

lcs

SeqNo: **2665068** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.66	1.0	10	0	86.6	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7	1.0	10	0	70	72.3	118	0	0		S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	73.1	123	0	0		
1,1-Dichloroethane	9.32	1.0	10	0	93.2	73.2	127	0	0		
1,1-Dichloroethene	7.95	1.0	10	0	79.5	70.3	128	0	0		
1,2,3-Trichloropropane	3.73	1.0	5	0	74.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.39	1.0	10	0	83.9	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	8.27	1.0	10	0	82.7	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	8.22	1.0	10	0	82.2	71.7	127	0	0		
2-Butanone	9.26	5.0	10	0	92.6	65.1	132	0	0		
4-Methyl-2-pentanone	7.64	5.0	10	0	76.4	68.7	118	0	0		
Acetone	9.61	5.0	10	0	96.1	69.2	133	0	0		
Benzene	8.6	1.0	10	0	86	71.2	122	0	0		
Carbon disulfide	4.02	1.0	5	0	80.4	67.8	134	0	0		
Carbon tetrachloride	8.32	1.0	10	0	83.2	74.5	122	0	0		
Chlorobenzene	8.93	1.0	10	0	89.3	72.7	124	0	0		
Chloroethane	9.03	1.0	10	0	90.3	72.3	136	0	0		
Chloroform	9	1.0	10	0	90	71.6	133	0	0		
Dibromochloromethane	7.66	1.0	10	0	76.6	70.6	124	0	0		
Ethylbenzene	8.6	1.0	10	0	86	70.9	126	0	0		
Methylene chloride	10.06	1.0	10	0	101	66.3	130	0	0		
Tetrachloroethene	9.83	1.0	10	0	98.3	72.4	119	0	0		
Toluene	8.92	1.0	10	0	89.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.68	1.0	10	0	96.8	70.3	120	0	0		
Trichloroethene	9.53	1.0	10	0	95.3	73	127	0	0		
Vinyl chloride	7.98	1.0	10	0	79.8	65.2	134	0	0		
Xylenes, Total	25.86	1.0	30	0	86.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.27	5.0	50	0	98.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.71	5.0	50	0	95.4	76.5	125	0	0		
Surr: Toluene-d8	47.89	5.0	50	0	95.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

lcsd

SeqNo: **2665069** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.22	1.0	10	0	92.2	72.3	121	8.66	6.26	25	
1,1,2,2-Tetrachloroethane	7.49	1.0	10	0	74.9	72.3	118	7	6.76	25	
1,1,2-Trichloroethane	9.2	1.0	10	0	92	73.1	123	8.91	3.20	25	
1,1-Dichloroethane	10.04	1.0	10	0	100	73.2	127	9.32	7.44	25	
1,1-Dichloroethene	8.67	1.0	10	0	86.7	70.3	128	7.95	8.66	25	
1,2,3-Trichloropropane	4.08	1.0	5	0	81.6	68.4	115	3.73	8.96	25	
1,2-Dichlorobenzene	9.35	1.0	10	0	93.5	71	124	8.39	10.8	25	
1,2-Dichloroethane	9.3	1.0	10	0	93	72.5	127	9.27	0.323	25	
1,3-Dichlorobenzene	9.24	1.0	10	0	92.4	72.2	121	8.27	11.1	25	
1,3-Dichloropropane	4.48	1.0	5	0	89.6	76	122	4.35	2.94	0	
1,4-Dichlorobenzene	9.35	1.0	10	0	93.5	71.7	127	8.22	12.9	25	
2-Butanone	9.35	5.0	10	0	93.5	65.1	132	9.26	0.967	25	
4-Methyl-2-pentanone	8.37	5.0	10	0	83.7	68.7	118	7.64	9.12	25	
Acetone	8.81	5.0	10	0	88.1	69.2	133	9.61	8.69	25	
Benzene	9.33	1.0	10	0	93.3	71.2	122	8.6	8.14	25	
Carbon disulfide	4.39	1.0	5	0	87.8	67.8	134	4.02	8.80	25	
Carbon tetrachloride	8.6	1.0	10	0	86	74.5	122	8.32	3.31	25	
Chlorobenzene	9.64	1.0	10	0	96.4	72.7	124	8.93	7.65	25	
Chloroethane	9.77	1.0	10	0	97.7	72.3	136	9.03	7.87	25	
Chloroform	9.64	1.0	10	0	96.4	71.6	133	9	6.87	25	
Dibromochloromethane	8.32	1.0	10	0	83.2	70.6	124	7.66	8.26	25	
Ethylbenzene	9.6	1.0	10	0	96	70.9	126	8.6	11.0	25	
Methylene chloride	10.37	1.0	10	0	104	66.3	130	10.06	3.03	25	
Tetrachloroethene	9.82	1.0	10	0	98.2	72.4	119	9.83	0.102	25	
Toluene	9.64	1.0	10	0	96.4	71.8	116	8.92	7.76	25	
trans-1,2-Dichloroethene	9.62	1.0	10	0	96.2	70.3	120	9.68	0.622	25	
Trichloroethene	9.91	1.0	10	0	99.1	73	127	9.53	3.91	25	
Vinyl chloride	8.66	1.0	10	0	86.6	65.2	134	7.98	8.17	25	
Surr: 1,2-Dichloroethane-d4	49.32	5.0	50	0	98.6	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	47.62	5.0	50	0	95.2	76.5	125	0	0	25	
Surr: Toluene-d8	48.26	5.0	50	0	96.5	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

ms	SeqNo: **2665076**	TestNo: **SW8260C**	RunNo: **173578**
	Samp ID: **190723055-001b (072319-01-SW-U-**	Units: **µg/L**	Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.66	1.0	10	0	86.6	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.56	1.0	10	0	65.6	70.1	123	0	0		S
1,1,2-Trichloroethane	8.35	1.0	10	0	83.5	72.1	119	0	0		
1,1-Dichloroethane	9.31	1.0	10	0	93.1	70.4	126	0	0		
1,1-Dichloroethene	9.4	1.0	10	0	94	70.2	125	0	0		
1,2,3-Trichloropropane	3.64	1.0	5	0	72.8	53.7	101	0	0		
1,2-Dichlorobenzene	8.22	1.0	10	0	82.2	70.2	123	0	0		
1,2-Dichloroethane	8.65	1.0	10	0	86.5	73.5	126	0	0		
1,3-Dichlorobenzene	8.35	1.0	10	0	83.5	70.4	124	0	0		
1,3-Dichloropropane	4.3	1.0	5	0	86	64	125	0	0		
1,4-Dichlorobenzene	7.88	1.0	10	0	78.8	70.8	127	0	0		
2-Butanone	7.84	5.0	10	0	78.4	60.5	123	0	0		
4-Methyl-2-pentanone	7.13	5.0	10	0	71.3	52.8	133	0	0		
Acetone	5.69	5.0	10	0	56.9	56.3	135	0	0		
Benzene	8.99	1.0	10	0	89.9	70.2	127	0	0		
Carbon disulfide	3.93	1.0	5	0	78.6	62.2	130	0	0		
Carbon tetrachloride	8.75	1.0	10	0	87.5	56.4	137	0	0		
Chlorobenzene	9.23	1.0	10	0	92.3	72.7	128	0	0		
Chloroethane	8.2	1.0	10	0	82	71.3	135	0	0		
Chloroform	8.33	1.0	10	0	83.3	70.2	125	0	0		
Dibromochloromethane	7.59	1.0	10	0	75.9	69.5	123	0	0		
Ethylbenzene	9.24	1.0	10	0	92.4	71.9	129	0	0		
Methylene chloride	9.56	1.0	10	0	95.6	65.3	123	0	0		
Tetrachloroethene	9.92	1.0	10	0	99.2	74.5	121	0	0		
Toluene	9.14	1.0	10	0	91.4	73	122	0	0		
trans-1,2-Dichloroethene	9.45	1.0	10	0	94.5	69.1	133	0	0		
Trichloroethene	10.07	1.0	10	0	101	71.1	126	0	0		
Vinyl chloride	7.49	1.0	10	0	74.9	65	137	0	0		
Xylenes, Total	28.09	1.0	30	0.33	92.5	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.21	5.0	50	0	96.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.71	5.0	50	0	97.4	76.5	125	0	0		
Surr: Toluene-d8	48.51	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

msd

SeqNo: **2665077** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **190723055-001b (072319-01-SW-U-** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.82	1.0	10	0	88.2	71.6	126	8.66	1.83	20.4	
1,1,2,2-Tetrachloroethane	7.17	1.0	10	0	71.7	70.1	123	6.56	8.89	18.6	
1,1,2-Trichloroethane	8.61	1.0	10	0	86.1	72.1	119	8.35	3.07	20	
1,1-Dichloroethane	9.52	1.0	10	0	95.2	70.4	126	9.31	2.23	19.2	
1,1-Dichloroethene	9.02	1.0	10	0	90.2	70.2	125	9.4	4.13	16.1	
1,2,3-Trichloropropane	3.72	1.0	5	0	74.4	53.7	101	3.64	2.17	20	
1,2-Dichlorobenzene	9.29	1.0	10	0	92.9	70.2	123	8.22	12.2	17.9	
1,2-Dichloroethane	8.69	1.0	10	0	86.9	73.5	126	8.65	0.461	15.6	
1,3-Dichlorobenzene	9.15	1.0	10	0	91.5	70.4	124	8.35	9.14	14.3	
1,3-Dichloropropane	4.54	1.0	5	0	90.8	64	125	4.3	5.43	0	
1,4-Dichlorobenzene	9.06	1.0	10	0	90.6	70.8	127	7.88	13.9	14.4	
2-Butanone	8.26	5.0	10	0	82.6	60.5	123	7.84	5.22	15	
4-Methyl-2-pentanone	7.46	5.0	10	0	74.6	52.8	133	7.13	4.52	11.9	
Acetone	5.76	5.0	10	0	57.6	56.3	135	5.69	1.22	10.6	
Benzene	9.33	1.0	10	0	93.3	70.2	127	8.99	3.71	18.4	
Carbon disulfide	4.43	1.0	5	0	88.6	62.2	130	3.93	12.0	13.1	
Carbon tetrachloride	8.81	1.0	10	0	88.1	56.4	137	8.75	0.683	20.3	
Chlorobenzene	9.29	1.0	10	0	92.9	72.7	128	9.23	0.648	19.6	
Chloroethane	8.53	1.0	10	0	85.3	71.3	135	8.2	3.95	27.8	
Chloroform	8.9	1.0	10	0	89	70.2	125	8.33	6.62	20.3	
Dibromochloromethane	7.83	1.0	10	0	78.3	69.5	123	7.59	3.11	18.8	
Ethylbenzene	9.21	1.0	10	0	92.1	71.9	129	9.24	0.325	16.3	
Methylene chloride	9.79	1.0	10	0	97.9	65.3	123	9.56	2.38	21.4	
Tetrachloroethene	10.23	1.0	10	0	102	74.5	121	9.92	3.08	20.9	
Toluene	9.39	1.0	10	0	93.9	73	122	9.14	2.70	19.4	
trans-1,2-Dichloroethene	9.45	1.0	10	0	94.5	69.1	133	9.45	0	16.1	
Trichloroethene	10.03	1.0	10	0	100	71.1	126	10.07	0.398	16.6	
Vinyl chloride	7.67	1.0	10	0	76.7	65	137	7.49	2.37	20.5	
Xylenes, Total	28.35	1.0	30	0.33	93.4	72	130	28.09	0.921	16.1	
Surr: 1,2-Dichloroethane-d4	48.24	5.0	50	0	96.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.55	5.0	50	0	97.1	76.5	125	0	0	0	
Surr: Toluene-d8	48.19	5.0	50	0	96.4	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

CRI

SeqNo: **2665789** TestNo: **E200.7** RunNo: **173626**
Samp ID: **CRI-1** Units: **µg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	50	150	0	0		
Antimony	110.2	60.0	120	0	91.9	50	150	0	0		
Arsenic	19.26	10.0	20	0	96.3	50	150	0	0		
Barium	ND	200	0	0	0	50	150	0	0		
Beryllium	9.615	5.00	10	0	96.2	50	150	0	0		
Boron	0.7735	50.0	0	0	0	50	150	0	0		
Cadmium	10.1	5.00	10	0	101	50	150	0	0		
Calcium	6.674	5000	0	0	0	50	150	0	0		
Chromium	19.44	10.0	20	0	97.2	50	150	0	0		
Cobalt	95.54	50.0	100	0	95.5	50	150	0	0		
Copper	51.72	25.0	50	0	103	50	150	0	0		
Iron	0.8924	100	0	0	0	50	150	0	0		
Lead	6.915	3.00	6	0	115	50	150	0	0		
Lithium	4.399	100	0	0	0	50	150	0	0		
Magnesium	4.278	5000	0	0	0	50	150	0	0		
Manganese	27.62	15.0	30	0	92.1	50	150	0	0		
Molybdenum	ND	50.0	0	0	0	50	150	0	0		
Nickel	80.46	40.0	80	0	101	50	150	0	0		
Potassium	3.644	5000	0	0	0	50	150	0	0		
Selenium	9.898	5.00	10	0	99	50	150	0	0		
Silver	22.64	10.0	20	0	113	50	150	0	0		
Sodium	ND	5000	0	0	0	50	150	0	0		
Strontium	10.73	20.0	0	0	0	50	150	0	0		
Thallium	18.41	10.0	20	0	92	50	150	0	0		
Tin	0.2103	50.0	0	0	0	50	150	0	0		
Titanium	ND	50.0	0	0	0	50	150	0	0		
Vanadium	97.94	50.0	100	0	97.9	50	150	0	0		
Zinc	42.31	20.0	40	0	106	50	150	0	0		

CRA

SeqNo: **2665790** TestNo: **E200.7** RunNo: **173626**
Samp ID: **CRIA-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

CRA

SeqNo: **2665790** TestNo: **E200.7** RunNo: **173626**
Samp ID: **CRIA-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.05435	0.100	0.05	0	109	70	130	0	0		
Antimony	0.04552	0.0600	0.05	0	91	70	130	0	0		
Arsenic	0.04946	0.00500	0	0	0	70	130	0	0		
Barium	0.04854	0.0100	0	0	0	70	130	0	0		
Beryllium	0.04895	0.00500	0	0	0	70	130	0	0		
Boron	0.05384	0.0500	0.05	0	108	70	130	0	0		
Cadmium	0.05317	0.00500	0	0	0	70	130	0	0		
Calcium	0.04838	0.0500	0.05	0	96.8	70	130	0	0		
Chromium	0.04755	0.00500	0	0	0	70	130	0	0		
Cobalt	0.04846	0.0500	0.05	0	96.9	70	130	0	0		
Copper	0.04704	0.00500	0	0	0	70	130	0	0		
Iron	0.04582	0.0500	0.05	0	91.6	70	130	0	0		
Lead	0.05168	0.00500	0	0	0	70	130	0	0		
Lithium	0.05843	0.0500	0.05	0	117	70	130	0	0		
Magnesium	0.04728	0.0500	0.05	0	94.6	70	130	0	0		
Manganese	0.04729	0.0200	0	0	0	70	130	0	0		
Molybdenum	0.04463	0.0100	0	0	0	70	130	0	0		
Nickel	0.05137	0.0200	0	0	0	70	130	0	0		
Potassium	0.159	0.0500	0	0	0	70	130	0	0		
Selenium	0.05631	0.00500	0	0	0	70	130	0	0		
Silver	0.0126	0.0100	0.0125	0	101	70	130	0	0		
Sodium	0.05827	0.0500	0.05	0	117	70	130	0	0		
Strontium	0.05859	0.0500	0.05	0	117	70	130	0	0		
Thallium	0.05036	0.0100	0	0	0	70	130	0	0		
Tin	0.04498	0.0500	0.05	0	90	70	130	0	0		
Titanium	ND	0.0100	0	0	0	70	130	0	0		
Vanadium	0.0478	0.0200	0	0	0	70	130	0	0		
Zinc	0.0551	0.0100	0	0	0	70	130	0	0		

ICB

SeqNo: **2665788** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICB-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

ICB

SeqNo: **2665788** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICB-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.100	0	0	0	0	0	0	0		
Antimony	ND	0.0600	0	0	0	0	0	0	0		
Arsenic	ND	0.00500	0	0	0	0	0	0	0		
Barium	ND	0.0100	0	0	0	0	0	0	0		
Beryllium	0.00001382	0.00500	0	0	0	0	0	0	0		
Boron	0.001617	0.0500	0	0	0	0	0	0	0		
Cadmium	0.00002698	0.00500	0	0	0	0	0	0	0		
Calcium	ND	0.0500	0	0	0	0	0	0	0		
Chromium	ND	0.00500	0	0	0	0	0	0	0		
Cobalt	ND	0.0500	0	0	0	0	0	0	0		
Copper	0.0008938	0.00500	0	0	0	0	0	0	0		
Iron	ND	0.0500	0	0	0	0	0	0	0		
Lead	0.0003227	0.00500	0	0	0	0	0	0	0		
Lithium	0.007415	0.0500	0	0	0	0	0	0	0		
Magnesium	ND	0.0500	0	0	0	0	0	0	0		
Manganese	ND	0.0200	0	0	0	0	0	0	0		
Molybdenum	ND	0.0100	0	0	0	0	0	0	0		
Nickel	ND	0.0200	0	0	0	0	0	0	0		
Potassium	0.009106	0.0500	0	0	0	0	0	0	0		
Selenium	0.0006938	0.00500	0	0	0	0	0	0	0		
Silver	0.003784	0.0100	0	0	0	0	0	0	0		
Sodium	ND	0.0500	0	0	0	0	0	0	0		
Strontium	0.01799	0.0500	0	0	0	0	0	0	0		
Thallium	ND	0.0100	0	0	0	0	0	0	0		
Tin	0.00003824	0.0500	0	0	0	0	0	0	0		
Titanium	ND	0.0100	0	0	0	0	0	0	0		
Vanadium	0.004575	0.0200	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICV

SeqNo: **2665787** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICV-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

ICV

SeqNo: **2665787** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICV-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.958	0.100	2	0	97.9	95	105	0	0		
Antimony	1.968	0.0600	2	0	98.4	95	105	0	0		
Arsenic	2.01	0.00500	2	0	101	95	105	0	0		
Barium	2.031	0.0100	2	0	102	95	105	0	0		
Beryllium	1.984	0.00500	2	0	99.2	95	105	0	0		
Boron	2.053	0.0500	2	0	103	95	105	0	0		
Cadmium	2.09	0.00500	2	0	104	95	105	0	0		
Calcium	1.997	0.0500	2	0	99.9	95	105	0	0		
Chromium	2.022	0.00500	2	0	101	95	105	0	0		
Cobalt	1.958	0.0500	2	0	97.9	95	105	0	0		
Copper	2.044	0.00500	2	0	102	95	105	0	0		
Iron	1.971	0.0500	2	0	98.6	95	105	0	0		
Lead	1.974	0.00500	2	0	98.7	95	105	0	0		
Lithium	2.013	0.0500	2	0	101	95	105	0	0		
Magnesium	1.975	0.0500	2	0	98.8	95	105	0	0		
Manganese	2.037	0.0200	2	0	102	95	105	0	0		
Molybdenum	1.996	0.0100	2	0	99.8	95	105	0	0		
Nickel	2.054	0.0200	2	0	103	95	105	0	0		
Potassium	9.495	0.0500	10	0	95	95	105	0	0		S
Selenium	2.034	0.00500	2	0	102	95	105	0	0		
Silver	0.5222	0.0100	0.5	0	104	95	105	0	0		
Sodium	1.959	0.0500	2	0	97.9	95	105	0	0		
Strontium	2.015	0.0500	0	0	0	95	105	0	0		
Thallium	1.987	0.0100	2	0	99.3	95	105	0	0		
Tin	2.012	0.0500	2	0	101	95	105	0	0		
Titanium	ND	0.0100	0	0	0	95	105	0	0		
Vanadium	1.991	0.0200	2	0	99.6	95	105	0	0		
Zinc	2.068	0.0100	2	0	103	95	105	0	0		

ICSA

SeqNo: **2665793** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICSA-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

ICSA

SeqNo: **2665793** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICSA-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	494.4	0.100	500	0	98.9	80	120	0	0		
Antimony	ND	0.0600	0	0	0	0	0	0	0		
Arsenic	ND	0.00500	0	0	0	0	0	0	0		
Barium	0.0001554	0.0100	0	0	0	0	0	0	0		
Beryllium	0.002549	0.00500	0	0	0	0	0	0	0		
Boron	ND	0.0500	0	0	0	0	0	0	0		
Cadmium	ND	0.00500	0	0	0	0	0	0	0		
Calcium	427.3	0.0500	500	0	85.5	80	120	0	0		
Chromium	ND	0.00500	0	0	0	0	0	0	0		
Cobalt	0.0003056	0.0500	0	0	0	0	0	0	0		
Copper	ND	0.00500	0	0	0	0	0	0	0		
Iron	120.7	0.0500	200	0	60.4	80	120	0	0		S
Lead	ND	0.00500	0	0	0	0	0	0	0		
Lithium	ND	0.0500	0	0	0	0	0	0	0		
Magnesium	516.1	0.0500	500	0	103	80	120	0	0		
Manganese	ND	0.0200	0	0	0	0	0	0	0		
Molybdenum	ND	0.0100	0	0	0	0	0	0	0		
Nickel	ND	0.0200	0	0	0	0	0	0	0		
Potassium	0.00288	0.0500	0	0	0	0	0	0	0		
Selenium	ND	0.00500	0	0	0	0	0	0	0		
Silver	ND	0.0100	0	0	0	0	0	0	0		
Sodium	0.03989	0.0500	0	0	0	0	0	0	0		
Strontium	0.0164	0.0500	0	0	0	0	0	0	0		
Thallium	ND	0.0100	0	0	0	0	0	0	0		
Tin	0.00239	0.0500	0	0	0	0	0	0	0		
Titanium	ND	0.0100	0	0	0	0	0	0	0		
Vanadium	ND	0.0200	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICSAB

SeqNo: **2665794** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICSAB-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190723055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173626

ICSAB

SeqNo: **2665794** TestNo: **E200.7** RunNo: **173626**
Samp ID: **ICSAB-1** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	502.7	0.100	500	0	101	80	120	0	0		
Antimony	ND	0.0600	0	0	0	80	120	0	0		
Arsenic	ND	0.00500	0	0	0	80	120	0	0		
Barium	0.5111	0.0100	0.5	0	102	80	120	0	0		
Beryllium	0.4927	0.00500	0.5	0	98.5	80	120	0	0		
Boron	ND	0.0500	0	0	0	80	120	0	0		
Cadmium	0.9101	0.00500	1	0	91	80	120	0	0		
Calcium	435.3	0.0500	500	0	87.1	80	120	0	0		
Chromium	0.5319	0.00500	0.5	0	106	80	120	0	0		
Cobalt	0.4577	0.0500	0.5	0	91.5	80	120	0	0		
Copper	0.5583	0.00500	0.5	0	112	80	120	0	0		
Iron	122.1	0.0500	200	0	61.1	80	120	0	0		S
Lead	0.8723	0.00500	1	0	87.2	80	120	0	0		
Lithium	ND	0.0500	0	0	0	80	120	0	0		
Magnesium	527.4	0.0500	500	0	105	80	120	0	0		
Manganese	0.4493	0.0200	0.5	0	89.9	80	120	0	0		
Molybdenum	ND	0.0100	0	0	0	80	120	0	0		
Nickel	0.8793	0.0200	1	0	87.9	80	120	0	0		
Potassium	0.001638	0.0500	0	0	0	80	120	0	0		
Selenium	ND	0.00500	0	0	0	80	120	0	0		
Silver	1.087	0.0100	1	0	109	80	120	0	0		
Sodium	0.04298	0.0500	0	0	0	80	120	0	0		
Strontium	0.01073	0.0500	0	0	0	80	120	0	0		
Thallium	ND	0.0100	0	0	0	80	120	0	0		
Tin	0.001223	0.0500	0	0	0	80	120	0	0		
Titanium	ND	0.0100	0	0	0	80	120	0	0		
Vanadium	0.4666	0.0200	0.5	0	93.3	80	120	0	0		
Zinc	0.8653	0.0100	1	0	86.5	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190723055 (1 of 2)

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072319-01-SW-D-A-1	7/23/19	1320	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	072319-02-SW-A-A-1	7/23/19	1345	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P				2	PCBs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	072319-03-SW-D-B-1	7/23/19	1410	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/23/19 1623
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/23/19 5:10

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190723055

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314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 19072305S (2 of 2)

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072319-03-SW-D-B-1	7/23/19	1410	A	W		✓	2	PCBs
				P					
				A				1	metals / hardness
				P					
				A				1	TSS
				P					
004	072319-04-SW-B-A-1	7/23/19	1300	A	W		✓	1	metals (filtered)
				P					
				A				2	VOCs
				P					
				A				2	PCBs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
005	072319-05-SW-B-B-1	7/23/19	1435	A	W		✓	1	TSS
				P					
006	072319-TB01	7/23/19		A	TB				trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/23/19 1623
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/23/19 5:10

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 26, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190724079
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 9 samples on 7/24/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*26-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190724079		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 9:05:55 PM
Surr: Decachlorobiphenyl	**76.2**	57.1-135		%REC	1	7/24/2019 9:05:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**4.6**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 3:45:00 PM
Barium	**0.027**	0.010		mg/L	1	7/25/2019 3:45:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 3:45:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 3:45:00 PM
Copper	**0.007**	0.005		mg/L	1	7/25/2019 3:45:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 3:45:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 3:45:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/25/2019 3:45:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 3:45:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:41:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	7/25/2019 4:41:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 4:41:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:41:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:41:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:41:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:41:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:41:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:41:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 8:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 8:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 8:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 8:17:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	7/24/2019 8:17:00 PM
Surr: 4-Bromofluorobenzene	**98.2**	76.5-125		%REC	1	7/24/2019 8:17:00 PM
Surr: Toluene-d8	**95.3**	80.4-121		%REC	1	7/24/2019 8:17:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**13.1**	1.1		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 9:19:18 PM
Surr: Decachlorobiphenyl	**64.0**	57.1-135		%REC	1	7/24/2019 9:19:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**3.1**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 3:49:00 PM
Barium	**0.026**	0.010		mg/L	1	7/25/2019 3:49:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 3:49:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 3:49:00 PM
Copper	**0.007**	0.005		mg/L	1	7/25/2019 3:49:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 3:49:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 3:49:00 PM
Silver	**ND**	0.010		mg/L	1	7/25/2019 3:49:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 3:49:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:47:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	7/25/2019 4:47:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 4:47:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:47:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:47:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:47:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/25/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:47:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:47:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:47:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 8:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 8:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 8:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 8:39:00 PM
Surr: 1,2-Dichloroethane-d4	**92.3**	80.9-122		%REC	1	7/24/2019 8:39:00 PM
Surr: 4-Bromofluorobenzene	**95.2**	76.5-125		%REC	1	7/24/2019 8:39:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	7/24/2019 8:39:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**11.9**	1.0		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-03-SW-D-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 9:32:39 PM
Surr: Decachlorobiphenyl	**68.2**	57.1-135		%REC	1	7/24/2019 9:32:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**5.5**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 3:55:00 PM
Barium	**0.026**	0.010		mg/L	1	7/25/2019 3:55:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 3:55:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 3:55:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 3:55:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 3:55:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 3:55:00 PM
Silver	**ND**	0.010		mg/L	1	7/25/2019 3:55:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 3:55:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:53:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/25/2019 4:53:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 4:53:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:53:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:53:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:53:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-03-SW-D-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/25/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:53:00 PM
Silver, Dissolved	**0.007**	0.010	J	mg/L	1	7/25/2019 4:53:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:53:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 9:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 9:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 9:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:00:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	7/24/2019 9:00:00 PM
Surr: 1,2-Dichloroethane-d4	**95.0**	80.9-122		%REC	1	7/24/2019 9:00:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	7/24/2019 9:00:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	7/24/2019 9:00:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-03-SW-D-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**12.8**	1.1		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-04-SW-B-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 9:45:59 PM
Surr: Decachlorobiphenyl	**71.2**	57.1-135		%REC	1	7/24/2019 9:45:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**3.6**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	7/25/2019 3:59:00 PM
Barium	**0.027**	0.010		mg/L	1	7/25/2019 3:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 3:59:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 3:59:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 3:59:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 3:59:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 3:59:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/25/2019 3:59:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 3:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:57:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/25/2019 4:57:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 4:57:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:57:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	7/25/2019 4:57:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:57:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-04-SW-B-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/25/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 4:57:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	7/25/2019 4:57:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 4:57:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 9:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 9:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 9:22:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:22:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/24/2019 9:22:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	7/24/2019 9:22:00 PM
Surr: 4-Bromofluorobenzene	**96.3**	76.5-125		%REC	1	7/24/2019 9:22:00 PM
Surr: Toluene-d8	**95.9**	80.4-121		%REC	1	7/24/2019 9:22:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-04-SW-B-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**16.1**	1.0		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-2
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 9:59:18 PM
Surr: Decachlorobiphenyl	**78.0**	57.1-135		%REC	1	7/24/2019 9:59:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**2.9**	0.5		ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 4:03:00 PM
Barium	**0.027**	0.010		mg/L	1	7/25/2019 4:03:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 4:03:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 4:03:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 4:03:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 4:03:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 4:03:00 PM
Silver	**ND**	0.010		mg/L	1	7/25/2019 4:03:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	7/25/2019 4:03:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:01:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/25/2019 5:01:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 5:01:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:01:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:01:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:01:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-2
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/25/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:01:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 5:01:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 5:01:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 9:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 9:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 9:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 9:43:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/24/2019 9:43:00 PM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	7/24/2019 9:43:00 PM
Surr: 4-Bromofluorobenzene	**96.5**	76.5-125		%REC	1	7/24/2019 9:43:00 PM
Surr: Toluene-d8	**93.8**	80.4-121		%REC	1	7/24/2019 9:43:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-02-SW-A-A-2
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**11.0**	1.0		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-05-SW-B-A-1
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**13.6**	1.0		mg/L	1	7/25/2019

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-TB01
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Methylene chloride	**0.8**	1.0	J	µg/L	1	7/24/2019 10:05:00 PM
Acetone	**11**	5.0		µg/L	1	7/24/2019 10:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 10:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 10:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 10:05:00 PM
Surr: 1,2-Dichloroethane-d4	**93.6**	80.9-122		%REC	1	7/24/2019 10:05:00 PM
Surr: 4-Bromofluorobenzene	**96.3**	76.5-125		%REC	1	7/24/2019 10:05:00 PM
Surr: Toluene-d8	**95.1**	80.4-121		%REC	1	7/24/2019 10:05:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-TB02
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Methylene chloride	**1.0**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Acetone	**9.3**	5.0		µg/L	1	7/24/2019 10:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 10:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 10:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 10:26:00 PM
Surr: 1,2-Dichloroethane-d4	**93.3**	80.9-122		%REC	1	7/24/2019 10:26:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	7/24/2019 10:26:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	7/24/2019 10:26:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-3
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-009
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/24/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
PCB, Total	**ND**	0.065		µg/L	1	7/24/2019 10:12:40 PM
Surr: Decachlorobiphenyl	**42.8**	57.1-135	S	%REC	1	7/24/2019 10:12:40 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/24/2019)						
Mercury	**0.1**	0.5	J	ng/L	1	7/25/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	7/25/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/25/2019 4:06:00 PM
Barium	**ND**	0.010		mg/L	1	7/25/2019 4:06:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/25/2019 4:06:00 PM
Chromium	**ND**	0.005		mg/L	1	7/25/2019 4:06:00 PM
Copper	**ND**	0.005		mg/L	1	7/25/2019 4:06:00 PM
Lead	**ND**	0.005		mg/L	1	7/25/2019 4:06:00 PM
Selenium	**ND**	0.005		mg/L	1	7/25/2019 4:06:00 PM
Silver	**ND**	0.010		mg/L	1	7/25/2019 4:06:00 PM
Zinc	**ND**	0.010		mg/L	1	7/25/2019 4:06:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/25/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:05:00 PM
Barium, Dissolved	**0.003**	0.010	J	mg/L	1	7/25/2019 5:05:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/25/2019 5:05:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:05:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:05:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:05:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-3
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-009
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/25/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/25/2019 5:05:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/25/2019 5:05:00 PM
Zinc, Dissolved	**0.009**	0.010	J	mg/L	1	7/25/2019 5:05:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	7/24/2019 10:47:00 PM
Acetone	**ND**	5.0		µg/L	1	7/24/2019 10:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/24/2019 10:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Benzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/24/2019 10:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Toluene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/24/2019 10:47:00 PM
Surr: 1,2-Dichloroethane-d4	**95.8**	80.9-122		%REC	1	7/24/2019 10:47:00 PM
Surr: 4-Bromofluorobenzene	**95.1**	76.5-125		%REC	1	7/24/2019 10:47:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	7/24/2019 10:47:00 PM

Adirondack Environmental Services, Inc

Date: *26-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072419-01-SW-U-A-3
Work Order:	**190724079**	**Collection Date:**	7/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190724079-009
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/25/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	7/25/2019

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74627

MBLK

SeqNo: **2665850** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **MB-74627** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2665860** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **MB-74627** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2665851** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **LCS-74627** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.6	0.500	10	0	96	77	123	0	0		

LCS

SeqNo: **2665861** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **LCS-74627** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.97	0.500	10	0	99.7	77	123	0	0		

MS

SeqNo: **2665853** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190723055-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.2	0.500	12.5	4.74	75.7	71	125	0	0		

MS

SeqNo: **2665863** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190724079-001 (072419-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.8	0.500	12.5	4.62	81.4	71	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: 74627

MSD

SeqNo: **2665854** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190723055-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	4.74	73.3	71	125	14.2	2.14	24	

MSD

SeqNo: **2665864** **PrepDate:7/24/2019** TestNo: **E1631** RunNo: **173631**
Samp ID: **190724079-001 (072419-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.1	0.500	12.5	4.62	67.8	71	125	14.8	12.2	24	S

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74639

mblk SeqNo: **2665173** PrepDate:**7/24/2019** TestNo: **E608** RunNo: **173587**
Samp ID: **MB-74639** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0664	0	0.1	0	66.4	48.8	140	0	0		

lcs SeqNo: **2665174** PrepDate:**7/24/2019** TestNo: **E608** RunNo: **173587**
Samp ID: **LCS-74639** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1104	0.0650	0.1	0	110	50	114	0	0		
Aroclor 1260	0.076	0.0650	0.1	0	76	52.9	127	0	0		
Surr: Decachlorobiphenyl	0.0962	0	0.1	0	96.2	48.8	140	0	0		

lcsd SeqNo: **2665175** PrepDate:**7/24/2019** TestNo: **E608** RunNo: **173587**
Samp ID: **LCSD-74639** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1104	0.0650	0.1	0	110	50	114	0.1104	0	23.7	
Aroclor 1260	0.0614	0.0650	0.1	0	61.4	52.9	127	0.076	0	32.7	J
Surr: Decachlorobiphenyl	0.0964	0	0.1	0	96.4	48.8	140	0	0	0	

dup SeqNo: **2665177** PrepDate:**7/24/2019** TestNo: **E608** RunNo: **173587**
Samp ID: **190724062-001** PrepRef: Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	0.0868	0.0650	0	0	0	0	0	0.0542	46.2	31.2	Z
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74639

dup

SeqNo: **2665177** | **PrepDate:7/24/2019** | TestNo: **E608** | RunNo: **173587**
Samp ID: **190724062-001** | **PrepRef:** | Units: **µg/L** | Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.0754	0	0.1	0	75.4	48.8	140	0	0	0	

dup

SeqNo: **2665180** | **PrepDate:7/24/2019** | TestNo: **E608** | RunNo: **173587**
Samp ID: **190724062-001a** | **PrepRef:** | Units: **µg/L** | Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	0.0454	0.0650	0	0	0	0	0	0.0542	0	31.2	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.08	0	0.1	0	80	48.8	140	0	0	0	

mblk

SeqNo: **2665187** | **PrepDate:7/24/2019** | TestNo: **SW8082A** | RunNo: **173588**
Samp ID: **mb-74639** | **PrepRef:(SW3535A)** | Units: **µg/L** | Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0664	0.0100	0.1	0	66.4	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74639

lcs

SeqNo: **2665188** **PrepDate:7/24/2019** TestNo: **SW8082A** RunNo: **173588**
Samp ID: **lcs-74639** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1104	0.0650	0.1	0	110	60	140	0	0		
Aroclor 1260	0.0772	0.0650	0.1	0	77.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0962	0.0100	0.1	0	96.2	57.1	135	0	0		

lcsd

SeqNo: **2665189** **PrepDate:7/24/2019** TestNo: **SW8082A** RunNo: **173588**
Samp ID: **lcsd-74639** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1104	0.0650	0.1	0	110	60	140	0.1104	0	30	
Aroclor 1260	0.0614	0.0650	0.1	0	61.4	60	140	0.0772	0	30	J
Surr: Decachlorobiphenyl	0.0964	0.0100	0.1	0	96.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74649

MBLK

SeqNo: **2666112** PrepDate:**7/25/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **MB-74649** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2666113** PrepDate:**7/25/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **LCS-74649** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.037	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.039	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.093	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	2.018	0.00500	2	0	101	89.1	109	0	0		
Copper, Dissolved	2.064	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.139	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.052	0.00500	2	0	103	85	115	0	0		
Silver, Dissolved	0.521	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	2.082	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2666123** PrepDate:**7/25/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190724079-009 (072419-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03896	0.00500	0.04	0	97.4	75	123	0	0		
Barium, Dissolved	2.058	0.0100	2	0.002506	103	75	124	0	0		
Cadmium, Dissolved	0.05194	0.00500	0.05	0	104	75	125	0	0		
Chromium, Dissolved	0.1992	0.00500	0.2	0	99.6	77.2	117	0	0		
Copper, Dissolved	0.2676	0.00500	0.25	0	107	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74649

MS

SeqNo: **2666123** **PrepDate:7/25/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190724079-009 (072419-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02124	0.00500	0.02	0	106	75	125	0	0		
Selenium, Dissolved	0.01284	0.00500	0.01	0	128	75	125	0	0		S
Silver, Dissolved	0.05493	0.0100	0.05	0.003405	103	75	125	0	0		
Zinc, Dissolved	0.5515	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2666122** **PrepDate:7/25/2019** TestNo: **E200.7F** RunNo: **173626**
Samp ID: **190724079-009** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.002408	0.0100	0	0	0	0	0	0.002506	0	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001052	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0000339	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.001324	0.0100	0	0	0	0	0	0.003405	0	17.6	
Zinc, Dissolved	0.008684	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74650

MBLK

SeqNo: **2666100** PrepDate:**7/25/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **MB-74650** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2666101** PrepDate:**7/25/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **LCS-74650** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.038	0.00500	2	0	102	89.1	111	0	0		
Barium	2.051	0.0100	2	0	103	85	115	0	0		
Cadmium	2.099	0.00500	2	0	105	85	115	0	0		
Chromium	2.033	0.00500	2	0	102	89.7	109	0	0		
Copper	2.071	0.00500	2	0	104	85	115	0	0		
Lead	2.145	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.062	0.00500	2	0	103	87.5	112	0	0		
Silver	0.5245	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.089	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2666109** PrepDate:**7/25/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **190724079-009 (072419-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0402	0.00500	0.04	0	100	75	125	0	0		
Barium	2.048	0.0100	2	0	102	75	119	0	0		
Cadmium	0.05124	0.00500	0.05	0	102	75	118	0	0		
Chromium	0.1973	0.00500	0.2	0	98.7	75	124	0	0		
Copper	0.2634	0.00500	0.25	0	105	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74650

MS

SeqNo: **2666109** **PrepDate:7/25/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **190724079-009 (072419-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02192	0.00500	0.02	0	110	75	125	0	0		
Selenium	0.01027	0.00500	0.01	0	103	75	125	0	0		
Silver	0.05412	0.0100	0.05	0	108	75	125	0	0		
Zinc	0.5386	0.0100	0.5	0	108	76.9	125	0	0		

DUP

SeqNo: **2666108** **PrepDate:7/25/2019** TestNo: **E200.7** RunNo: **173626**
Samp ID: **190724079-009** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001237	0.00500	0	0	0	0	0	0	0	20	
Barium	0.002063	0.0100	0	0	0	0	0	0	0	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.0001314	0.00500	0	0	0	0	0	0	0	20	
Copper	0.002298	0.00500	0	0	0	0	0	0	0	20	
Lead	0.00005366	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.006496	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002154	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74658

LCS

SeqNo: **2665901** **PrepDate:7/25/2019** TestNo: **SM2540D** RunNo: **173635**
Samp ID: **LCS-74658** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	490	0	101	86.5	114	0	0		

LCS

SeqNo: **2666241** **PrepDate:7/25/2019** TestNo: **SM2540D** RunNo: **173661**
Samp ID: **LCS-74658** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	490	0	101	86.5	114	0	0		

DUP

SeqNo: **2666248** **PrepDate:7/25/2019** TestNo: **SM2540D** RunNo: **173661**
Samp ID: **190719045-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	79	10.0	0	0	0	0	0	85	7.32	10	

DUP

SeqNo: **2666251** **PrepDate:7/25/2019** TestNo: **SM2540D** RunNo: **173661**
Samp ID: **190719045-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	36	4.00	0	0	0	0	0	34	5.71	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

mblk

SeqNo: **2665070** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.74	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.74	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.8	5.0	50	0	97.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.18	5.0	50	0	94.4	76.5	125	0	0		
Surr: Toluene-d8	47.75	5.0	50	0	95.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

lcs

SeqNo: **2665068** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.66	1.0	10	0	86.6	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7	1.0	10	0	70	72.3	118	0	0		S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	73.1	123	0	0		
1,1-Dichloroethane	9.32	1.0	10	0	93.2	73.2	127	0	0		
1,1-Dichloroethene	7.95	1.0	10	0	79.5	70.3	128	0	0		
1,2,3-Trichloropropane	3.73	1.0	5	0	74.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.39	1.0	10	0	83.9	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	8.27	1.0	10	0	82.7	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	8.22	1.0	10	0	82.2	71.7	127	0	0		
2-Butanone	9.26	5.0	10	0	92.6	65.1	132	0	0		
4-Methyl-2-pentanone	7.64	5.0	10	0	76.4	68.7	118	0	0		
Acetone	9.61	5.0	10	0	96.1	69.2	133	0	0		
Benzene	8.6	1.0	10	0	86	71.2	122	0	0		
Carbon disulfide	4.02	1.0	5	0	80.4	67.8	134	0	0		
Carbon tetrachloride	8.32	1.0	10	0	83.2	74.5	122	0	0		
Chlorobenzene	8.93	1.0	10	0	89.3	72.7	124	0	0		
Chloroethane	9.03	1.0	10	0	90.3	72.3	136	0	0		
Chloroform	9	1.0	10	0	90	71.6	133	0	0		
Dibromochloromethane	7.66	1.0	10	0	76.6	70.6	124	0	0		
Ethylbenzene	8.6	1.0	10	0	86	70.9	126	0	0		
Methylene chloride	10.06	1.0	10	0	101	66.3	130	0	0		
Tetrachloroethene	9.83	1.0	10	0	98.3	72.4	119	0	0		
Toluene	8.92	1.0	10	0	89.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.68	1.0	10	0	96.8	70.3	120	0	0		
Trichloroethene	9.53	1.0	10	0	95.3	73	127	0	0		
Vinyl chloride	7.98	1.0	10	0	79.8	65.2	134	0	0		
Xylenes, Total	25.86	1.0	30	0	86.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.27	5.0	50	0	98.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.71	5.0	50	0	95.4	76.5	125	0	0		
Surr: Toluene-d8	47.89	5.0	50	0	95.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

lcsd

SeqNo: **2665069** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.22	1.0	10	0	92.2	72.3	121	8.66	6.26	25	
1,1,2,2-Tetrachloroethane	7.49	1.0	10	0	74.9	72.3	118	7	6.76	25	
1,1,2-Trichloroethane	9.2	1.0	10	0	92	73.1	123	8.91	3.20	25	
1,1-Dichloroethane	10.04	1.0	10	0	100	73.2	127	9.32	7.44	25	
1,1-Dichloroethene	8.67	1.0	10	0	86.7	70.3	128	7.95	8.66	25	
1,2,3-Trichloropropane	4.08	1.0	5	0	81.6	68.4	115	3.73	8.96	25	
1,2-Dichlorobenzene	9.35	1.0	10	0	93.5	71	124	8.39	10.8	25	
1,2-Dichloroethane	9.3	1.0	10	0	93	72.5	127	9.27	0.323	25	
1,3-Dichlorobenzene	9.24	1.0	10	0	92.4	72.2	121	8.27	11.1	25	
1,3-Dichloropropane	4.48	1.0	5	0	89.6	76	122	4.35	2.94	0	
1,4-Dichlorobenzene	9.35	1.0	10	0	93.5	71.7	127	8.22	12.9	25	
2-Butanone	9.35	5.0	10	0	93.5	65.1	132	9.26	0.967	25	
4-Methyl-2-pentanone	8.37	5.0	10	0	83.7	68.7	118	7.64	9.12	25	
Acetone	8.81	5.0	10	0	88.1	69.2	133	9.61	8.69	25	
Benzene	9.33	1.0	10	0	93.3	71.2	122	8.6	8.14	25	
Carbon disulfide	4.39	1.0	5	0	87.8	67.8	134	4.02	8.80	25	
Carbon tetrachloride	8.6	1.0	10	0	86	74.5	122	8.32	3.31	25	
Chlorobenzene	9.64	1.0	10	0	96.4	72.7	124	8.93	7.65	25	
Chloroethane	9.77	1.0	10	0	97.7	72.3	136	9.03	7.87	25	
Chloroform	9.64	1.0	10	0	96.4	71.6	133	9	6.87	25	
Dibromochloromethane	8.32	1.0	10	0	83.2	70.6	124	7.66	8.26	25	
Ethylbenzene	9.6	1.0	10	0	96	70.9	126	8.6	11.0	25	
Methylene chloride	10.37	1.0	10	0	104	66.3	130	10.06	3.03	25	
Tetrachloroethene	9.82	1.0	10	0	98.2	72.4	119	9.83	0.102	25	
Toluene	9.64	1.0	10	0	96.4	71.8	116	8.92	7.76	25	
trans-1,2-Dichloroethene	9.62	1.0	10	0	96.2	70.3	120	9.68	0.622	25	
Trichloroethene	9.91	1.0	10	0	99.1	73	127	9.53	3.91	25	
Vinyl chloride	8.66	1.0	10	0	86.6	65.2	134	7.98	8.17	25	
Surr: 1,2-Dichloroethane-d4	49.32	5.0	50	0	98.6	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	47.62	5.0	50	0	95.2	76.5	125	0	0	25	
Surr: Toluene-d8	48.26	5.0	50	0	96.5	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

ms	SeqNo: **2665076**	TestNo: **SW8260C**	RunNo: **173578**
	Samp ID: **190723055-001b**	Units: **µg/L**	Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.66	1.0	10	0	86.6	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.56	1.0	10	0	65.6	70.1	123	0	0		S
1,1,2-Trichloroethane	8.35	1.0	10	0	83.5	72.1	119	0	0		
1,1-Dichloroethane	9.31	1.0	10	0	93.1	70.4	126	0	0		
1,1-Dichloroethene	9.4	1.0	10	0	94	70.2	125	0	0		
1,2,3-Trichloropropane	3.64	1.0	5	0	72.8	53.7	101	0	0		
1,2-Dichlorobenzene	8.22	1.0	10	0	82.2	70.2	123	0	0		
1,2-Dichloroethane	8.65	1.0	10	0	86.5	73.5	126	0	0		
1,3-Dichlorobenzene	8.35	1.0	10	0	83.5	70.4	124	0	0		
1,3-Dichloropropane	4.3	1.0	5	0	86	64	125	0	0		
1,4-Dichlorobenzene	7.88	1.0	10	0	78.8	70.8	127	0	0		
2-Butanone	7.84	5.0	10	0	78.4	60.5	123	0	0		
4-Methyl-2-pentanone	7.13	5.0	10	0	71.3	52.8	133	0	0		
Acetone	5.69	5.0	10	0	56.9	56.3	135	0	0		
Benzene	8.99	1.0	10	0	89.9	70.2	127	0	0		
Carbon disulfide	3.93	1.0	5	0	78.6	62.2	130	0	0		
Carbon tetrachloride	8.75	1.0	10	0	87.5	56.4	137	0	0		
Chlorobenzene	9.23	1.0	10	0	92.3	72.7	128	0	0		
Chloroethane	8.2	1.0	10	0	82	71.3	135	0	0		
Chloroform	8.33	1.0	10	0	83.3	70.2	125	0	0		
Dibromochloromethane	7.59	1.0	10	0	75.9	69.5	123	0	0		
Ethylbenzene	9.24	1.0	10	0	92.4	71.9	129	0	0		
Methylene chloride	9.56	1.0	10	0	95.6	65.3	123	0	0		
Tetrachloroethene	9.92	1.0	10	0	99.2	74.5	121	0	0		
Toluene	9.14	1.0	10	0	91.4	73	122	0	0		
trans-1,2-Dichloroethene	9.45	1.0	10	0	94.5	69.1	133	0	0		
Trichloroethene	10.07	1.0	10	0	101	71.1	126	0	0		
Vinyl chloride	7.49	1.0	10	0	74.9	65	137	0	0		
Xylenes, Total	28.09	1.0	30	0.33	92.5	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.21	5.0	50	0	96.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.71	5.0	50	0	97.4	76.5	125	0	0		
Surr: Toluene-d8	48.51	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190724079
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173578

msd

SeqNo: **2665077** TestNo: **SW8260C** RunNo: **173578**
Samp ID: **190723055-001b** Units: **µg/L** Analysis Date: **7/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.82	1.0	10	0	88.2	71.6	126	8.66	1.83	20.4	
1,1,2,2-Tetrachloroethane	7.17	1.0	10	0	71.7	70.1	123	6.56	8.89	18.6	
1,1,2-Trichloroethane	8.61	1.0	10	0	86.1	72.1	119	8.35	3.07	20	
1,1-Dichloroethane	9.52	1.0	10	0	95.2	70.4	126	9.31	2.23	19.2	
1,1-Dichloroethene	9.02	1.0	10	0	90.2	70.2	125	9.4	4.13	16.1	
1,2,3-Trichloropropane	3.72	1.0	5	0	74.4	53.7	101	3.64	2.17	20	
1,2-Dichlorobenzene	9.29	1.0	10	0	92.9	70.2	123	8.22	12.2	17.9	
1,2-Dichloroethane	8.69	1.0	10	0	86.9	73.5	126	8.65	0.461	15.6	
1,3-Dichlorobenzene	9.15	1.0	10	0	91.5	70.4	124	8.35	9.14	14.3	
1,3-Dichloropropane	4.54	1.0	5	0	90.8	64	125	4.3	5.43	0	
1,4-Dichlorobenzene	9.06	1.0	10	0	90.6	70.8	127	7.88	13.9	14.4	
2-Butanone	8.26	5.0	10	0	82.6	60.5	123	7.84	5.22	15	
4-Methyl-2-pentanone	7.46	5.0	10	0	74.6	52.8	133	7.13	4.52	11.9	
Acetone	5.76	5.0	10	0	57.6	56.3	135	5.69	1.22	10.6	
Benzene	9.33	1.0	10	0	93.3	70.2	127	8.99	3.71	18.4	
Carbon disulfide	4.43	1.0	5	0	88.6	62.2	130	3.93	12.0	13.1	
Carbon tetrachloride	8.81	1.0	10	0	88.1	56.4	137	8.75	0.683	20.3	
Chlorobenzene	9.29	1.0	10	0	92.9	72.7	128	9.23	0.648	19.6	
Chloroethane	8.53	1.0	10	0	85.3	71.3	135	8.2	3.95	27.8	
Chloroform	8.9	1.0	10	0	89	70.2	125	8.33	6.62	20.3	
Dibromochloromethane	7.83	1.0	10	0	78.3	69.5	123	7.59	3.11	18.8	
Ethylbenzene	9.21	1.0	10	0	92.1	71.9	129	9.24	0.325	16.3	
Methylene chloride	9.79	1.0	10	0	97.9	65.3	123	9.56	2.38	21.4	
Tetrachloroethene	10.23	1.0	10	0	102	74.5	121	9.92	3.08	20.9	
Toluene	9.39	1.0	10	0	93.9	73	122	9.14	2.70	19.4	
trans-1,2-Dichloroethene	9.45	1.0	10	0	94.5	69.1	133	9.45	0	16.1	
Trichloroethene	10.03	1.0	10	0	100	71.1	126	10.07	0.398	16.6	
Vinyl chloride	7.67	1.0	10	0	76.7	65	137	7.49	2.37	20.5	
Xylenes, Total	28.35	1.0	30	0.33	93.4	72	130	28.09	0.921	16.1	
Surr: 1,2-Dichloroethane-d4	48.24	5.0	50	0	96.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.55	5.0	50	0	97.1	76.5	125	0	0	0	
Surr: Toluene-d8	48.19	5.0	50	0	96.4	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190724079

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleile@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072419-01-SW-U-A-1	7/24/19	1205	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	072419-02-SW-A-A-1	7/24/19	1230	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
003	072419-03-SW-D-A-1	7/24/19	1305	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/24/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/24/19 4:35 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4° C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190724079

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19072407 9

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072419-03-SW-D-A-1	7/24/19	1305	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	072419-04-SW-B-A-1	7/24/19	1145	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	072419-02-SW-A-A-2	7/24/19	1245	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/24/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/24/19 4:25 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19072409

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
005	072419-02-SW-A-A-2	7/24/19	1245	A	W		✓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
006	072419-05-SW-B-A-1	7/24/19	1335	A	W		✓	1	TSS
007	072419-TB01			A	TB				trip blank
				P					
008	072419-TB02			A	TB				trip blank
				P					
009	072419-01-SW-U-A-3	7/24/19	0745	A	W		✓	1	metals (filtered)
	↓	↓	↓	P	↓		↓	2	VOCs
				A					
				P				2	PCBs
				A					
				P				1	metals/hardness
				A					
				P				3	mercury
				A					
				P				1	TSS
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/24/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/24/19 4:25

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190724079

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

7/24/2019

Demo

190724079

TAT: **2**

DateDue: 7/26/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190724079-001	072419-01-SW-U-A-1	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F
190724079-002	072419-02-SW-A-A-1	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F
190724079-003	072419-03-SW-D-A-1	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F
190724079-004	072419-04-SW-B-A-1	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F
190724079-005	072419-02-SW-A-A-2	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F
190724079-006	072419-05-SW-B-A-1	Water	7/24/2019	7/26/2019							A
190724079-007	072419-TB01	Trip Blank	7/24/2019	7/26/2019			A				
190724079-008	072419-TB02	Trip Blank	7/24/2019	7/26/2019			A				
190724079-009	072419-01-SW-U-A-3	Water	7/24/2019	7/26/2019	E	C	B	D	D	A	F

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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July 29, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190725069
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 7/25/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*29-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190725069		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-01-SW-U-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:55:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 2:19:00 PM
Surr: Decachlorobiphenyl	**65.8**	57.1-135		%REC	1	7/26/2019 2:19:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/25/2019)						
Mercury	**11.8**	0.5		ng/L	1	7/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	7/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/26/2019 12:15:00 PM
Barium	**0.028**	0.010		mg/L	1	7/26/2019 12:15:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/26/2019 12:15:00 PM
Chromium	**ND**	0.005		mg/L	1	7/26/2019 12:15:00 PM
Copper	**ND**	0.005		mg/L	1	7/26/2019 12:15:00 PM
Lead	**ND**	0.005		mg/L	1	7/26/2019 12:15:00 PM
Selenium	**ND**	0.005		mg/L	1	7/26/2019 12:15:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/26/2019 12:15:00 PM
Zinc	**ND**	0.010		mg/L	1	7/26/2019 12:15:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:46:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	7/26/2019 1:46:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/26/2019 1:46:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:46:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:46:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:46:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-01-SW-U-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:55:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:46:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 1:46:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 1:46:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **MG**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Acetone	**ND**	5.0		µg/L	1	7/25/2019 8:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/25/2019 8:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Benzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/25/2019 8:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Toluene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:42:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	7/25/2019 8:42:00 PM
Surr: 1,2-Dichloroethane-d4	**96.0**	80.9-122		%REC	1	7/25/2019 8:42:00 PM
Surr: 4-Bromofluorobenzene	**94.4**	76.5-125		%REC	1	7/25/2019 8:42:00 PM
Surr: Toluene-d8	**94.1**	80.4-121		%REC	1	7/25/2019 8:42:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-01-SW-U-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:55:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/26/2019)						
TSS (Residue, Non-Filterable)	**8.4**	1.0		mg/L	1	7/26/2019

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-02-SW-A-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:20:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 2:32:24 PM
Surr: Decachlorobiphenyl	**68.6**	57.1-135		%REC	1	7/26/2019 2:32:24 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/25/2019)						
Mercury	**3.0**	0.5		ng/L	1	7/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	7/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/26/2019 12:21:00 PM
Barium	**0.028**	0.010		mg/L	1	7/26/2019 12:21:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/26/2019 12:21:00 PM
Chromium	**ND**	0.005		mg/L	1	7/26/2019 12:21:00 PM
Copper	**0.007**	0.005		mg/L	1	7/26/2019 12:21:00 PM
Lead	**ND**	0.005		mg/L	1	7/26/2019 12:21:00 PM
Selenium	**ND**	0.005		mg/L	1	7/26/2019 12:21:00 PM
Silver	**ND**	0.010		mg/L	1	7/26/2019 12:21:00 PM
Zinc	**ND**	0.010		mg/L	1	7/26/2019 12:21:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:52:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	7/26/2019 1:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/26/2019 1:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:52:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:52:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-02-SW-A-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:20:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/26/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 1:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 1:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 1:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **MG**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Acetone	**ND**	5.0		µg/L	1	7/25/2019 9:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/25/2019 9:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Benzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/25/2019 9:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Toluene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/25/2019 9:04:00 PM
Surr: 1,2-Dichloroethane-d4	**95.8**	80.9-122		%REC	1	7/25/2019 9:04:00 PM
Surr: 4-Bromofluorobenzene	**93.3**	76.5-125		%REC	1	7/25/2019 9:04:00 PM
Surr: Toluene-d8	**95.0**	80.4-121		%REC	1	7/25/2019 9:04:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-02-SW-A-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:20:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/26/2019)						
TSS (Residue, Non-Filterable)	**10.7**	1.0		mg/L	1	7/26/2019

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-03-SW-D-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:50:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 2:45:44 PM
Surr: Decachlorobiphenyl	**68.0**	57.1-135		%REC	1	7/26/2019 2:45:44 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/25/2019)						
Mercury	**6.2**	0.5		ng/L	1	7/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Total Hardness (As CaCO3)	**100**	5		mg/L CaCO3	1	7/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/26/2019 12:29:00 PM
Barium	**0.030**	0.010		mg/L	1	7/26/2019 12:29:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/26/2019 12:29:00 PM
Chromium	**ND**	0.005		mg/L	1	7/26/2019 12:29:00 PM
Copper	**ND**	0.005		mg/L	1	7/26/2019 12:29:00 PM
Lead	**0.002**	0.005	J	mg/L	1	7/26/2019 12:29:00 PM
Selenium	**ND**	0.005		mg/L	1	7/26/2019 12:29:00 PM
Silver	**0.007**	0.010	J	mg/L	1	7/26/2019 12:29:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	7/26/2019 12:29:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:01:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/26/2019 2:01:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/26/2019 2:01:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:01:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	7/26/2019 2:01:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:01:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-03-SW-D-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:50:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:01:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 2:01:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 2:01:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **MG**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Acetone	**ND**	5.0		µg/L	1	7/25/2019 9:25:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/25/2019 9:25:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Benzene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/25/2019 9:25:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Toluene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:25:00 PM
1,2-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	7/25/2019 9:25:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/25/2019 9:25:00 PM
Xylenes, Total	**0.6**	1.0	J	µg/L	1	7/25/2019 9:25:00 PM
Surr: 1,2-Dichloroethane-d4	**93.2**	80.9-122		%REC	1	7/25/2019 9:25:00 PM
Surr: 4-Bromofluorobenzene	**92.0**	76.5-125		%REC	1	7/25/2019 9:25:00 PM
Surr: Toluene-d8	**94.3**	80.4-121		%REC	1	7/25/2019 9:25:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-03-SW-D-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 12:50:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/26/2019)						
TSS (Residue, Non-Filterable)	**15.4**	1.1		mg/L	1	7/26/2019

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-04-SW-B-B-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:35:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 2:59:07 PM
Surr: Decachlorobiphenyl	**70.4**	57.1-135		%REC	1	7/26/2019 2:59:07 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/25/2019)						
Mercury	**1.9**	0.5		ng/L	1	7/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Total Hardness (As CaCO3)	**101**	5		mg/L CaCO3	1	7/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	7/26/2019 12:32:00 PM
Barium	**0.028**	0.010		mg/L	1	7/26/2019 12:32:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/26/2019 12:32:00 PM
Chromium	**ND**	0.005		mg/L	1	7/26/2019 12:32:00 PM
Copper	**ND**	0.005		mg/L	1	7/26/2019 12:32:00 PM
Lead	**ND**	0.005		mg/L	1	7/26/2019 12:32:00 PM
Selenium	**ND**	0.005		mg/L	1	7/26/2019 12:32:00 PM
Silver	**0.005**	0.010	J	mg/L	1	7/26/2019 12:32:00 PM
Zinc	**ND**	0.010		mg/L	1	7/26/2019 12:32:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:10:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/26/2019 2:10:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/26/2019 2:10:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:10:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:10:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:10:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-04-SW-B-B-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:35:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/26/2019 2:10:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 2:10:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/26/2019 2:10:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **MG**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	7/25/2019 9:47:00 PM
Acetone	**ND**	5.0		µg/L	1	7/25/2019 9:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/25/2019 9:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Benzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/25/2019 9:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Toluene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 9:47:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/25/2019 9:47:00 PM
Surr: 1,2-Dichloroethane-d4	**92.3**	80.9-122		%REC	1	7/25/2019 9:47:00 PM
Surr: 4-Bromofluorobenzene	**92.3**	76.5-125		%REC	1	7/25/2019 9:47:00 PM
Surr: Toluene-d8	**93.6**	80.4-121		%REC	1	7/25/2019 9:47:00 PM

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-04-SW-B-B-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 11:35:00 AM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/26/2019)						
TSS (Residue, Non-Filterable)	**8.7**	1.1		mg/L	1	7/26/2019

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-05-SW-B-A-1
Work Order:	**190725069**	**Collection Date:**	7/25/2019 1:35:00 PM
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/26/2019)						
TSS (Residue, Non-Filterable)	**14.7**	1.1		mg/L	1	7/26/2019

Adirondack Environmental Services, Inc

Date: *29-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072519-TB01
Work Order:	**190725069**	**Collection Date:**	7/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 /	**Lab Sample ID:**	190725069-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **MG**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Methylene chloride	**2.9**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Acetone	**ND**	5.0		µg/L	1	7/25/2019 8:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Chloroform	**0.6**	1.0	J	µg/L	1	7/25/2019 8:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/25/2019 8:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Benzene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/25/2019 8:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Toluene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/25/2019 8:21:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	7/25/2019 8:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/25/2019 8:21:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	7/25/2019 8:21:00 PM
Surr: 4-Bromofluorobenzene	**97.4**	76.5-125		%REC	1	7/25/2019 8:21:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	7/25/2019 8:21:00 PM

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74666

MBLK

SeqNo: **2666461** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **MB-74666** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2666474** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **MB-74666** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2666462** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **LCS-74666** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.61	0.500	10	0	96.1	77	123	0	0		

LCS

SeqNo: **2666475** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **LCS-74666** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.51	0.500	10	0	95.1	77	123	0	0		

MS

SeqNo: **2666468** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **190725069-002 (072519-02-SW-A-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.9	0.500	12.5	3	79.2	71	125	0	0		

MSD

SeqNo: **2666469** **PrepDate:7/25/2019** TestNo: **E1631** RunNo: **173676**
Samp ID: **190725069-002 (072519-02-SW-A-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.5	0.500	12.5	3	76	71	125	12.9	3.15	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74670

LCS				
SeqNo: **2666700**	**PrepDate:7/26/2019**	TestNo: **SM2540D**	RunNo: **173687**
Samp ID: **LCS-74670**	**PrepRef:(Gen Prep)**	Units: **mg/L**	Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	480	40.0	490	0	98	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74671

MBLK

SeqNo: **2666848** PrepDate:**7/26/2019** TestNo: **E200.7F** RunNo: **173669**
Samp ID: **MB-74671** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2666849** PrepDate:**7/26/2019** TestNo: **E200.7F** RunNo: **173669**
Samp ID: **LCS-74671** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.034	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.047	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.151	0.00500	2	0	108	85.3	112	0	0		
Chromium, Dissolved	2.038	0.00500	2	0	102	89.1	109	0	0		
Copper, Dissolved	2.109	0.00500	2	0	105	86.8	115	0	0		
Lead, Dissolved	2.158	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.043	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5334	0.0100	0.5	0	107	85	115	0	0		
Zinc, Dissolved	2.094	0.0100	2	0	105	85	115	0	0		

MS

SeqNo: **2666860** PrepDate:**7/26/2019** TestNo: **E200.7F** RunNo: **173669**
Samp ID: **190725069-004 (072519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03935	0.00500	0.04	0	98.4	75	123	0	0		
Barium, Dissolved	2.072	0.0100	2	0.02544	102	75	124	0	0		
Cadmium, Dissolved	0.05168	0.00500	0.05	0	103	75	125	0	0		
Chromium, Dissolved	0.2045	0.00500	0.2	0	102	77.2	117	0	0		
Copper, Dissolved	0.2676	0.00500	0.25	0	107	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74671

MS

SeqNo: **2666860** PrepDate:**7/26/2019** TestNo: **E200.7F** RunNo: **173669**
Samp ID: **190725069-004 (072519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02092	0.00500	0.02	0	105	75	125	0	0		
Selenium, Dissolved	0.008977	0.00500	0.01	0	89.8	75	125	0	0		
Silver, Dissolved	0.05495	0.0100	0.05	0	110	75	125	0	0		
Zinc, Dissolved	0.5266	0.0100	0.5	0	105	75	121	0	0		

DUP

SeqNo: **2666859** PrepDate:**7/26/2019** TestNo: **E200.7F** RunNo: **173669**
Samp ID: **190725069-004** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001924	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02487	0.0100	0	0	0	0	0	0.02544	2.25	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.004205	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.002292	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.003289	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74673

MBLK

SeqNo: **2666836** PrepDate:**7/26/2019** TestNo: **E200.7** RunNo: **173669**
Samp ID: **MB-74673** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2666837** PrepDate:**7/26/2019** TestNo: **E200.7** RunNo: **173669**
Samp ID: **LCS-74673** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.03	0.00500	2	0	102	89.1	111	0	0		
Barium	2.064	0.0100	2	0	103	85	115	0	0		
Cadmium	2.151	0.00500	2	0	108	85	115	0	0		
Chromium	2.055	0.00500	2	0	103	89.7	109	0	0		
Copper	2.144	0.00500	2	0	107	85	115	0	0		
Lead	2.148	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.024	0.00500	2	0	101	87.5	112	0	0		
Silver	0.5347	0.0100	0.5	0	107	85.2	115	0	0		
Zinc	2.085	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2666845** PrepDate:**7/26/2019** TestNo: **E200.7** RunNo: **173669**
Samp ID: **190725069-004 (072519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04062	0.00500	0.04	0.003332	93.2	75	125	0	0		
Barium	2.105	0.0100	2	0.02833	104	75	119	0	0		
Cadmium	0.05265	0.00500	0.05	0	105	75	118	0	0		
Chromium	0.2049	0.00500	0.2	0	102	75	124	0	0		
Copper	0.2715	0.00500	0.25	0	109	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74673

MS

SeqNo: **2666845** **PrepDate:7/26/2019** TestNo: **E200.7** RunNo: **173669**
Samp ID: **190725069-004 (072519-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02041	0.00500	0.02	0	102	75	125	0	0		
Selenium	0.008866	0.00500	0.01	0	88.7	75	125	0	0		
Silver	0.0544	0.0100	0.05	0.00452	99.8	75	125	0	0		
Zinc	0.529	0.0100	0.5	0	106	76.9	125	0	0		

DUP

SeqNo: **2666844** **PrepDate:7/26/2019** TestNo: **E200.7** RunNo: **173669**
Samp ID: **190725069-004** **PrepRef:** Units: **mg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.002277	0.00500	0	0	0	0	0	0.003332	0	20	
Barium	0.02843	0.0100	0	0	0	0	0	0.02833	0.349	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.004964	0.00500	0	0	0	0	0	0	0	20	
Lead	0.0003574	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.004647	0.0100	0	0	0	0	0	0.00452	0	10.8	
Zinc	0.002665	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74682

mblk

SeqNo: **2666694** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **mb-74682** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0748	0.0650	0.1	0	74.8	57.1	135	0	0		

lcs

SeqNo: **2666693** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **lcs-74682** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3562	0.0650	0.5	0	71.2	60	140	0	0		
Aroclor 1260	0.4318	0.0650	0.5	0	86.4	60	140	0	0		
PCB, Total	0.788	0.0650	1	0	78.8	60	140	0	0		
Surr: Decachlorobiphenyl	0.0782	0.0650	0.1	0	78.2	57.1	135	0	0		

ms

SeqNo: **2666781** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **190726067-003c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3638	0.0650	0.5	0	72.8	51	150	0	0		
Aroclor 1260	0.3324	0.0650	0.5	0	66.5	51	150	0	0		
PCB, Total	0.6962	0.0650	1	0	69.6	51	150	0	0		
Surr: Decachlorobiphenyl	0.0568	0.0650	0.1	0	56.8	57.1	135	0	0		JS

msd

SeqNo: **2666782** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **190726067-003c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74682

msd	SeqNo: **2666782**	**PrepDate:7/26/2019**	TestNo: **SW8082A**	RunNo: **173686**
	Samp ID: **190726067-003c**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3848	0.0650	0.5	0	77	51	150	0.3638	5.61	30	
Aroclor 1260	0.3926	0.0650	0.5	0	78.5	51	150	0.3324	16.6	30	
PCB, Total	0.7774	0.0650	1	0	77.7	51	150	0.6962	11.0	0	
Surr: Decachlorobiphenyl	0.0586	0.0650	0.1	0	58.6	57.1	135	0	0	0	J

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173666

mblk

SeqNo: **2666330** TestNo: **SW8260C** RunNo: **173666**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.32	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.22	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.44	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.71	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.52	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.11	1.0									J
Surr: 1,2-Dichloroethane-d4	47.3	5.0	50	0	94.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.22	5.0	50	0	94.4	76.5	125	0	0		
Surr: Toluene-d8	47.56	5.0	50	0	95.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173666

lcs

SeqNo: **2666300** TestNo: **SW8260C** RunNo: **173666**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.52	1.0	10	0	95.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.77	1.0	10	0	77.7	72.3	118	0	0		
1,1,2-Trichloroethane	9.9	1.0	10	0	99	73.1	123	0	0		
1,1-Dichloroethane	10.89	1.0	10	0	109	73.2	127	0	0		
1,1-Dichloroethene	10.86	1.0	10	0	109	70.3	128	0	0		
1,2,3-Trichloropropane	4.28	1.0	5	0	85.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.89	1.0	10	0	88.9	71	124	0	0		
1,2-Dichloroethane	10.37	1.0	10	0	104	72.5	127	0	0		
1,3-Dichlorobenzene	9.13	1.0	10	0	91.3	72.2	121	0	0		
1,3-Dichloropropane	4.99	1.0	5	0	99.8	76	122	0	0		
1,4-Dichlorobenzene	8.73	1.0	10	0	87.3	71.7	127	0	0		
2-Butanone	6.95	5.0	10	0	69.5	65.1	132	0	0		
4-Methyl-2-pentanone	8.92	5.0	10	0	89.2	68.7	118	0	0		
Acetone	7.63	5.0	10	0	76.3	69.2	133	0	0		
Benzene	10	1.0	10	0	100	71.2	122	0	0		
Carbon disulfide	4.99	1.0	5	0	99.8	67.8	134	0	0		
Carbon tetrachloride	8.98	1.0	10	0	89.8	74.5	122	0	0		
Chlorobenzene	10.41	1.0	10	0	104	72.7	124	0	0		
Chloroethane	8.07	1.0	10	0	80.7	72.3	136	0	0		
Chloroform	10.03	1.0	10	0	100	71.6	133	0	0		
Dibromochloromethane	8.99	1.0	10	0	89.9	70.6	124	0	0		
Ethylbenzene	10.16	1.0	10	0	102	70.9	126	0	0		
Methylene chloride	11.7	1.0	10	0	117	66.3	130	0	0		
Tetrachloroethene	10.55	1.0	10	0	106	72.4	119	0	0		
Toluene	10.36	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	10.76	1.0	10	0	108	70.3	120	0	0		
Trichloroethene	10.67	1.0	10	0	107	73	127	0	0		
Vinyl chloride	6.84	1.0	10	0	68.4	65.2	134	0	0		
Xylenes, Total	29.39	1.0	30	0	98	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.35	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.1	5.0	50	0	94.2	76.5	125	0	0		
Surr: Toluene-d8	47.87	5.0	50	0	95.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173666

ms	SeqNo: **2666336**	TestNo: **SW8260C**	RunNo: **173666**
	Samp ID: **190725069-001b (072519-01-SW-U-**	Units: **µg/L**	Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.29	1.0	10	0	103	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.08	1.0	10	0	70.8	70.1	123	0	0		
1,1,2-Trichloroethane	9.84	1.0	10	0	98.4	72.1	119	0	0		
1,1-Dichloroethane	11	1.0	10	0	110	70.4	126	0	0		
1,1-Dichloroethene	10.98	1.0	10	0	110	70.2	125	0	0		
1,2,3-Trichloropropane	3.61	1.0	5	0	72.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.78	1.0	10	0	87.8	70.2	123	0	0		
1,2-Dichloroethane	10.13	1.0	10	0	101	73.5	126	0	0		
1,3-Dichlorobenzene	9.21	1.0	10	0	92.1	70.4	124	0	0		
1,3-Dichloropropane	5.11	1.0	5	0	102	64	125	0	0		
1,4-Dichlorobenzene	8.65	1.0	10	0	86.5	70.8	127	0	0		
2-Butanone	9.35	5.0	10	0	93.5	60.5	123	0	0		
4-Methyl-2-pentanone	7.79	5.0	10	0	77.9	52.8	133	0	0		
Acetone	5.2	5.0	10	0	52	56.3	135	0	0		S
Benzene	10.45	1.0	10	0	104	70.2	127	0	0		
Carbon disulfide	5.13	1.0	5	0	103	62.2	130	0	0		
Carbon tetrachloride	10.11	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	10.1	1.0	10	0	101	72.7	128	0	0		
Chloroethane	8.15	1.0	10	0	81.5	71.3	135	0	0		
Chloroform	9.91	1.0	10	0	99.1	70.2	125	0	0		
Dibromochloromethane	8.69	1.0	10	0	86.9	69.5	123	0	0		
Ethylbenzene	10.28	1.0	10	0	103	71.9	129	0	0		
Methylene chloride	11.37	1.0	10	0	114	65.3	123	0	0		
Tetrachloroethene	11.3	1.0	10	0	113	74.5	121	0	0		
Toluene	10.65	1.0	10	0	106	73	122	0	0		
trans-1,2-Dichloroethene	11	1.0	10	0	110	69.1	133	0	0		
Trichloroethene	10.89	1.0	10	0	109	71.1	126	0	0		
Vinyl chloride	6.81	1.0	10	0	68.1	65	137	0	0		
Xylenes, Total	30.74	1.0	30	0.48	101	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.45	5.0	50	0	98.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.84	5.0	50	0	95.7	76.5	125	0	0		
Surr: Toluene-d8	48.13	5.0	50	0	96.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190725069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173666

msd

SeqNo: **2666337** TestNo: **SW8260C** RunNo: **173666**
Samp ID: **190725069-001b (072519-01-SW-U-** Units: **µg/L** Analysis Date: **7/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.78	1.0	10	0	97.8	71.6	126	10.29	5.08	20.4	
1,1,2,2-Tetrachloroethane	7.5	1.0	10	0	75	70.1	123	7.08	5.76	18.6	
1,1,2-Trichloroethane	9.66	1.0	10	0	96.6	72.1	119	9.84	1.85	20	
1,1-Dichloroethane	10.93	1.0	10	0	109	70.4	126	11	0.638	19.2	
1,1-Dichloroethene	11.02	1.0	10	0	110	70.2	125	10.98	0.364	16.1	
1,2,3-Trichloropropane	4.04	1.0	5	0	80.8	53.7	101	3.61	11.2	20	
1,2-Dichlorobenzene	9.71	1.0	10	0	97.1	70.2	123	8.78	10.1	17.9	
1,2-Dichloroethane	9.56	1.0	10	0	95.6	73.5	126	10.13	5.79	15.6	
1,3-Dichlorobenzene	9.66	1.0	10	0	96.6	70.4	124	9.21	4.77	14.3	
1,3-Dichloropropane	4.58	1.0	5	0	91.6	64	125	5.11	10.9	0	
1,4-Dichlorobenzene	9.35	1.0	10	0	93.5	70.8	127	8.65	7.78	14.4	
2-Butanone	9.9	5.0	10	0	99	60.5	123	9.35	5.71	15	
4-Methyl-2-pentanone	8.39	5.0	10	0	83.9	52.8	133	7.79	7.42	11.9	
Acetone	5.84	5.0	10	0	58.4	56.3	135	5.2	11.6	10.6	Z
Benzene	10.33	1.0	10	0	103	70.2	127	10.45	1.15	18.4	
Carbon disulfide	5.28	1.0	5	0	106	62.2	130	5.13	2.88	13.1	
Carbon tetrachloride	9.8	1.0	10	0	98	56.4	137	10.11	3.11	20.3	
Chlorobenzene	9.94	1.0	10	0	99.4	72.7	128	10.1	1.60	19.6	
Chloroethane	7.73	1.0	10	0	77.3	71.3	135	8.15	5.29	27.8	
Chloroform	10.08	1.0	10	0	101	70.2	125	9.91	1.70	20.3	
Dibromochloromethane	8.55	1.0	10	0	85.5	69.5	123	8.69	1.62	18.8	
Ethylbenzene	10.46	1.0	10	0	105	71.9	129	10.28	1.74	16.3	
Methylene chloride	11.02	1.0	10	0	110	65.3	123	11.37	3.13	21.4	
Tetrachloroethene	10.91	1.0	10	0	109	74.5	121	11.3	3.51	20.9	
Toluene	10.49	1.0	10	0	105	73	122	10.65	1.51	19.4	
trans-1,2-Dichloroethene	11.07	1.0	10	0	111	69.1	133	11	0.634	16.1	
Trichloroethene	10.98	1.0	10	0	110	71.1	126	10.89	0.823	16.6	
Vinyl chloride	6.76	1.0	10	0	67.6	65	137	6.81	0.737	20.5	
Xylenes, Total	31.15	1.0	30	0.48	102	72	130	30.74	1.32	16.1	
Surr: 1,2-Dichloroethane-d4	48.42	5.0	50	0	96.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.57	5.0	50	0	93.1	76.5	125	0	0	0	
Surr: Toluene-d8	47.9	5.0	50	0	95.8	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190725069

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleile@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072519-01-SW-U-A-1	7/25/19	1155	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	072519-02-SW-A-A-1	7/25/19	1220	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	072519-03-SW-D-A-1	7/25/19	1250	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/25/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	K. Miller	7.25.19 4:15pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 6° C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy



Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 1907258

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post on portal	BASF Rensselaer NY	Patrick Geehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072519-03-SW-D-A-1	7/25/19	1250	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	072519-04-SW-B-B-1	7/25/19	1135	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	072519-TB01			A	TB				trip blank
006	072519-05-SW-B-A-1	7/25/19	1335	P	W		✓	1	TSS
				A					
				P					
				A					
				P					

1CAM 7/25

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/25/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	K Muller	7.25.19 4:15pm 1CAM 7/25

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	Y (✓) N	Y (✓) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190725069

REPORTING INFORMATION: Ryan McCarthy — Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation:

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy



TAT: **2**

DateDue: 7/29/2019

7/25/2019

☑ **RPT** MS/MSD/DUP Report — Completed by_____

☑ **EDD** EFW-EQUIS — Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal — Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190725069-001	072519-01-SW-U-A-1	Water	7/25/2019 11:55:00 AM	7/29/2019	E	C	B	D	D	A	F
190725069-002	072519-02-SW-A-A-1	Water	7/25/2019 12:20:00 PM	7/29/2019	E	C	B	D	D	A	F
190725069-003	072519-03-SW-D-A-1	Water	7/25/2019 12:50:00 PM	7/29/2019	E	C	B	D	D	A	F
190725069-004	072519-04-SW-B-B-1	Water	7/25/2019 11:35:00 AM	7/29/2019	E	C	B	D	D	A	F
190725069-005	072519-05-SW-B-A-1	Water	7/25/2019 1:35:00 PM	7/29/2019							A
190725069-006	071519-TB01	Trip Blank	7/25/2019	7/29/2019			A				

TMD 7/25/19

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 30, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190726067
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 10 samples on 7/26/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*30-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190726067		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 6:12:59 PM
Surr: Decachlorobiphenyl	**53.2**	57.1-135	S	%REC	1	7/26/2019 6:12:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**4.3**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 12:33:00 PM
Barium	**0.027**	0.010		mg/L	1	7/29/2019 12:33:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 12:33:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 12:33:00 PM
Copper	**ND**	0.005		mg/L	1	7/29/2019 12:33:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 12:33:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 12:33:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 12:33:00 PM
Zinc	**ND**	0.010		mg/L	1	7/29/2019 12:33:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:06:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/29/2019 2:06:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 2:06:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:06:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:06:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:06:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:06:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:06:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:06:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 12:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	7/30/2019 12:00:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 12:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 12:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 12:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	7/30/2019 12:00:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/30/2019 12:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 12:00:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	7/30/2019 12:00:00 PM
Surr: 4-Bromofluorobenzene	**91.5**	76.5-125		%REC	1	7/30/2019 12:00:00 PM
Surr: Toluene-d8	**92.9**	80.4-121		%REC	1	7/30/2019 12:00:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**16.4**	1.1		mg/L	1	7/29/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-02-SW-A-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 6:39:38 PM
Surr: Decachlorobiphenyl	**60.8**	57.1-135		%REC	1	7/26/2019 6:39:38 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**22.9**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 12:41:00 PM
Barium	**0.028**	0.010		mg/L	1	7/29/2019 12:41:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 12:41:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 12:41:00 PM
Copper	**ND**	0.005		mg/L	1	7/29/2019 12:41:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 12:41:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 12:41:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 12:41:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/29/2019 12:41:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:12:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/29/2019 2:12:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 2:12:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:12:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:12:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-02-SW-A-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:12:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:12:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:12:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 12:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	7/30/2019 12:21:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 12:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	7/30/2019 12:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 12:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 12:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	7/30/2019 12:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/30/2019 12:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 12:21:00 PM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	7/30/2019 12:21:00 PM
Surr: 4-Bromofluorobenzene	**91.1**	76.5-125		%REC	1	7/30/2019 12:21:00 PM
Surr: Toluene-d8	**92.9**	80.4-121		%REC	1	7/30/2019 12:21:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-02-SW-A-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**26.2**	1.1		mg/L	1	7/29/2019

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-03-SW-U-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 7:19:46 PM
Surr: Decachlorobiphenyl	**65.4**	57.1-135		%REC	1	7/26/2019 7:19:46 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**1.9**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 12:51:00 PM
Barium	**0.027**	0.010		mg/L	1	7/29/2019 12:51:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 12:51:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 12:51:00 PM
Copper	**ND**	0.005		mg/L	1	7/29/2019 12:51:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 12:51:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 12:51:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 12:51:00 PM
Zinc	**ND**	0.010		mg/L	1	7/29/2019 12:51:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:16:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	7/29/2019 2:16:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 2:16:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:16:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:16:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:16:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-03-SW-U-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 2:16:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:16:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 2:16:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Vinyl chloride	**ND**	1.0	SN	µg/L	1	7/30/2019 12:43:00 PM
Chloroethane	**ND**	1.0	N	µg/L	1	7/30/2019 12:43:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	7/30/2019 12:43:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 12:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 12:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 12:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	7/30/2019 12:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 12:43:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/30/2019 12:43:00 PM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	7/30/2019 12:43:00 PM
Surr: 4-Bromofluorobenzene	**87.3**	76.5-125		%REC	1	7/30/2019 12:43:00 PM
Surr: Toluene-d8	**95.4**	80.4-121		%REC	1	7/30/2019 12:43:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-03-SW-U-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**5.3**	1.1		mg/L	1	7/29/2019

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-04-SW-B-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 7:33:17 PM
Surr: Decachlorobiphenyl	**82.2**	57.1-135		%REC	1	7/26/2019 7:33:17 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**5.0**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 1:22:00 PM
Barium	**0.027**	0.010		mg/L	1	7/29/2019 1:22:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 1:22:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 1:22:00 PM
Copper	**ND**	0.005		mg/L	1	7/29/2019 1:22:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 1:22:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 1:22:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 1:22:00 PM
Zinc	**ND**	0.010		mg/L	1	7/29/2019 1:22:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:26:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	7/29/2019 3:26:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 3:26:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:26:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:26:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:26:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-04-SW-B-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:26:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:26:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:26:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 1:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	7/30/2019 1:04:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 1:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 1:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 1:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	7/30/2019 1:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/30/2019 1:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:04:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/30/2019 1:04:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	7/30/2019 1:04:00 PM
Surr: 4-Bromofluorobenzene	**89.9**	76.5-125		%REC	1	7/30/2019 1:04:00 PM
Surr: Toluene-d8	**91.4**	80.4-121		%REC	1	7/30/2019 1:04:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-04-SW-B-A-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**15.9**	1.0		mg/L	1	7/29/2019

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-05-SW-B-B-1
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	7/29/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-2
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 7:46:39 PM
Surr: Decachlorobiphenyl	**65.6**	57.1-135		%REC	1	7/26/2019 7:46:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**4.5**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 1:49:00 PM
Barium	**0.027**	0.010		mg/L	1	7/29/2019 1:49:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 1:49:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 1:49:00 PM
Copper	**ND**	0.005		mg/L	1	7/29/2019 1:49:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 1:49:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 1:49:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 1:49:00 PM
Zinc	**ND**	0.010		mg/L	1	7/29/2019 1:49:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:33:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	7/29/2019 3:33:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 3:33:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:33:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	7/29/2019 3:33:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:33:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-2
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:33:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:33:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:33:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 1:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	7/30/2019 1:26:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 1:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 1:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 1:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	7/30/2019 1:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	7/30/2019 1:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 1:26:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	7/30/2019 1:26:00 PM
Surr: 4-Bromofluorobenzene	**85.1**	76.5-125		%REC	1	7/30/2019 1:26:00 PM
Surr: Toluene-d8	**91.4**	80.4-121		%REC	1	7/30/2019 1:26:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-2
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**13.8**	1.1		mg/L	1	7/29/2019

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-3
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-007
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/26/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
PCB, Total	**ND**	0.065		µg/L	1	7/26/2019 7:59:58 PM
Surr: Decachlorobiphenyl	**73.8**	57.1-135		%REC	1	7/26/2019 7:59:58 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**ND**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	7/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/29/2019 1:53:00 PM
Barium	**ND**	0.010		mg/L	1	7/29/2019 1:53:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/29/2019 1:53:00 PM
Chromium	**ND**	0.005		mg/L	1	7/29/2019 1:53:00 PM
Copper	**0.008**	0.005		mg/L	1	7/29/2019 1:53:00 PM
Lead	**ND**	0.005		mg/L	1	7/29/2019 1:53:00 PM
Selenium	**ND**	0.005		mg/L	1	7/29/2019 1:53:00 PM
Silver	**ND**	0.010		mg/L	1	7/29/2019 1:53:00 PM
Zinc	**ND**	0.010		mg/L	1	7/29/2019 1:53:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:39:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:39:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/29/2019 3:39:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:39:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:39:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:39:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-3
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-007
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/29/2019 3:39:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:39:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/29/2019 3:39:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 1:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Methylene chloride	**0.7**	1.0	J	µg/L	1	7/30/2019 1:48:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 1:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 1:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 1:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	7/30/2019 1:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 1:48:00 PM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	7/30/2019 1:48:00 PM
Surr: 4-Bromofluorobenzene	**91.1**	76.5-125		%REC	1	7/30/2019 1:48:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	7/30/2019 1:48:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-01-SW-D-A-3
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-007
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/29/2019)						
TSS (Residue, Non-Filterable)	**1.3**	1.0		mg/L	1	7/29/2019

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-TB01
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-008
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 2:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Methylene chloride	**3.0**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Acetone	**6.0**	5.0		µg/L	1	7/30/2019 2:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Chloroform	**0.5**	1.0	J	µg/L	1	7/30/2019 2:09:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	7/30/2019 2:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 2:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 2:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 2:09:00 PM
Surr: 1,2-Dichloroethane-d4	**95.0**	80.9-122		%REC	1	7/30/2019 2:09:00 PM
Surr: 4-Bromofluorobenzene	**94.5**	76.5-125		%REC	1	7/30/2019 2:09:00 PM
Surr: Toluene-d8	**93.9**	80.4-121		%REC	1	7/30/2019 2:09:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-TB02
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-009
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 2:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Methylene chloride	**3.0**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Acetone	**6.1**	5.0		µg/L	1	7/30/2019 2:31:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Chloroform	**0.5**	1.0	J	µg/L	1	7/30/2019 2:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 2:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 2:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 2:31:00 PM
Surr: 1,2-Dichloroethane-d4	**99.9**	80.9-122		%REC	1	7/30/2019 2:31:00 PM
Surr: 4-Bromofluorobenzene	**90.8**	76.5-125		%REC	1	7/30/2019 2:31:00 PM
Surr: Toluene-d8	**93.3**	80.4-121		%REC	1	7/30/2019 2:31:00 PM

Adirondack Environmental Services, Inc

Date: *30-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072619-TB03
Work Order:	**190726067**	**Collection Date:**	7/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190726067-010
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 2:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Methylene chloride	**2.9**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Acetone	**7.8**	5.0		µg/L	1	7/30/2019 2:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Chloroform	**0.4**	1.0	J	µg/L	1	7/30/2019 2:52:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 2:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 2:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 2:52:00 PM
Surr: 1,2-Dichloroethane-d4	**96.1**	80.9-122		%REC	1	7/30/2019 2:52:00 PM
Surr: 4-Bromofluorobenzene	**86.9**	76.5-125		%REC	1	7/30/2019 2:52:00 PM
Surr: Toluene-d8	**92.5**	80.4-121		%REC	1	7/30/2019 2:52:00 PM

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74682

mblk

SeqNo: **2666694** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **mb-74682** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0748	0.0650	0.1	0	74.8	57.1	135	0	0		

lcs

SeqNo: **2666693** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **lcs-74682** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3562	0.0650	0.5	0	71.2	60	140	0	0		
Aroclor 1260	0.4318	0.0650	0.5	0	86.4	60	140	0	0		
PCB, Total	0.788	0.0650	1	0	78.8	60	140	0	0		
Surr: Decachlorobiphenyl	0.0782	0.0650	0.1	0	78.2	57.1	135	0	0		

lcsd

SeqNo: **2666699** PrepDate:**7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **lcsd-74682** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3888	0.0650	0.5	0	77.8	60	140	0.3562	8.75	30	
Aroclor 1260	0.48	0.0650	0.5	0	96	60	140	0.4318	10.6	30	
PCB, Total	0.8688	0.0650	1	0	86.9	60	140	0.788	9.75	0	
Surr: Decachlorobiphenyl	0.0832	0.0650	0.1	0	83.2	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 74682

ms

SeqNo: **2666781** **PrepDate:7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **190726067-003c (072619-03-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3638	0.0650	0.5	0	72.8	51	150	0	0		
Aroclor 1260	0.3324	0.0650	0.5	0	66.5	51	150	0	0		
PCB, Total	0.6962	0.0650	1	0	69.6	51	150	0	0		
Surr: Decachlorobiphenyl	0.0568	0.0650	0.1	0	56.8	57.1	135	0	0		JS

msd

SeqNo: **2666782** **PrepDate:7/26/2019** TestNo: **SW8082A** RunNo: **173686**
Samp ID: **190726067-003c (072619-03-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **7/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.3848	0.0650	0.5	0	77	51	150	0.3638	5.61	30	
Aroclor 1260	0.3926	0.0650	0.5	0	78.5	51	150	0.3324	16.6	30	
PCB, Total	0.7774	0.0650	1	0	77.7	51	150	0.6962	11.0	0	
Surr: Decachlorobiphenyl	0.0586	0.0650	0.1	0	58.6	57.1	135	0	0	0	J

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74689

MBLK

SeqNo: **2667959** PrepDate:**7/29/2019** TestNo: **E200.7F** RunNo: **173743**
Samp ID: **MB-74689** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2667960** PrepDate:**7/29/2019** TestNo: **E200.7F** RunNo: **173743**
Samp ID: **LCS-74689** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.996	0.00500	2	0	99.8	85	115	0	0		
Barium, Dissolved	2.029	0.0100	2	0	101	89	112	0	0		
Cadmium, Dissolved	2.161	0.00500	2	0	108	85.3	112	0	0		
Chromium, Dissolved	1.977	0.00500	2	0	98.8	89.1	109	0	0		
Copper, Dissolved	2.062	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.162	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.015	0.00500	2	0	101	85	115	0	0		
Silver, Dissolved	0.529	0.0100	0.5	0	106	85	115	0	0		
Zinc, Dissolved	2.095	0.0100	2	0	105	85	115	0	0		

MS

SeqNo: **2667965** PrepDate:**7/29/2019** TestNo: **E200.7F** RunNo: **173743**
Samp ID: **190726067-003 (072619-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03876	0.00500	0.04	0	96.9	75	123	0	0		
Barium, Dissolved	2.044	0.0100	2	0.02438	101	75	124	0	0		
Cadmium, Dissolved	0.05202	0.00500	0.05	0	104	75	125	0	0		
Chromium, Dissolved	0.2001	0.00500	0.2	0	100	77.2	117	0	0		
Copper, Dissolved	0.2654	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74689

MS

SeqNo: **2667965** PrepDate:**7/29/2019** TestNo: **E200.7F** RunNo: **173743**
Samp ID: **190726067-003 (072619-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.01932	0.00500	0.02	0	96.6	75	125	0	0		
Selenium, Dissolved	0.01024	0.00500	0.01	0	102	75	125	0	0		
Silver, Dissolved	0.05164	0.0100	0.05	0	103	75	125	0	0		
Zinc, Dissolved	0.5282	0.0100	0.5	0	106	75	121	0	0		

DUP

SeqNo: **2667964** PrepDate:**7/29/2019** TestNo: **E200.7F** RunNo: **173743**
Samp ID: **190726067-003** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.004919	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02506	0.0100	0	0	0	0	0	0.02438	2.73	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.003261	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0003131	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002357	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74690

MS

SeqNo: **2668338** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **190726038-001** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03648	0.00100	0.04	0	91.2	70	130	0	0		
Barium	1.717	0.00200	2	0.1418	78.8	70	130	0	0		
Cadmium	0.05159	0.00100	0.05	0	103	70	130	0	0		
Chromium	0.1593	0.00500	0.2	0.002345	78.5	70	130	0	0		
Copper	0.2762	0.00500	0.25	0.03364	97	70	130	0	0		
Lead	0.02557	0.00100	0.02	0.003671	110	70	130	0	0		
Selenium	0.007477	0.00100	0.01	0.0004146	70.6	70	130	0	0		
Silver	0.03682	0.00500	0.05	0	73.6	70	130	0	0		
Zinc	0.6836	0.0100	0.5	0.1644	104	70	130	0	0		

DUP

SeqNo: **2668337** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **190726038-001** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00008511	0.00100	0	0	0	0	0	0	0	20	
Barium	0.1413	0.00200	0	0	0	0	0	0.1418	0.354	20	
Cadmium	0.0001201	0.00100	0	0	0	0	0	0	0	20	
Chromium	0.002766	0.00500	0	0	0	0	0	0.002345	0	20	
Copper	0.03689	0.00500	0	0	0	0	0	0.03364	9.22	20	
Lead	0.003651	0.00100	0	0	0	0	0	0.003671	0.555	20	
Selenium	0.0004138	0.00100	0	0	0	0	0	0.0004146	0	20	
Silver	-0.00003624	0.00500	0	0	0	0	0	0	0	20	
Zinc	0.177	0.0100	0	0	0	0	0	0.1644	7.43	20	

MBLK

SeqNo: **2667947** PrepDate:**7/29/2019** TestNo: **E200.7** RunNo: **173743**
Samp ID: **MB-74690** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74690

MBLK

SeqNo: **2667947** PrepDate:**7/29/2019** TestNo: **E200.7** RunNo: **173743**
Samp ID: **MB-74690** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2667948** PrepDate:**7/29/2019** TestNo: **E200.7** RunNo: **173743**
Samp ID: **LCS-74690** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.023	0.00500	2	0	101	89.1	111	0	0		
Barium	2.048	0.0100	2	0	102	85	115	0	0		
Cadmium	2.153	0.00500	2	0	108	85	115	0	0		
Chromium	2.008	0.00500	2	0	100	89.7	109	0	0		
Copper	2.073	0.00500	2	0	104	85	115	0	0		
Lead	2.183	0.00500	2	0	109	88.1	112	0	0		
Selenium	2.042	0.00500	2	0	102	87.5	112	0	0		
Silver	0.5347	0.0100	0.5	0	107	85.2	115	0	0		
Zinc	2.114	0.0100	2	0	106	88.3	113	0	0		

MS

SeqNo: **2667953** PrepDate:**7/29/2019** TestNo: **E200.7** RunNo: **173743**
Samp ID: **190726067-003 (072619-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04	0.00500	0.04	0	100	75	125	0	0		
Barium	2.05	0.0100	2	0.02695	101	75	119	0	0		
Cadmium	0.05133	0.00500	0.05	0	103	75	118	0	0		
Chromium	0.1949	0.00500	0.2	0	97.4	75	124	0	0		
Copper	0.2677	0.00500	0.25	0	107	75	125	0	0		
Lead	0.01878	0.00500	0.02	0	93.9	75	125	0	0		
Selenium	0.008731	0.00500	0.01	0	87.3	75	125	0	0		
Silver	0.05252	0.0100	0.05	0	105	75	125	0	0		
Zinc	0.5275	0.0100	0.5	0	105	76.9	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74690

DUP

SeqNo: **2667952** **PrepDate:7/29/2019** TestNo: **E200.7** RunNo: **173743**
Samp ID: **190726067-003** **PrepRef:** Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.004323	0.00500	0	0	0	0	0	0	0	20	
Barium	0.0265	0.0100	0	0	0	0	0	0.02695	1.70	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.002509	0.00500	0	0	0	0	0	0	0	20	
Lead	0.0006432	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.006831	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002571	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74699

LCS

SeqNo: **2668249** PrepDate:**7/29/2019** TestNo: **SM2540D** RunNo: **173758**
Samp ID: **LCS-74699** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	436	40.0	490	0	89	86.5	114	0	0		

DUP

SeqNo: **2668258** PrepDate:**7/29/2019** TestNo: **SM2540D** RunNo: **173758**
Samp ID: **190724052-001** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1553	10.0	0	0	0	0	0	1415	9.30	10	

DUP

SeqNo: **2668267** PrepDate:**7/29/2019** TestNo: **SM2540D** RunNo: **173758**
Samp ID: **190726067-003F** PrepRef: Units: **mg/L** Analysis Date: **7/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	5.579	1.10	0	0	0	0	0	5.263	5.83	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74705

MBLK

SeqNo: **2668235** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **MB-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2668236** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **LCS-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.26	0.500	10	0	92.6	77	123	0	0		

MS

SeqNo: **2668244** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190726067-003 (072619-03-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12	0.500	12.5	1.92	80.6	71	125	0	0		

MSD

SeqNo: **2668245** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190726067-003 (072619-03-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.7	0.500	12.5	1.92	86.2	71	125	12	5.67	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

mblk

SeqNo: **2668356** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.4	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.21	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.41	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.91	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.6	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.21	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.33	5.0	50	0	92.7	76.5	125	0	0		
Surr: Toluene-d8	46.4	5.0	50	0	92.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcs

SeqNo: **2668354** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.63	1.0	10	0	106	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.26	1.0	10	0	82.6	72.3	118	0	0		
1,1,2-Trichloroethane	10.4	1.0	10	0	104	73.1	123	0	0		
1,1-Dichloroethane	12.3	1.0	10	0	123	73.2	127	0	0		
1,1-Dichloroethene	10.25	1.0	10	0	103	70.3	128	0	0		
1,2,3-Trichloropropane	4.35	1.0	5	0	87	68.4	115	0	0		
1,2-Dichlorobenzene	9.85	1.0	10	0	98.5	71	124	0	0		
1,2-Dichloroethane	11.27	1.0	10	0	113	72.5	127	0	0		
1,3-Dichlorobenzene	10.09	1.0	10	0	101	72.2	121	0	0		
1,3-Dichloropropane	5.24	1.0	5	0	105	76	122	0	0		
1,4-Dichlorobenzene	9.8	1.0	10	0	98	71.7	127	0	0		
2-Butanone	8.83	5.0	10	0	88.3	65.1	132	0	0		
4-Methyl-2-pentanone	8.61	5.0	10	0	86.1	68.7	118	0	0		
Acetone	10.13	5.0	10	0	101	69.2	133	0	0		
Benzene	10.7	1.0	10	0	107	71.2	122	0	0		
Carbon disulfide	5.26	1.0	5	0	105	67.8	134	0	0		
Carbon tetrachloride	10.09	1.0	10	0	101	74.5	122	0	0		
Chlorobenzene	11.28	1.0	10	0	113	72.7	124	0	0		
Chloroethane	7.29	1.0	10	0	72.9	72.3	136	0	0		
Chloroform	11.99	1.0	10	0	120	71.6	133	0	0		
Dibromochloromethane	9.47	1.0	10	0	94.7	70.6	124	0	0		
Ethylbenzene	10.57	1.0	10	0	106	70.9	126	0	0		
Methylene chloride	12.98	1.0	10	0	130	66.3	130	0	0		
Tetrachloroethene	11.8	1.0	10	0	118	72.4	119	0	0		
Toluene	10.79	1.0	10	0	108	71.8	116	0	0		
trans-1,2-Dichloroethene	12.46	1.0	10	0	125	70.3	120	0	0		S
Trichloroethene	11.08	1.0	10	0	111	73	127	0	0		
Vinyl chloride	6.33	1.0	10	0	63.3	65.2	134	0	0		S
Xylenes, Total	31.44	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.36	5.0	50	0	98.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.57	5.0	50	0	93.1	76.5	125	0	0		
Surr: Toluene-d8	46.53	5.0	50	0	93.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcsd

SeqNo: **2668355** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.01	1.0	10	0	90.1	72.3	121	10.63	16.5	25	
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	72.3	118	8.26	2.39	25	
1,1,2-Trichloroethane	9.58	1.0	10	0	95.8	73.1	123	10.4	8.21	25	
1,1-Dichloroethane	10.43	1.0	10	0	104	73.2	127	12.3	16.5	25	
1,1-Dichloroethene	10.28	1.0	10	0	103	70.3	128	10.25	0.292	25	
1,2,3-Trichloropropane	4.28	1.0	5	0	85.6	68.4	115	4.35	1.62	25	
1,2-Dichlorobenzene	9.73	1.0	10	0	97.3	71	124	9.85	1.23	25	
1,2-Dichloroethane	9.68	1.0	10	0	96.8	72.5	127	11.27	15.2	25	
1,3-Dichlorobenzene	9.7	1.0	10	0	97	72.2	121	10.09	3.94	25	
1,3-Dichloropropane	4.59	1.0	5	0	91.8	76	122	5.24	13.2	0	
1,4-Dichlorobenzene	9.12	1.0	10	0	91.2	71.7	127	9.8	7.19	25	
2-Butanone	10.84	5.0	10	0	108	65.1	132	8.83	20.4	25	
4-Methyl-2-pentanone	9.22	5.0	10	0	92.2	68.7	118	8.61	6.84	25	
Acetone	10.15	5.0	10	0	102	69.2	133	10.13	0.197	25	
Benzene	9.42	1.0	10	0	94.2	71.2	122	10.7	12.7	25	
Carbon disulfide	4.8	1.0	5	0	96	67.8	134	5.26	9.15	25	
Carbon tetrachloride	8.82	1.0	10	0	88.2	74.5	122	10.09	13.4	25	
Chlorobenzene	10.54	1.0	10	0	105	72.7	124	11.28	6.78	25	
Chloroethane	7.24	1.0	10	0	72.4	72.3	136	7.29	0.688	25	
Chloroform	10.5	1.0	10	0	105	71.6	133	11.99	13.3	25	
Dibromochloromethane	8.68	1.0	10	0	86.8	70.6	124	9.47	8.71	25	
Ethylbenzene	9.89	1.0	10	0	98.9	70.9	126	10.57	6.65	25	
Methylene chloride	11.08	1.0	10	0	111	66.3	130	12.98	15.8	25	
Tetrachloroethene	10.49	1.0	10	0	105	72.4	119	11.8	11.8	25	
Toluene	10.01	1.0	10	0	100	71.8	116	10.79	7.50	25	
trans-1,2-Dichloroethene	10.49	1.0	10	0	105	70.3	120	12.46	17.2	25	
Trichloroethene	9.86	1.0	10	0	98.6	73	127	11.08	11.7	25	
Vinyl chloride	5.9	1.0	10	0	59	65.2	134	6.33	7.03	25	S
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	48.3	5.0	50	0	96.6	76.5	125	0	0	25	
Surr: Toluene-d8	47.32	5.0	50	0	94.6	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

ms	SeqNo: **2668366**	TestNo: **SW8260C**	RunNo: **173765**
	Samp ID: **190726067-003b (072619-03-SW-U-**	Units: **µg/L**	Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.52	1.0	10	0	95.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.69	1.0	10	0	76.9	70.1	123	0	0		
1,1,2-Trichloroethane	9.76	1.0	10	0	97.6	72.1	119	0	0		
1,1-Dichloroethane	11.07	1.0	10	0	111	70.4	126	0	0		
1,1-Dichloroethene	10.76	1.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	0	0		
1,2-Dichlorobenzene	8.96	1.0	10	0	89.6	70.2	123	0	0		
1,2-Dichloroethane	10.11	1.0	10	0	101	73.5	126	0	0		
1,3-Dichlorobenzene	8.75	1.0	10	0	87.5	70.4	124	0	0		
1,3-Dichloropropane	4.54	1.0	5	0	90.8	64	125	0	0		
1,4-Dichlorobenzene	8.6	1.0	10	0	86	70.8	127	0	0		
2-Butanone	8.14	5.0	10	0	81.4	60.5	123	0	0		
4-Methyl-2-pentanone	9.41	5.0	10	0	94.1	52.8	133	0	0		
Acetone	9.97	5.0	10	0	99.7	56.3	135	0	0		
Benzene	9.93	1.0	10	0	99.3	70.2	127	0	0		
Carbon disulfide	5.09	1.0	5	0	102	62.2	130	0	0		
Carbon tetrachloride	9.68	1.0	10	0	96.8	56.4	137	0	0		
Chlorobenzene	9.59	1.0	10	0	95.9	72.7	128	0	0		
Chloroethane	6.28	1.0	10	0	62.8	71.3	135	0	0		S
Chloroform	9.78	1.0	10	0	97.8	70.2	125	0	0		
Dibromochloromethane	8.8	1.0	10	0	88	69.5	123	0	0		
Ethylbenzene	9.23	1.0	10	0	92.3	71.9	129	0	0		
Methylene chloride	11.86	1.0	10	0.33	115	65.3	123	0	0		
Tetrachloroethene	10.7	1.0	10	0	107	74.5	121	0	0		
Toluene	10.31	1.0	10	0.25	101	73	122	0	0		
trans-1,2-Dichloroethene	11.31	1.0	10	0	113	69.1	133	0	0		
Trichloroethene	10.05	1.0	10	0	100	71.1	126	0	0		
Vinyl chloride	5.37	1.0	10	0	53.7	65	137	0	0		S
Xylenes, Total	26.76	1.0	30	0.36	88	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.97	5.0	50	0	89.9	76.5	125	0	0		
Surr: Toluene-d8	46.77	5.0	50	0	93.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190726067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

msd

SeqNo: **2668367** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **190726067-003b (072619-03-SW-U-** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.3	1.0	10	0	93	71.6	126	9.52	2.34	20.4	
1,1,2,2-Tetrachloroethane	8.93	1.0	10	0	89.3	70.1	123	7.69	14.9	18.6	
1,1,2-Trichloroethane	10.57	1.0	10	0	106	72.1	119	9.76	7.97	20	
1,1-Dichloroethane	11.32	1.0	10	0	113	70.4	126	11.07	2.23	19.2	
1,1-Dichloroethene	11.65	1.0	10	0	116	70.2	125	10.76	7.94	16.1	
1,2,3-Trichloropropane	4.53	1.0	5	0	90.6	53.7	101	3.8	17.5	20	
1,2-Dichlorobenzene	9.56	1.0	10	0	95.6	70.2	123	8.96	6.48	17.9	
1,2-Dichloroethane	10.24	1.0	10	0	102	73.5	126	10.11	1.28	15.6	
1,3-Dichlorobenzene	9.6	1.0	10	0	96	70.4	124	8.75	9.26	14.3	
1,3-Dichloropropane	5.17	1.0	5	0	103	64	125	4.54	13.0	0	
1,4-Dichlorobenzene	9.34	1.0	10	0	93.4	70.8	127	8.6	8.25	14.4	
2-Butanone	8.66	5.0	10	0	86.6	60.5	123	8.14	6.19	15	
4-Methyl-2-pentanone	10.07	5.0	10	0	101	52.8	133	9.41	6.78	11.9	
Acetone	11.43	5.0	10	0	114	56.3	135	9.97	13.6	10.6	Z
Benzene	10.01	1.0	10	0	100	70.2	127	9.93	0.802	18.4	
Carbon disulfide	5.44	1.0	5	0	109	62.2	130	5.09	6.65	13.1	
Carbon tetrachloride	9.62	1.0	10	0	96.2	56.4	137	9.68	0.622	20.3	
Chlorobenzene	10.19	1.0	10	0	102	72.7	128	9.59	6.07	19.6	
Chloroethane	6	1.0	10	0	60	71.3	135	6.28	4.56	27.8	S
Chloroform	9.95	1.0	10	0	99.5	70.2	125	9.78	1.72	20.3	
Dibromochloromethane	8.66	1.0	10	0	86.6	69.5	123	8.8	1.60	18.8	
Ethylbenzene	10.29	1.0	10	0	103	71.9	129	9.23	10.9	16.3	
Methylene chloride	11.52	1.0	10	0.33	112	65.3	123	11.86	2.91	21.4	
Tetrachloroethene	11.11	1.0	10	0	111	74.5	121	10.7	3.76	20.9	
Toluene	10.15	1.0	10	0.25	99	73	122	10.31	1.56	19.4	
trans-1,2-Dichloroethene	11.32	1.0	10	0	113	69.1	133	11.31	0.0884	16.1	
Trichloroethene	10.51	1.0	10	0	105	71.1	126	10.05	4.47	16.6	
Vinyl chloride	5.42	1.0	10	0	54.2	65	137	5.37	0.927	20.5	S
Xylenes, Total	28.92	1.0	30	0.36	95.2	72	130	26.76	7.76	16.1	
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.95	5.0	50	0	91.9	76.5	125	0	0	0	
Surr: Toluene-d8	46.58	5.0	50	0	93.2	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 190726067

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Geehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072619-01-SW-D-A-1	7/26/19	0905	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	072619-02-SW-A-A-1	7/26/19	0945	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	072619-03-SW-U-A-1	7/26/19	1020	A	W		✓	3	metals (filtered)
				P				6	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

072619-03-SW-U-A-1 MS/MSD

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/26/19 4:30pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/26/19 4:42pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental S

190726067

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 19072606 7

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072619-03-SW-U-A-1	7/26/19	1020	A	W		✓	6	PCBs
				P				3	metals/hardness
				A				9	mercury
				P				3	TSS
004	072619-04-SW-B-A-1	7/26/19	0840	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	072619-05-SW-B-B-1	7/26/19	0920	A	W		✓	1	TSS
006	072619-01-SW-D-A-2	7/26/19	0926	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

072619-03-SW-U-A-1

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/26/19 4:01 PM
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/26/19 4:47

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190726067

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	072619-01-SW-D-A-2	7/26/19	0920	A	W		✓	1	metals/hardness
				P				3	mercury
				A/P				1	TSS
007	072619-01-SW-D-A-3	7/26/19	1230	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
008	072619-TB01	7/26/19		A/P	TB				trip blank
009	072619-TB02	7/26/19		A/P	TB				trip blank
010	072619-TB03	7/26/19		A/P	TB				trip blank
				A/P					
				A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/26/19 4:01pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/26/19 4:42 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190726067

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190726067

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project# :
ClientReferenceNo: 60323713

DateDue: 7/30/2019

QClevel: STD+

☐ Hard Copy

7/29/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ ***EDD*** EFW-EQUIS Completed by_____
Must Go in 48 Hour TAT

☑ ***EDD*** Portal Completed by_____
PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS W**	**P_SCAN_W_DI**	**TSS_W**
190726067-001	072619-01-SW-D-A-1	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-002	072619-02-SW-A-A-1	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-003	072619-03-SW-U-A-1	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-004	072619-04-SW-B-A-1	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-005	072619-05-SW-B-B-1	Water	7/26/2019	7/30/2019							A
190726067-006	072619-01-SW-D-A-2	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-007	072619-01-SW-D-A-3	Water	7/26/2019	7/30/2019	E	C	B	D	D	A	F
190726067-008	072619-TB01	Trip Blank	7/26/2019	7/30/2019			A				
190726067-009	072619-TB02	Trip Blank	7/26/2019	7/30/2019			A				
190726067-010	072619-TB03	Trip Blank	7/26/2019	7/30/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

July 31, 2019

Mike Gardner
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190729049
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Mike Gardner:

Adirondack Environmental Services, Inc received 6 samples on 7/29/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *31-Jul-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190729049	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-01-SW-U-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1221	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1232	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1242	**0.169**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1248	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1254	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1260	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1262	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Aroclor 1268	**ND**	0.066		µg/L	1	7/30/2019 2:05:57 PM
PCB, Total	**0.169**	0.066		µg/L	1	7/30/2019 2:05:57 PM
Surr: Decachlorobiphenyl	**79.2**	57.1-135		%REC	1	7/30/2019 2:05:57 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**7.9**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	7/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/30/2019 2:30:00 PM
Barium	**0.025**	0.010		mg/L	1	7/30/2019 2:30:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/30/2019 2:30:00 PM
Chromium	**ND**	0.005		mg/L	1	7/30/2019 2:30:00 PM
Copper	**0.005**	0.005		mg/L	1	7/30/2019 2:30:00 PM
Lead	**ND**	0.005		mg/L	1	7/30/2019 2:30:00 PM
Selenium	**ND**	0.005		mg/L	1	7/30/2019 2:30:00 PM
Silver	**ND**	0.010		mg/L	1	7/30/2019 2:30:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/30/2019 2:30:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	7/30/2019 4:31:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/30/2019 4:31:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/30/2019 4:31:00 PM
Chromium, Dissolved	**0.005**	0.005		mg/L	1	7/30/2019 4:31:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	7/30/2019 4:31:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:31:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-01-SW-U-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/30/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:31:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 4:31:00 PM
Zinc, Dissolved	**0.006**	0.010	J	mg/L	1	7/30/2019 4:31:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 4:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	7/30/2019 4:41:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 4:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	7/30/2019 4:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 4:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 4:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 4:41:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/30/2019 4:41:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	7/30/2019 4:41:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/30/2019 4:41:00 PM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	7/30/2019 4:41:00 PM
Surr: 4-Bromofluorobenzene	**94.0**	76.5-125		%REC	1	7/30/2019 4:41:00 PM
Surr: Toluene-d8	**92.5**	80.4-121		%REC	1	7/30/2019 4:41:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-01-SW-U-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**13.5**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-02-SW-A-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1242	**0.275**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 2:19:17 PM
PCB, Total	**0.275**	0.065		µg/L	1	7/30/2019 2:19:17 PM
Surr: Decachlorobiphenyl	**104**	57.1-135		%REC	1	7/30/2019 2:19:17 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**7.3**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	7/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/30/2019 2:52:00 PM
Barium	**0.025**	0.010		mg/L	1	7/30/2019 2:52:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/30/2019 2:52:00 PM
Chromium	**ND**	0.005		mg/L	1	7/30/2019 2:52:00 PM
Copper	**0.008**	0.005		mg/L	1	7/30/2019 2:52:00 PM
Lead	**0.002**	0.005	J	mg/L	1	7/30/2019 2:52:00 PM
Selenium	**ND**	0.005		mg/L	1	7/30/2019 2:52:00 PM
Silver	**ND**	0.010		mg/L	1	7/30/2019 2:52:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/30/2019 2:52:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic, Dissolved	**0.004**	0.005	J	mg/L	1	7/30/2019 4:54:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/30/2019 4:54:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/30/2019 4:54:00 PM
Chromium, Dissolved	**0.008**	0.005		mg/L	1	7/30/2019 4:54:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:54:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:54:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-02-SW-A-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/30/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:54:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 4:54:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 4:54:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 5:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	7/30/2019 5:10:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 5:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 5:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 5:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:10:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/30/2019 5:10:00 PM
Surr: 1,2-Dichloroethane-d4	**99.4**	80.9-122		%REC	1	7/30/2019 5:10:00 PM
Surr: 4-Bromofluorobenzene	**87.2**	76.5-125		%REC	1	7/30/2019 5:10:00 PM
Surr: Toluene-d8	**91.4**	80.4-121		%REC	1	7/30/2019 5:10:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-02-SW-A-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**12.9**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-03-SW-D-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1221	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1232	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1242	**0.040**	0.066	J	µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1248	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1254	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1260	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1262	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
Aroclor 1268	**ND**	0.066		µg/L	1	7/30/2019 2:32:39 PM
PCB, Total	**0.040**	0.066	J	µg/L	1	7/30/2019 2:32:39 PM
Surr: Decachlorobiphenyl	**120**	57.1-135		%REC	1	7/30/2019 2:32:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**2.1**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	7/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/30/2019 2:58:00 PM
Barium	**0.024**	0.010		mg/L	1	7/30/2019 2:58:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/30/2019 2:58:00 PM
Chromium	**ND**	0.005		mg/L	1	7/30/2019 2:58:00 PM
Copper	**0.005**	0.005		mg/L	1	7/30/2019 2:58:00 PM
Lead	**ND**	0.005		mg/L	1	7/30/2019 2:58:00 PM
Selenium	**ND**	0.005		mg/L	1	7/30/2019 2:58:00 PM
Silver	**ND**	0.010		mg/L	1	7/30/2019 2:58:00 PM
Zinc	**ND**	0.010		mg/L	1	7/30/2019 2:58:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:57:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	7/30/2019 4:57:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/30/2019 4:57:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:57:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	7/30/2019 4:57:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:57:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-03-SW-D-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/30/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 4:57:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 4:57:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 4:57:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 5:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	7/30/2019 5:31:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 5:31:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 5:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 5:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 5:31:00 PM
Surr: 1,2-Dichloroethane-d4	**99.7**	80.9-122		%REC	1	7/30/2019 5:31:00 PM
Surr: 4-Bromofluorobenzene	**89.9**	76.5-125		%REC	1	7/30/2019 5:31:00 PM
Surr: Toluene-d8	**93.2**	80.4-121		%REC	1	7/30/2019 5:31:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-03-SW-D-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**8.2**	1.0		mg/L	1	7/30/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-04-SW-B-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1242	**0.256**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 2:46:02 PM
PCB, Total	**0.256**	0.065		µg/L	1	7/30/2019 2:46:02 PM
Surr: Decachlorobiphenyl	**95.8**	57.1-135		%REC	1	7/30/2019 2:46:02 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/29/2019)						
Mercury	**10.7**	0.5		ng/L	1	7/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	7/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/30/2019 3:12:00 PM
Barium	**0.024**	0.010		mg/L	1	7/30/2019 3:12:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/30/2019 3:12:00 PM
Chromium	**ND**	0.005		mg/L	1	7/30/2019 3:12:00 PM
Copper	**ND**	0.005		mg/L	1	7/30/2019 3:12:00 PM
Lead	**ND**	0.005		mg/L	1	7/30/2019 3:12:00 PM
Selenium	**ND**	0.005		mg/L	1	7/30/2019 3:12:00 PM
Silver	**ND**	0.010		mg/L	1	7/30/2019 3:12:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	7/30/2019 3:12:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 5:04:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/30/2019 5:04:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/30/2019 5:04:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 5:04:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	7/30/2019 5:04:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 5:04:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-04-SW-B-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/30/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/30/2019 5:04:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 5:04:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/30/2019 5:04:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 5:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 5:53:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 5:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 5:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 5:53:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/30/2019 5:53:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	7/30/2019 5:53:00 PM
Surr: 4-Bromofluorobenzene	**90.4**	76.5-125		%REC	1	7/30/2019 5:53:00 PM
Surr: Toluene-d8	**93.1**	80.4-121		%REC	1	7/30/2019 5:53:00 PM

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-04-SW-B-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**10.3**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-05-SW-B-A-1
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**8.8**	1.0		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *31-Jul-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	072919-TB01
Work Order:	**190729049**	**Collection Date:**	7/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190729049-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 6:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Methylene chloride	**3.0**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Acetone	**7.1**	5.0		µg/L	1	7/30/2019 6:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Chloroform	**0.6**	1.0	J	µg/L	1	7/30/2019 6:15:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 6:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 6:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 6:15:00 PM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	7/30/2019 6:15:00 PM
Surr: 4-Bromofluorobenzene	**87.1**	76.5-125		%REC	1	7/30/2019 6:15:00 PM
Surr: Toluene-d8	**95.4**	80.4-121		%REC	1	7/30/2019 6:15:00 PM

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74705

MBLK

SeqNo: **2668235** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **MB-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2668607** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **MB-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2668236** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **LCS-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.26	0.500	10	0	92.6	77	123	0	0		

LCS

SeqNo: **2668608** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **LCS-74705** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.21	0.500	10	0	92.1	77	123	0	0		

MS

SeqNo: **2668244** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190726067-003** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12	0.500	12.5	1.92	80.6	71	125	0	0		

MS

SeqNo: **2668605** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190729049-001 (072919-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.9	0.500	12.5	7.92	71.8	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74705

MS

SeqNo: **2668614** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190729037-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.6	0.500	12.5	1.31	82.3	71	125	0	0		

MSD

SeqNo: **2668245** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190726067-003** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.7	0.500	12.5	1.92	86.2	71	125	12	5.67	24	

MSD

SeqNo: **2668606** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190729049-001** **(072919-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15	0.500	12.5	7.92	56.6	71	125	16.9	11.9	24	S

MSD

SeqNo: **2668615** **PrepDate:7/29/2019** TestNo: **E1631** RunNo: **173757**
Samp ID: **190729037-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.2	0.500	12.5	1.31	87.1	71	125	11.6	5.04	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74713

MBLK

SeqNo: **2668757** PrepDate:**7/30/2019** TestNo: **E200.7F** RunNo: **173780**
Samp ID: **MB-74713** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

MBLK

SeqNo: **2669266** PrepDate: TestNo: **E200.7F** RunNo: **173801**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2668758** PrepDate:**7/30/2019** TestNo: **E200.7F** RunNo: **173780**
Samp ID: **LCS-74713** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.857	0.00500	2	0	92.8	85	115	0	0		
Barium, Dissolved	2.042	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.006	0.00500	2	0	100	85.3	112	0	0		
Chromium, Dissolved	1.982	0.00500	2	0	99.1	89.1	109	0	0		
Copper, Dissolved	2.032	0.00500	2	0	102	86.8	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74713

LCS

SeqNo: **2668758** PrepDate:**7/30/2019** TestNo: **E200.7F** RunNo: **173780**
Samp ID: **LCS-74713** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	1.996	0.00500	2	0	99.8	86.8	114	0	0		
Selenium, Dissolved	1.894	0.00500	2	0	94.7	85	115	0	0		
Silver, Dissolved	0.5212	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	1.963	0.0100	2	0	98.2	85	115	0	0		

LCS

SeqNo: **2669270** PrepDate: TestNo: **E200.7F** RunNo: **173801**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.033	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.186	0.0100	2	0	109	89	112	0	0		
Cadmium, Dissolved	1.996	0.00500	2	0	99.8	85.3	112	0	0		
Chromium, Dissolved	2.069	0.00500	2	0	103	89.1	109	0	0		
Copper, Dissolved	2.08	0.00500	2	0	104	86.8	115	0	0		
Lead, Dissolved	1.971	0.00500	2	0	98.5	86.8	114	0	0		
Selenium, Dissolved	2.077	0.00500	2	0	104	85	115	0	0		
Silver, Dissolved	0.5283	0.0100	0.5	0	106	85	115	0	0		
Zinc, Dissolved	2.127	0.0100	2	0	106	85	115	0	0		

MS

SeqNo: **2668762** PrepDate:**7/30/2019** TestNo: **E200.7F** RunNo: **173780**
Samp ID: **190729049-001 (072919-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04114	0.00500	0.04	0.0034	94.4	75	123	0	0		
Barium, Dissolved	2.106	0.0100	2	0.02137	104	75	124	0	0		
Cadmium, Dissolved	0.05143	0.00500	0.05	0	103	75	125	0	0		
Chromium, Dissolved	0.2081	0.00500	0.2	0.005019	102	77.2	117	0	0		
Copper, Dissolved	0.2734	0.00500	0.25	0.00478	107	75	125	0	0		
Lead, Dissolved	0.01993	0.00500	0.02	0	99.7	75	125	0	0		
Selenium, Dissolved	0.01044	0.00500	0.01	0	104	75	125	0	0		
Silver, Dissolved	0.05116	0.0100	0.05	0	102	75	125	0	0		
Zinc, Dissolved	0.5414	0.0100	0.5	0.005684	107	75	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74713

DUP

SeqNo: **2668761** **PrepDate:7/30/2019** TestNo: **E200.7F** RunNo: **173780**
Samp ID: **190729049-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.00238	0.00500	0	0	0	0	0	0.0034	0	17.3	
Barium, Dissolved	0.02163	0.0100	0	0	0	0	0	0.02137	1.20	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.004474	0.00500	0	0	0	0	0	0.005019	0	20	
Copper, Dissolved	0.006141	0.00500	0	0	0	0	0	0.00478	24.9	20.1	Z
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.006117	0.0100	0	0	0	0	0	0.005684	0	15.4	

Qualifiers:
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CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74714

MBLK

SeqNo: **2668333** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									
Barium	ND	0.00200									
Cadmium	ND	0.00100									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00100									
Selenium	ND	0.00100									
Silver	ND	0.00500									
Zinc	ND	0.0100									

LCS

SeqNo: **2668334** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.02148	0.00100	0.02	0	107	85	115	0	0		
Barium	0.0194	0.00200	0.02	0	97	85	115	0	0		
Cadmium	0.02151	0.00100	0.02	0	108	85	115	0	0		
Chromium	0.02143	0.00500	0.02	0	107	85	115	0	0		
Copper	0.02027	0.00500	0.02	0	101	85	115	0	0		
Lead	0.02118	0.00100	0.02	0	106	85	115	0	0		
Selenium	0.02029	0.00100	0.02	0	101	85	115	0	0		
Silver	0.005003	0.00500	0.005	0	100	85	115	0	0		
Zinc	0.02194	0.0100	0.02	0	110	85	115	0	0		

MBLK

SeqNo: **2669297** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									
Barium	ND	0.00200									
Cadmium	ND	0.00100									
Chromium	ND	0.00500									
Copper	0.0007518	0.00500									J

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74714

MBLK SeqNo: **2669297** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00100									
Selenium	0.0005315	0.00100									J
Silver	0.0009542	0.00500									J
Zinc	ND	0.0100									

LCS SeqNo: **2669298** PrepDate: TestNo: **E200.8** RunNo: **173764**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0204	0.00100	0.02	0	102	85	115	0	0		
Barium	0.01867	0.00200	0.02	0	93.4	85	115	0	0		
Cadmium	0.02024	0.00100	0.02	0	101	85	115	0	0		
Chromium	0.02014	0.00500	0.02	0	101	85	115	0	0		
Copper	0.02043	0.00500	0.02	0	102	85	115	0	0		
Lead	0.0203	0.00100	0.02	0	102	85	115	0	0		
Selenium	0.02015	0.00100	0.02	0	101	85	115	0	0		
Silver	0.004786	0.00500	0.005	0	95.7	85	115	0	0		J
Zinc	0.02105	0.0100	0.02	0	105	85	115	0	0		

MBLK SeqNo: **2668734** PrepDate:**7/30/2019** TestNo: **E200.7** RunNo: **173780**
Samp ID: **MB-74714** PrepRef: Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

Qualifiers:
ND - Not Detected at the Reporting Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74714

LCS

SeqNo: **2668735** **PrepDate:7/30/2019** TestNo: **E200.7** RunNo: **173780**
Samp ID: **LCS-74714** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.967	0.00500	2	0	98.3	89.1	111	0	0		
Barium	2.043	0.0100	2	0	102	85	115	0	0		
Cadmium	2.077	0.00500	2	0	104	85	115	0	0		
Chromium	1.953	0.00500	2	0	97.7	89.7	109	0	0		
Copper	2.061	0.00500	2	0	103	85	115	0	0		
Lead	2.133	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.023	0.00500	2	0	101	87.5	112	0	0		
Silver	0.523	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.068	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2668748** **PrepDate:7/30/2019** TestNo: **E200.7** RunNo: **173780**
Samp ID: **190729049-001 (072919-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03968	0.00500	0.04	0	99.2	75	125	0	0		
Barium	2.108	0.0100	2	0.02467	104	75	119	0	0		
Cadmium	0.05178	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.2075	0.00500	0.2	0	104	75	124	0	0		
Copper	0.2751	0.00500	0.25	0.005303	108	75	125	0	0		
Lead	0.02253	0.00500	0.02	0	113	75	125	0	0		
Selenium	0.009765	0.00500	0.01	0	97.6	75	125	0	0		
Silver	0.05179	0.0100	0.05	0	104	75	125	0	0		
Zinc	0.544	0.0100	0.5	0.005616	108	76.9	125	0	0		

DUP

SeqNo: **2668746** **PrepDate:7/30/2019** TestNo: **E200.7** RunNo: **173780**
Samp ID: **190729049-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02492	0.0100	0	0	0	0	0	0.02467	1.03	20	
Cadmium	0.00006224	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.0001148	0.00500	0	0	0	0	0	0	0	20	
Copper	0.00658	0.00500	0	0	0	0	0	0.005303	21.5	20	Z

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74714

DUP	SeqNo: **2668746**	PrepDate:**7/30/2019**	TestNo: **E200.7**	RunNo: **173780**
	Samp ID: **190729049-001**	PrepRef:	Units: **mg/L**	Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.00145	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.001807	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.005483	0.0100	0	0	0	0	0	0.005616	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74729

mblk

SeqNo: **2668278** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **mb-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0642	0.0100	0.1	0	64.2	57.1	135	0	0		

lcs

SeqNo: **2668279** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **lcs-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1164	0.0650	0.1	0	116	60	140	0	0		
Aroclor 1260	0.1186	0.0650	0.1	0	119	60	140	0	0		
Surr: Decachlorobiphenyl	0.0762	0.0100	0.1	0	76.2	57.1	135	0	0		

lcsd

SeqNo: **2668280** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **lcsd-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1154	0.0650	0.1	0	115	60	140	0.1164	0.863	30	
Aroclor 1260	0.0898	0.0650	0.1	0	89.8	60	140	0.1186	27.6	30	
Surr: Decachlorobiphenyl	0.0548	0.0100	0.1	0	54.8	57.1	135	0	0	0	S

dup

SeqNo: **2668285** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-001c** PrepRef: Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1221	ND	0.0940	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: 74729

dup

SeqNo: **2668285** **PrepDate:7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-001c** **PrepRef:** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1232	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1242	0.1414	0.0940	0	0	0	0	0	0.1689	17.7	0	
Aroclor 1248	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1254	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1260	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1262	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1268	ND	0.0940	0	0	0	0	0	0	0	0	
PCB, Total	0.1414	0.0940	0	0	0	0	0	0.1689	17.7	0	
Surr: Decachlorobiphenyl	0.1284	0.0140	0	0	0	0	0	0	0	0	

dup

SeqNo: **2668518** **PrepDate:7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-004c** **PrepRef:** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1221	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1232	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1242	0.2346	0.0930	0	0	0	0	0	0.2556	8.58	0	
Aroclor 1248	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1254	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1260	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1262	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1268	ND	0.0930	0	0	0	0	0	0	0	0	
PCB, Total	0.2346	0.0930	0	0	0	0	0	0.2556	8.58	0	
Surr: Decachlorobiphenyl	0.1171	0	0	0	0	0	0	0	0	0	

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74733

LCS

SeqNo: **2669012** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **LCS-74733** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	480	40.0	490	0	98	86.5	114	0	0		

DUP

SeqNo: **2669017** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **190726061-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	84	6.70	0	0	0	0	0	78	7.41	10	

DUP

SeqNo: **2669019** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **190729034-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	17	5.00	0	0	0	0	0	15.5	9.23	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

mblk

SeqNo: **2668356** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.4	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.21	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.41	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.91	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.6	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.21	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.33	5.0	50	0	92.7	76.5	125	0	0		
Surr: Toluene-d8	46.4	5.0	50	0	92.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcs

SeqNo: **2668354** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.63	1.0	10	0	106	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.26	1.0	10	0	82.6	72.3	118	0	0		
1,1,2-Trichloroethane	10.4	1.0	10	0	104	73.1	123	0	0		
1,1-Dichloroethane	12.3	1.0	10	0	123	73.2	127	0	0		
1,1-Dichloroethene	10.25	1.0	10	0	103	70.3	128	0	0		
1,2,3-Trichloropropane	4.35	1.0	5	0	87	68.4	115	0	0		
1,2-Dichlorobenzene	9.85	1.0	10	0	98.5	71	124	0	0		
1,2-Dichloroethane	11.27	1.0	10	0	113	72.5	127	0	0		
1,3-Dichlorobenzene	10.09	1.0	10	0	101	72.2	121	0	0		
1,3-Dichloropropane	5.24	1.0	5	0	105	76	122	0	0		
1,4-Dichlorobenzene	9.8	1.0	10	0	98	71.7	127	0	0		
2-Butanone	8.83	5.0	10	0	88.3	65.1	132	0	0		
4-Methyl-2-pentanone	8.61	5.0	10	0	86.1	68.7	118	0	0		
Acetone	10.13	5.0	10	0	101	69.2	133	0	0		
Benzene	10.7	1.0	10	0	107	71.2	122	0	0		
Carbon disulfide	5.26	1.0	5	0	105	67.8	134	0	0		
Carbon tetrachloride	10.09	1.0	10	0	101	74.5	122	0	0		
Chlorobenzene	11.28	1.0	10	0	113	72.7	124	0	0		
Chloroethane	7.29	1.0	10	0	72.9	72.3	136	0	0		
Chloroform	11.99	1.0	10	0	120	71.6	133	0	0		
Dibromochloromethane	9.47	1.0	10	0	94.7	70.6	124	0	0		
Ethylbenzene	10.57	1.0	10	0	106	70.9	126	0	0		
Methylene chloride	12.98	1.0	10	0	130	66.3	130	0	0		
Tetrachloroethene	11.8	1.0	10	0	118	72.4	119	0	0		
Toluene	10.79	1.0	10	0	108	71.8	116	0	0		
trans-1,2-Dichloroethene	12.46	1.0	10	0	125	70.3	120	0	0		S
Trichloroethene	11.08	1.0	10	0	111	73	127	0	0		
Vinyl chloride	6.33	1.0	10	0	63.3	65.2	134	0	0		S
Xylenes, Total	31.44	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.36	5.0	50	0	98.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.57	5.0	50	0	93.1	76.5	125	0	0		
Surr: Toluene-d8	46.53	5.0	50	0	93.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcsd

SeqNo: **2668355** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.01	1.0	10	0	90.1	72.3	121	10.63	16.5	25	
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	72.3	118	8.26	2.39	25	
1,1,2-Trichloroethane	9.58	1.0	10	0	95.8	73.1	123	10.4	8.21	25	
1,1-Dichloroethane	10.43	1.0	10	0	104	73.2	127	12.3	16.5	25	
1,1-Dichloroethene	10.28	1.0	10	0	103	70.3	128	10.25	0.292	25	
1,2,3-Trichloropropane	4.28	1.0	5	0	85.6	68.4	115	4.35	1.62	25	
1,2-Dichlorobenzene	9.73	1.0	10	0	97.3	71	124	9.85	1.23	25	
1,2-Dichloroethane	9.68	1.0	10	0	96.8	72.5	127	11.27	15.2	25	
1,3-Dichlorobenzene	9.7	1.0	10	0	97	72.2	121	10.09	3.94	25	
1,3-Dichloropropane	4.59	1.0	5	0	91.8	76	122	5.24	13.2	0	
1,4-Dichlorobenzene	9.12	1.0	10	0	91.2	71.7	127	9.8	7.19	25	
2-Butanone	10.84	5.0	10	0	108	65.1	132	8.83	20.4	25	
4-Methyl-2-pentanone	9.22	5.0	10	0	92.2	68.7	118	8.61	6.84	25	
Acetone	10.15	5.0	10	0	102	69.2	133	10.13	0.197	25	
Benzene	9.42	1.0	10	0	94.2	71.2	122	10.7	12.7	25	
Carbon disulfide	4.8	1.0	5	0	96	67.8	134	5.26	9.15	25	
Carbon tetrachloride	8.82	1.0	10	0	88.2	74.5	122	10.09	13.4	25	
Chlorobenzene	10.54	1.0	10	0	105	72.7	124	11.28	6.78	25	
Chloroethane	7.24	1.0	10	0	72.4	72.3	136	7.29	0.688	25	
Chloroform	10.5	1.0	10	0	105	71.6	133	11.99	13.3	25	
Dibromochloromethane	8.68	1.0	10	0	86.8	70.6	124	9.47	8.71	25	
Ethylbenzene	9.89	1.0	10	0	98.9	70.9	126	10.57	6.65	25	
Methylene chloride	11.08	1.0	10	0	111	66.3	130	12.98	15.8	25	
Tetrachloroethene	10.49	1.0	10	0	105	72.4	119	11.8	11.8	25	
Toluene	10.01	1.0	10	0	100	71.8	116	10.79	7.50	25	
trans-1,2-Dichloroethene	10.49	1.0	10	0	105	70.3	120	12.46	17.2	25	
Trichloroethene	9.86	1.0	10	0	98.6	73	127	11.08	11.7	25	
Vinyl chloride	5.9	1.0	10	0	59	65.2	134	6.33	7.03	25	S
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	48.3	5.0	50	0	96.6	76.5	125	0	0	25	
Surr: Toluene-d8	47.32	5.0	50	0	94.6	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

ms

SeqNo: **2668366** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **190726067-003b** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.52	1.0	10	0	95.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.69	1.0	10	0	76.9	70.1	123	0	0		
1,1,2-Trichloroethane	9.76	1.0	10	0	97.6	72.1	119	0	0		
1,1-Dichloroethane	11.07	1.0	10	0	111	70.4	126	0	0		
1,1-Dichloroethene	10.76	1.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	0	0		
1,2-Dichlorobenzene	8.96	1.0	10	0	89.6	70.2	123	0	0		
1,2-Dichloroethane	10.11	1.0	10	0	101	73.5	126	0	0		
1,3-Dichlorobenzene	8.75	1.0	10	0	87.5	70.4	124	0	0		
1,3-Dichloropropane	4.54	1.0	5	0	90.8	64	125	0	0		
1,4-Dichlorobenzene	8.6	1.0	10	0	86	70.8	127	0	0		
2-Butanone	8.14	5.0	10	0	81.4	60.5	123	0	0		
4-Methyl-2-pentanone	9.41	5.0	10	0	94.1	52.8	133	0	0		
Acetone	9.97	5.0	10	0	99.7	56.3	135	0	0		
Benzene	9.93	1.0	10	0	99.3	70.2	127	0	0		
Carbon disulfide	5.09	1.0	5	0	102	62.2	130	0	0		
Carbon tetrachloride	9.68	1.0	10	0	96.8	56.4	137	0	0		
Chlorobenzene	9.59	1.0	10	0	95.9	72.7	128	0	0		
Chloroethane	6.28	1.0	10	0	62.8	71.3	135	0	0		S
Chloroform	9.78	1.0	10	0	97.8	70.2	125	0	0		
Dibromochloromethane	8.8	1.0	10	0	88	69.5	123	0	0		
Ethylbenzene	9.23	1.0	10	0	92.3	71.9	129	0	0		
Methylene chloride	11.86	1.0	10	0.33	115	65.3	123	0	0		
Tetrachloroethene	10.7	1.0	10	0	107	74.5	121	0	0		
Toluene	10.31	1.0	10	0.25	101	73	122	0	0		
trans-1,2-Dichloroethene	11.31	1.0	10	0	113	69.1	133	0	0		
Trichloroethene	10.05	1.0	10	0	100	71.1	126	0	0		
Vinyl chloride	5.37	1.0	10	0	53.7	65	137	0	0		S
Xylenes, Total	26.76	1.0	30	0.36	88	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.97	5.0	50	0	89.9	76.5	125	0	0		
Surr: Toluene-d8	46.77	5.0	50	0	93.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190729049
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

msd

SeqNo: **2668367** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **190726067-003b** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.3	1.0	10	0	93	71.6	126	9.52	2.34	20.4	
1,1,2,2-Tetrachloroethane	8.93	1.0	10	0	89.3	70.1	123	7.69	14.9	18.6	
1,1,2-Trichloroethane	10.57	1.0	10	0	106	72.1	119	9.76	7.97	20	
1,1-Dichloroethane	11.32	1.0	10	0	113	70.4	126	11.07	2.23	19.2	
1,1-Dichloroethene	11.65	1.0	10	0	116	70.2	125	10.76	7.94	16.1	
1,2,3-Trichloropropane	4.53	1.0	5	0	90.6	53.7	101	3.8	17.5	20	
1,2-Dichlorobenzene	9.56	1.0	10	0	95.6	70.2	123	8.96	6.48	17.9	
1,2-Dichloroethane	10.24	1.0	10	0	102	73.5	126	10.11	1.28	15.6	
1,3-Dichlorobenzene	9.6	1.0	10	0	96	70.4	124	8.75	9.26	14.3	
1,3-Dichloropropane	5.17	1.0	5	0	103	64	125	4.54	13.0	0	
1,4-Dichlorobenzene	9.34	1.0	10	0	93.4	70.8	127	8.6	8.25	14.4	
2-Butanone	8.66	5.0	10	0	86.6	60.5	123	8.14	6.19	15	
4-Methyl-2-pentanone	10.07	5.0	10	0	101	52.8	133	9.41	6.78	11.9	
Acetone	11.43	5.0	10	0	114	56.3	135	9.97	13.6	10.6	Z
Benzene	10.01	1.0	10	0	100	70.2	127	9.93	0.802	18.4	
Carbon disulfide	5.44	1.0	5	0	109	62.2	130	5.09	6.65	13.1	
Carbon tetrachloride	9.62	1.0	10	0	96.2	56.4	137	9.68	0.622	20.3	
Chlorobenzene	10.19	1.0	10	0	102	72.7	128	9.59	6.07	19.6	
Chloroethane	6	1.0	10	0	60	71.3	135	6.28	4.56	27.8	S
Chloroform	9.95	1.0	10	0	99.5	70.2	125	9.78	1.72	20.3	
Dibromochloromethane	8.66	1.0	10	0	86.6	69.5	123	8.8	1.60	18.8	
Ethylbenzene	10.29	1.0	10	0	103	71.9	129	9.23	10.9	16.3	
Methylene chloride	11.52	1.0	10	0.33	112	65.3	123	11.86	2.91	21.4	
Tetrachloroethene	11.11	1.0	10	0	111	74.5	121	10.7	3.76	20.9	
Toluene	10.15	1.0	10	0.25	99	73	122	10.31	1.56	19.4	
trans-1,2-Dichloroethene	11.32	1.0	10	0	113	69.1	133	11.31	0.0884	16.1	
Trichloroethene	10.51	1.0	10	0	105	71.1	126	10.05	4.47	16.6	
Vinyl chloride	5.42	1.0	10	0	54.2	65	137	5.37	0.927	20.5	S
Xylenes, Total	28.92	1.0	30	0.36	95.2	72	130	26.76	7.76	16.1	
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.95	5.0	50	0	91.9	76.5	125	0	0	0	
Surr: Toluene-d8	46.58	5.0	50	0	93.2	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190729049

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	072919-01-SW-U-A-1	7/29/19	1326	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	072919-02-SW-A-A-1	7/29/19	1342	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P				2	PCBs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	[redacted] 072919-03-SW-D-A-1	7/29/19	1400	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/29/19 1623
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/29/19 4:41 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190729049

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order #: 19029049

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	072919-03-SW-D-A-1	7/29/19	1400	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	072919-04-SW-B-A-1	7/29/19	1300	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
005	072919-05-SW-B-A-1	7/29/19	1425	P	W		✓	1	TSS
006	072919-TB01			A	TB				trip blank
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/29/19 1623
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/29/19 4:41 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190729049

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190729049

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 7/31/2019

7/29/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS Completed by_____
Must Go in 48 Hour TAT

☑ EDD Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190729049-001	072919-01-SW-U-A-1	Water	7/29/2019	7/31/2019	E	C	B	D	D	A	F
190729049-002	072919-02-SW-A-A-1	Water	7/29/2019	7/31/2019	E	C	B	D	D	A	F
190729049-003	072919-03-SW-D-A-1	Water	7/29/2019	7/31/2019	E	C	B	D	D	A	F
190729049-004	072919-04-SW-B-A-1	Water	7/29/2019	7/31/2019	E	C	B	D	D	A	F
190729049-005	072919-05-SW-B-A-1	Water	7/29/2019	7/31/2019							A
190729049-006	072919-TB01	Trip Blank	7/29/2019	7/31/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by MDH 7-30-19

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**7/30/19 – 8/5/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 7/30/19 through 8/5/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one low level exceedance of the water quality criteria (PCB Aroclor 1242). This exceedance (0.466 µg/l vs threshold of 0.2 µg/l) was at the downstream (Buoy 3) location. The sample was collected about 20 minutes prior to low tide and they were dredging a Non-TSCA/ low VOC grid cell at the time. The data received for the next day's sample set (8/1/19) samples came back completely non-detect.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU, however there were a few high readings (max = 60.5 NTU) over the reporting period. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (less than 20 NTU). The lab TSS values collected at the same time were never higher than 20 mg/L. Overall, the turbidity readings continued to be in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the dredging operations.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
073019-01-SW-D-A-1	12:20	AROCLOR-1242	T	ug/l	0.2	0.052	J		D	14	5.34	2.66	Low	14.7	Moon Pool	8:15
073019-01-SW-D-A-1	12:20	CHLOROBENZENE	T	ug/l	5	0.8	J		D	14	5.34	2.66	Low	14.7	Moon Pool	8:15
073119-01-SW-U-A-1	09:30	CHROMIUM, TOTAL	D	mg/l	0.17	0.005	J		U	15	1.47	-0.81	Outgoing (Ebb)	7.2	Moon Pool	7:30
073119-01-SW-U-A-1	09:30	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	15	1.47	-0.81	Outgoing (Ebb)	7.2	Moon Pool	7:30
073119-03-SW-D-A-1	10:15	AROCLOR-1242	T	ug/l	0.2	0.466	Z	X	D	29	15.96	-1.33	Outgoing (Ebb)	19.5	Moon Pool	7:30
080119-01-SW-D-A-1	13:20	AROCLOR-1242	T	ug/l	0.2	0.057	J		D	14	18.82	1.21	Low	23.6	Moon Pool	7:30
080119-01-SW-D-A-1	13:20	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			D	14	18.82	1.21	Low	23.6	Moon Pool	7:30
080119-02-SW-A-B-1	13:50	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			A	9.5	47.75	2.23	Low	6.9	Moon Pool	7:30
080119-03-SW-U-B-1	14:20	AROCLOR-1242	T	ug/l	0.2	0.034	J		U	13.5	60.48	2.95	Incoming (Flood)	6.9	Moon Pool	7:30
080219-02-SW-A-A-1	13:25	COPPER	D	mg/l	0.01	0.004	J		A	14.5	1.94	-0.45	Low	6.3	Moon Pool	7:30
080519-01-SW-U-A-1	09:45	COPPER	D	mg/l	0.01	0.005	J		U	18	1.87	2.59	High	5.9	Moon Pool	9:30
080519-03-SW-D-A-1	10:30	COPPER	D	mg/l	0.01	0.006			D	28	2.48	1.79	High	7.6	Moon Pool	9:30
080519-04-SW-B-A-1	09:15	COPPER	D	mg/l	0.01	0.004	J		B	18	1.57	3.3	High	6.7	Moon Pool	9:30

J: Analyte detected below quantitation limit
Z: Duplication outside acceptable limits

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
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August 01, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190730066
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 7/30/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *01-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190730066	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-01-SW-D-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1242	**0.052**	0.065	J	µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 7:29:59 PM
PCB, Total	**0.052**	0.065	J	µg/L	1	7/30/2019 7:29:59 PM
Surr: Decachlorobiphenyl	**56.2**	57.1-135	S	%REC	1	7/30/2019 7:29:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**2.8**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	7/31/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	7/31/2019 1:42:00 PM
Barium	**0.022**	0.010		mg/L	1	7/31/2019 1:42:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/31/2019 1:42:00 PM
Chromium	**ND**	0.005		mg/L	1	7/31/2019 1:42:00 PM
Copper	**ND**	0.005		mg/L	1	7/31/2019 1:42:00 PM
Lead	**ND**	0.005		mg/L	1	7/31/2019 1:42:00 PM
Selenium	**ND**	0.005		mg/L	1	7/31/2019 1:42:00 PM
Silver	**ND**	0.010		mg/L	1	7/31/2019 1:42:00 PM
Zinc	**ND**	0.010		mg/L	1	7/31/2019 1:42:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:04:00 PM
Barium, Dissolved	**0.019**	0.010		mg/L	1	7/31/2019 4:04:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/31/2019 4:04:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:04:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:04:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:04:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-01-SW-D-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/31/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:04:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:04:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:04:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 6:36:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 6:36:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 6:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 6:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Chlorobenzene	**0.8**	1.0	J	µg/L	1	7/30/2019 6:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:36:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	7/30/2019 6:36:00 PM
Surr: 1,2-Dichloroethane-d4	**98.6**	80.9-122		%REC	1	7/30/2019 6:36:00 PM
Surr: 4-Bromofluorobenzene	**92.0**	76.5-125		%REC	1	7/30/2019 6:36:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	7/30/2019 6:36:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-01-SW-D-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**14.7**	1.0		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
PCB, Total	**ND**	0.065		µg/L	1	7/30/2019 7:43:20 PM
Surr: Decachlorobiphenyl	**71.0**	57.1-135		%REC	1	7/30/2019 7:43:20 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**1.9**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	7/31/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/31/2019 2:10:00 PM
Barium	**0.021**	0.010		mg/L	1	7/31/2019 2:10:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/31/2019 2:10:00 PM
Chromium	**ND**	0.005		mg/L	1	7/31/2019 2:10:00 PM
Copper	**ND**	0.005		mg/L	1	7/31/2019 2:10:00 PM
Lead	**ND**	0.005		mg/L	1	7/31/2019 2:10:00 PM
Selenium	**ND**	0.005		mg/L	1	7/31/2019 2:10:00 PM
Silver	**ND**	0.010		mg/L	1	7/31/2019 2:10:00 PM
Zinc	**ND**	0.010		mg/L	1	7/31/2019 2:10:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:15:00 PM
Barium, Dissolved	**0.019**	0.010		mg/L	1	7/31/2019 4:15:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/31/2019 4:15:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:15:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:15:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:15:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/31/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:15:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:15:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:15:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 6:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 6:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 6:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 6:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 6:58:00 PM
Surr: 1,2-Dichloroethane-d4	**97.1**	80.9-122		%REC	1	7/30/2019 6:58:00 PM
Surr: 4-Bromofluorobenzene	**91.9**	76.5-125		%REC	1	7/30/2019 6:58:00 PM
Surr: Toluene-d8	**91.7**	80.4-121		%REC	1	7/30/2019 6:58:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**8.2**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-03-SW-U-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
PCB, Total	**ND**	0.065		µg/L	1	7/30/2019 7:56:38 PM
Surr: Decachlorobiphenyl	**69.8**	57.1-135		%REC	1	7/30/2019 7:56:38 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**2.1**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	7/31/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/31/2019 2:20:00 PM
Barium	**0.021**	0.010		mg/L	1	7/31/2019 2:20:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/31/2019 2:20:00 PM
Chromium	**ND**	0.005		mg/L	1	7/31/2019 2:20:00 PM
Copper	**ND**	0.005		mg/L	1	7/31/2019 2:20:00 PM
Lead	**ND**	0.005		mg/L	1	7/31/2019 2:20:00 PM
Selenium	**ND**	0.005		mg/L	1	7/31/2019 2:20:00 PM
Silver	**ND**	0.010		mg/L	1	7/31/2019 2:20:00 PM
Zinc	**ND**	0.010		mg/L	1	7/31/2019 2:20:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:19:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	7/31/2019 4:19:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/31/2019 4:19:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:19:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:19:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:19:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-03-SW-U-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 7/31/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:19:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:19:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:19:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 7:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 7:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 7:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 7:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:19:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	7/30/2019 7:19:00 PM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	7/30/2019 7:19:00 PM
Surr: 4-Bromofluorobenzene	**91.2**	76.5-125		%REC	1	7/30/2019 7:19:00 PM
Surr: Toluene-d8	**92.9**	80.4-121		%REC	1	7/30/2019 7:19:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-03-SW-U-A-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**10.6**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-04-SW-B-B-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
PCB, Total	**ND**	0.065		µg/L	1	7/30/2019 8:18:33 PM
Surr: Decachlorobiphenyl	**57.4**	57.1-135		%REC	1	7/30/2019 8:18:33 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	7/31/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/31/2019 2:29:00 PM
Barium	**0.021**	0.010		mg/L	1	7/31/2019 2:29:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/31/2019 2:29:00 PM
Chromium	**ND**	0.005		mg/L	1	7/31/2019 2:29:00 PM
Copper	**ND**	0.005		mg/L	1	7/31/2019 2:29:00 PM
Lead	**ND**	0.005		mg/L	1	7/31/2019 2:29:00 PM
Selenium	**ND**	0.005		mg/L	1	7/31/2019 2:29:00 PM
Silver	**ND**	0.010		mg/L	1	7/31/2019 2:29:00 PM
Zinc	**ND**	0.010		mg/L	1	7/31/2019 2:29:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:26:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	7/31/2019 4:26:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/31/2019 4:26:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:26:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:26:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:26:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-04-SW-B-B-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:26:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:26:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:26:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 7:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 7:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	7/30/2019 7:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 7:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 7:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 7:41:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/30/2019 7:41:00 PM
Surr: 1,2-Dichloroethane-d4	**93.2**	80.9-122		%REC	1	7/30/2019 7:41:00 PM
Surr: 4-Bromofluorobenzene	**92.1**	76.5-125		%REC	1	7/30/2019 7:41:00 PM
Surr: Toluene-d8	**93.6**	80.4-121		%REC	1	7/30/2019 7:41:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-04-SW-B-B-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**3.9**	1.1		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-03-SW-U-A-2
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
PCB, Total	**ND**	0.065		µg/L	1	7/30/2019 8:31:53 PM
Surr: Decachlorobiphenyl	**80.6**	57.1-135		%REC	1	7/30/2019 8:31:53 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**3.4**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	7/31/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic	**ND**	0.005		mg/L	1	7/31/2019 2:33:00 PM
Barium	**0.022**	0.010		mg/L	1	7/31/2019 2:33:00 PM
Cadmium	**ND**	0.001		mg/L	1	7/31/2019 2:33:00 PM
Chromium	**ND**	0.005		mg/L	1	7/31/2019 2:33:00 PM
Copper	**ND**	0.005		mg/L	1	7/31/2019 2:33:00 PM
Lead	**ND**	0.005		mg/L	1	7/31/2019 2:33:00 PM
Selenium	**ND**	0.005		mg/L	1	7/31/2019 2:33:00 PM
Silver	**ND**	0.010		mg/L	1	7/31/2019 2:33:00 PM
Zinc	**ND**	0.010		mg/L	1	7/31/2019 2:33:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 7/31/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:31:00 PM
Barium, Dissolved	**0.019**	0.010		mg/L	1	7/31/2019 4:31:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	7/31/2019 4:31:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:31:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:31:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:31:00 PM

CLIENT: AECOM Environment **Client Sample ID:** 073019-03-SW-U-A-2
Work Order: **190730066** **Collection Date:** 7/30/2019
Reference: BASF Rensselaer – Hudson River OU-2 / Wa **Lab Sample ID:** 190730066-005
PO#: 115954 **Matrix:** WATER
Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 7/31/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	7/31/2019 4:31:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:31:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	7/31/2019 4:31:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 8:03:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	7/30/2019 8:03:00 PM
Acetone	**ND**	5.0		µg/L	1	7/30/2019 8:03:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Chloroform	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 8:03:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 8:03:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:03:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	7/30/2019 8:03:00 PM
Surr: 1,2-Dichloroethane-d4	**95.2**	80.9-122		%REC	1	7/30/2019 8:03:00 PM
Surr: 4-Bromofluorobenzene	**95.6**	76.5-125		%REC	1	7/30/2019 8:03:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	7/30/2019 8:03:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-03-SW-U-A-2
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**9.9**	1.0		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-05-SW-B-B-1
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 7/30/2019)						
TSS (Residue, Non-Filterable)	**8.3**	1.0		mg/L	1	7/30/2019

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-TB01
Work Order:	**190730066**	**Collection Date:**	7/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190730066-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	7/30/2019 8:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Methylene chloride	**4.0**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Acetone	**6.9**	5.0		µg/L	1	7/30/2019 8:24:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Chloroform	**0.6**	1.0	J	µg/L	1	7/30/2019 8:24:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 8:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 8:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 8:24:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	7/30/2019 8:24:00 PM
Surr: 4-Bromofluorobenzene	**91.5**	76.5-125		%REC	1	7/30/2019 8:24:00 PM
Surr: Toluene-d8	**94.1**	80.4-121		%REC	1	7/30/2019 8:24:00 PM

Adirondack Environmental Services, Inc

Date: *01-Aug-19*

CLIENT: AECOM Environment
Work Order: **190730066**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# : 60323713

Client Sample ID: 073019-TB02
Collection Date: 7/30/2019
Lab Sample ID: 190730066-008
Matrix: TRIP BLANK

VOLATILE ORGANICS EPA 8260C (SW5030C PREP) Analyst: **SMD**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Chloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Methylene chloride	**2.8**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Acetone	**2.9**	5.0	J	µg/L	1	7/30/2019 8:46:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Chloroform	**0.5**	1.0	J	µg/L	1	7/30/2019 8:46:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
2-Butanone	**ND**	5.0		µg/L	1	7/30/2019 8:46:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Benzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	7/30/2019 8:46:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Toluene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	7/30/2019 8:46:00 PM
Surr: 1,2-Dichloroethane-d4	**97.2**	80.9-122		%REC	1	7/30/2019 8:46:00 PM
Surr: 4-Bromofluorobenzene	**92.0**	76.5-125		%REC	1	7/30/2019 8:46:00 PM
Surr: Toluene-d8	**93.8**	80.4-121		%REC	1	7/30/2019 8:46:00 PM

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74729

mblk

SeqNo: **2668278** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **mb-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0642	0.0100	0.1	0	64.2	57.1	135	0	0		

lcs

SeqNo: **2668279** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **lcs-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1164	0.0650	0.1	0	116	60	140	0	0		
Aroclor 1260	0.1186	0.0650	0.1	0	119	60	140	0	0		
Surr: Decachlorobiphenyl	0.0762	0.0100	0.1	0	76.2	57.1	135	0	0		

lcsd

SeqNo: **2668280** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **lcsd-74729** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.1154	0.0650	0.1	0	115	60	140	0.1164	0.863	30	
Aroclor 1260	0.0898	0.0650	0.1	0	89.8	60	140	0.1186	27.6	30	
Surr: Decachlorobiphenyl	0.0548	0.0100	0.1	0	54.8	57.1	135	0	0	0	S

dup

SeqNo: **2668285** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-001c** PrepRef: Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: 74729

dup

SeqNo: **2668285** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-001c** PrepRef: Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1221	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1232	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1242	0.1414	0.0940	0	0	0	0	0	0.1689	17.7	0	
Aroclor 1248	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1254	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1260	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1262	ND	0.0940	0	0	0	0	0	0	0	0	
Aroclor 1268	ND	0.0940	0	0	0	0	0	0	0	0	
PCB, Total	0.1414	0.0940	0	0	0	0	0	0.1689	17.7	0	
Surr: Decachlorobiphenyl	0.1284	0.0140	0	0	0	0	0	0	0	0	

dup

SeqNo: **2668518** PrepDate:**7/30/2019** TestNo: **SW8082A** RunNo: **173760**
Samp ID: **190729049-004c** PrepRef: Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1221	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1232	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1242	0.2346	0.0930	0	0	0	0	0	0.2556	8.58	0	
Aroclor 1248	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1254	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1260	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1262	ND	0.0930	0	0	0	0	0	0	0	0	
Aroclor 1268	ND	0.0930	0	0	0	0	0	0	0	0	
PCB, Total	0.2346	0.0930	0	0	0	0	0	0.2556	8.58	0	
Surr: Decachlorobiphenyl	0.1171	0	0	0	0	0	0	0	0	0	

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74733

LCS

SeqNo: **2669012** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **LCS-74733** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	480	40.0	490	0	98	86.5	114	0	0		

DUP

SeqNo: **2669017** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **190726061-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	84	6.70	0	0	0	0	0	78	7.41	10	

DUP

SeqNo: **2669019** **PrepDate:7/30/2019** TestNo: **SM2540D** RunNo: **173798**
Samp ID: **190729034-001** **PrepRef:** Units: **mg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	17	5.00	0	0	0	0	0	15.5	9.23	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74738

MBLK

SeqNo: **2669723** PrepDate:**7/31/2019** TestNo: **E200.7F** RunNo: **173803**
Samp ID: **MB-74738** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2669729** PrepDate:**7/31/2019** TestNo: **E200.7F** RunNo: **173803**
Samp ID: **LCS-74738** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.986	0.00500	2	0	99.3	85	115	0	0		
Barium, Dissolved	1.999	0.0100	2	0	100	89	112	0	0		
Cadmium, Dissolved	2.096	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.964	0.00500	2	0	98.2	89.1	109	0	0		
Copper, Dissolved	2.058	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.11	0.00500	2	0	105	86.8	114	0	0		
Selenium, Dissolved	1.99	0.00500	2	0	99.5	85	115	0	0		
Silver, Dissolved	0.5282	0.0100	0.5	0	106	85	115	0	0		
Zinc, Dissolved	2.084	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2669736** PrepDate:**7/31/2019** TestNo: **E200.7F** RunNo: **173803**
Samp ID: **190730066-005 (073019-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04288	0.00500	0.04	0	107	75	123	0	0		
Barium, Dissolved	2.084	0.0100	2	0.01942	103	75	124	0	0		
Cadmium, Dissolved	0.05089	0.00500	0.05	0	102	75	125	0	0		
Chromium, Dissolved	0.2044	0.00500	0.2	0	102	77.2	117	0	0		
Copper, Dissolved	0.2692	0.00500	0.25	0	108	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74738

MS

SeqNo: **2669736** **PrepDate:7/31/2019** TestNo: **E200.7F** RunNo: **173803**
Samp ID: **190730066-005 (073019-03-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.01932	0.00500	0.02	0	96.6	75	125	0	0		
Selenium, Dissolved	0.009885	0.00500	0.01	0	98.8	75	125	0	0		
Silver, Dissolved	0.04998	0.0100	0.05	0	100	75	125	0	0		
Zinc, Dissolved	0.5351	0.0100	0.5	0	107	75	121	0	0		

DUP

SeqNo: **2669735** **PrepDate:7/31/2019** TestNo: **E200.7F** RunNo: **173803**
Samp ID: **190730066-005** **PrepRef:** Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.002249	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.01924	0.0100	0	0	0	0	0	0.01942	0.973	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.00253	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.002832	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0001344	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.00235	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74739

MBLK

SeqNo: **2669286** PrepDate:**7/31/2019** TestNo: **E200.7** RunNo: **173803**
Samp ID: **MB-74739** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2669287** PrepDate:**7/31/2019** TestNo: **E200.7** RunNo: **173803**
Samp ID: **LCS-74739** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.978	0.00500	2	0	98.9	89.1	111	0	0		
Barium	2.002	0.0100	2	0	100	85	115	0	0		
Cadmium	2.068	0.00500	2	0	103	85	115	0	0		
Chromium	1.954	0.00500	2	0	97.7	89.7	109	0	0		
Copper	2.086	0.00500	2	0	104	85	115	0	0		
Lead	2.115	0.00500	2	0	106	88.1	112	0	0		
Selenium	1.971	0.00500	2	0	98.6	87.5	112	0	0		
Silver	0.5224	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	2.08	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2669722** PrepDate:**7/31/2019** TestNo: **E200.7** RunNo: **173803**
Samp ID: **190730066-005 (073019-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04104	0.00500	0.04	0	103	75	125	0	0		
Barium	2.068	0.0100	2	0.0221	102	75	119	0	0		
Cadmium	0.05038	0.00500	0.05	0	101	75	118	0	0		
Chromium	0.1981	0.00500	0.2	0	99	75	124	0	0		
Copper	0.2668	0.00500	0.25	0	107	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74739

MS

SeqNo: **2669722** PrepDate:**7/31/2019** TestNo: **E200.7** RunNo: **173803**
Samp ID: **190730066-005 (073019-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02033	0.00500	0.02	0	102	75	125	0	0		
Selenium	0.009885	0.00500	0.01	0	98.9	75	125	0	0		
Silver	0.04807	0.0100	0.05	0	96.1	75	125	0	0		
Zinc	0.528	0.0100	0.5	0	106	76.9	125	0	0		

DUP

SeqNo: **2669721** PrepDate:**7/31/2019** TestNo: **E200.7** RunNo: **173803**
Samp ID: **190730066-005** PrepRef: Units: **mg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00305	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02068	0.0100	0	0	0	0	0	0.0221	6.63	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.0005315	0.00500	0	0	0	0	0	0	0	20	
Copper	0.00295	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003851	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74746

MBLK

SeqNo: **2670160** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2670172** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2670178** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2670161** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.79	0.500	10	0	87.9	77	123	0	0		

LCS

SeqNo: **2670173** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.91	0.500	10	0	89.1	77	123	0	0		

LCS

SeqNo: **2670179** PrepDate:**7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.87	0.500	10	0	88.7	77	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74746

MS

SeqNo: **2670163** **PrepDate:** TestNo: **E1631** RunNo: **173854**
Samp ID: **190730066-001 (073019-01-SW-D-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15	0.500	12.5	2.83	97.4	71	125	0	0		

MS

SeqNo: **2670170** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731058-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	1.36	79.5	71	125	0	0		

MS

SeqNo: **2670183** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731042-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.32	0.500	12.5	0.616	69.6	71	125	0	0		S

MSD

SeqNo: **2670164** **PrepDate:** TestNo: **E1631** RunNo: **173854**
Samp ID: **190730066-001 (073019-01-SW-D-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.6	0.500	12.5	2.83	86.2	71	125	15	9.79	24	

MSD

SeqNo: **2670171** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731058-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	1.36	79.5	71	125	11.3	0	24	

MSD

SeqNo: **2670184** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731042-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.14	0.500	12.5	0.616	68.2	71	125	9.32	1.95	24	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

mblk

SeqNo: **2668356** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.4	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.21	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.41	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.91	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.6	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.21	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.33	5.0	50	0	92.7	76.5	125	0	0		
Surr: Toluene-d8	46.4	5.0	50	0	92.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcs

SeqNo: **2668354** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.63	1.0	10	0	106	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.26	1.0	10	0	82.6	72.3	118	0	0		
1,1,2-Trichloroethane	10.4	1.0	10	0	104	73.1	123	0	0		
1,1-Dichloroethane	12.3	1.0	10	0	123	73.2	127	0	0		
1,1-Dichloroethene	10.25	1.0	10	0	103	70.3	128	0	0		
1,2,3-Trichloropropane	4.35	1.0	5	0	87	68.4	115	0	0		
1,2-Dichlorobenzene	9.85	1.0	10	0	98.5	71	124	0	0		
1,2-Dichloroethane	11.27	1.0	10	0	113	72.5	127	0	0		
1,3-Dichlorobenzene	10.09	1.0	10	0	101	72.2	121	0	0		
1,3-Dichloropropane	5.24	1.0	5	0	105	76	122	0	0		
1,4-Dichlorobenzene	9.8	1.0	10	0	98	71.7	127	0	0		
2-Butanone	8.83	5.0	10	0	88.3	65.1	132	0	0		
4-Methyl-2-pentanone	8.61	5.0	10	0	86.1	68.7	118	0	0		
Acetone	10.13	5.0	10	0	101	69.2	133	0	0		
Benzene	10.7	1.0	10	0	107	71.2	122	0	0		
Carbon disulfide	5.26	1.0	5	0	105	67.8	134	0	0		
Carbon tetrachloride	10.09	1.0	10	0	101	74.5	122	0	0		
Chlorobenzene	11.28	1.0	10	0	113	72.7	124	0	0		
Chloroethane	7.29	1.0	10	0	72.9	72.3	136	0	0		
Chloroform	11.99	1.0	10	0	120	71.6	133	0	0		
Dibromochloromethane	9.47	1.0	10	0	94.7	70.6	124	0	0		
Ethylbenzene	10.57	1.0	10	0	106	70.9	126	0	0		
Methylene chloride	12.98	1.0	10	0	130	66.3	130	0	0		
Tetrachloroethene	11.8	1.0	10	0	118	72.4	119	0	0		
Toluene	10.79	1.0	10	0	108	71.8	116	0	0		
trans-1,2-Dichloroethene	12.46	1.0	10	0	125	70.3	120	0	0		S
Trichloroethene	11.08	1.0	10	0	111	73	127	0	0		
Vinyl chloride	6.33	1.0	10	0	63.3	65.2	134	0	0		S
Xylenes, Total	31.44	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.36	5.0	50	0	98.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.57	5.0	50	0	93.1	76.5	125	0	0		
Surr: Toluene-d8	46.53	5.0	50	0	93.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

lcsd

SeqNo: **2668355** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.01	1.0	10	0	90.1	72.3	121	10.63	16.5	25	
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	72.3	118	8.26	2.39	25	
1,1,2-Trichloroethane	9.58	1.0	10	0	95.8	73.1	123	10.4	8.21	25	
1,1-Dichloroethane	10.43	1.0	10	0	104	73.2	127	12.3	16.5	25	
1,1-Dichloroethene	10.28	1.0	10	0	103	70.3	128	10.25	0.292	25	
1,2,3-Trichloropropane	4.28	1.0	5	0	85.6	68.4	115	4.35	1.62	25	
1,2-Dichlorobenzene	9.73	1.0	10	0	97.3	71	124	9.85	1.23	25	
1,2-Dichloroethane	9.68	1.0	10	0	96.8	72.5	127	11.27	15.2	25	
1,3-Dichlorobenzene	9.7	1.0	10	0	97	72.2	121	10.09	3.94	25	
1,3-Dichloropropane	4.59	1.0	5	0	91.8	76	122	5.24	13.2	0	
1,4-Dichlorobenzene	9.12	1.0	10	0	91.2	71.7	127	9.8	7.19	25	
2-Butanone	10.84	5.0	10	0	108	65.1	132	8.83	20.4	25	
4-Methyl-2-pentanone	9.22	5.0	10	0	92.2	68.7	118	8.61	6.84	25	
Acetone	10.15	5.0	10	0	102	69.2	133	10.13	0.197	25	
Benzene	9.42	1.0	10	0	94.2	71.2	122	10.7	12.7	25	
Carbon disulfide	4.8	1.0	5	0	96	67.8	134	5.26	9.15	25	
Carbon tetrachloride	8.82	1.0	10	0	88.2	74.5	122	10.09	13.4	25	
Chlorobenzene	10.54	1.0	10	0	105	72.7	124	11.28	6.78	25	
Chloroethane	7.24	1.0	10	0	72.4	72.3	136	7.29	0.688	25	
Chloroform	10.5	1.0	10	0	105	71.6	133	11.99	13.3	25	
Dibromochloromethane	8.68	1.0	10	0	86.8	70.6	124	9.47	8.71	25	
Ethylbenzene	9.89	1.0	10	0	98.9	70.9	126	10.57	6.65	25	
Methylene chloride	11.08	1.0	10	0	111	66.3	130	12.98	15.8	25	
Tetrachloroethene	10.49	1.0	10	0	105	72.4	119	11.8	11.8	25	
Toluene	10.01	1.0	10	0	100	71.8	116	10.79	7.50	25	
trans-1,2-Dichloroethene	10.49	1.0	10	0	105	70.3	120	12.46	17.2	25	
Trichloroethene	9.86	1.0	10	0	98.6	73	127	11.08	11.7	25	
Vinyl chloride	5.9	1.0	10	0	59	65.2	134	6.33	7.03	25	S
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	48.3	5.0	50	0	96.6	76.5	125	0	0	25	
Surr: Toluene-d8	47.32	5.0	50	0	94.6	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

ms	SeqNo: **2668366**	TestNo: **SW8260C**	RunNo: **173765**
	Samp ID: **190726067-003b**	Units: **µg/L**	Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.52	1.0	10	0	95.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.69	1.0	10	0	76.9	70.1	123	0	0		
1,1,2-Trichloroethane	9.76	1.0	10	0	97.6	72.1	119	0	0		
1,1-Dichloroethane	11.07	1.0	10	0	111	70.4	126	0	0		
1,1-Dichloroethene	10.76	1.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	0	0		
1,2-Dichlorobenzene	8.96	1.0	10	0	89.6	70.2	123	0	0		
1,2-Dichloroethane	10.11	1.0	10	0	101	73.5	126	0	0		
1,3-Dichlorobenzene	8.75	1.0	10	0	87.5	70.4	124	0	0		
1,3-Dichloropropane	4.54	1.0	5	0	90.8	64	125	0	0		
1,4-Dichlorobenzene	8.6	1.0	10	0	86	70.8	127	0	0		
2-Butanone	8.14	5.0	10	0	81.4	60.5	123	0	0		
4-Methyl-2-pentanone	9.41	5.0	10	0	94.1	52.8	133	0	0		
Acetone	9.97	5.0	10	0	99.7	56.3	135	0	0		
Benzene	9.93	1.0	10	0	99.3	70.2	127	0	0		
Carbon disulfide	5.09	1.0	5	0	102	62.2	130	0	0		
Carbon tetrachloride	9.68	1.0	10	0	96.8	56.4	137	0	0		
Chlorobenzene	9.59	1.0	10	0	95.9	72.7	128	0	0		
Chloroethane	6.28	1.0	10	0	62.8	71.3	135	0	0		S
Chloroform	9.78	1.0	10	0	97.8	70.2	125	0	0		
Dibromochloromethane	8.8	1.0	10	0	88	69.5	123	0	0		
Ethylbenzene	9.23	1.0	10	0	92.3	71.9	129	0	0		
Methylene chloride	11.86	1.0	10	0.33	115	65.3	123	0	0		
Tetrachloroethene	10.7	1.0	10	0	107	74.5	121	0	0		
Toluene	10.31	1.0	10	0.25	101	73	122	0	0		
trans-1,2-Dichloroethene	11.31	1.0	10	0	113	69.1	133	0	0		
Trichloroethene	10.05	1.0	10	0	100	71.1	126	0	0		
Vinyl chloride	5.37	1.0	10	0	53.7	65	137	0	0		S
Xylenes, Total	26.76	1.0	30	0.36	88	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.47	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.97	5.0	50	0	89.9	76.5	125	0	0		
Surr: Toluene-d8	46.77	5.0	50	0	93.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190730066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173765

msd

SeqNo: **2668367** TestNo: **SW8260C** RunNo: **173765**
Samp ID: **190726067-003b** Units: **µg/L** Analysis Date: **7/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.3	1.0	10	0	93	71.6	126	9.52	2.34	20.4	
1,1,2,2-Tetrachloroethane	8.93	1.0	10	0	89.3	70.1	123	7.69	14.9	18.6	
1,1,2-Trichloroethane	10.57	1.0	10	0	106	72.1	119	9.76	7.97	20	
1,1-Dichloroethane	11.32	1.0	10	0	113	70.4	126	11.07	2.23	19.2	
1,1-Dichloroethene	11.65	1.0	10	0	116	70.2	125	10.76	7.94	16.1	
1,2,3-Trichloropropane	4.53	1.0	5	0	90.6	53.7	101	3.8	17.5	20	
1,2-Dichlorobenzene	9.56	1.0	10	0	95.6	70.2	123	8.96	6.48	17.9	
1,2-Dichloroethane	10.24	1.0	10	0	102	73.5	126	10.11	1.28	15.6	
1,3-Dichlorobenzene	9.6	1.0	10	0	96	70.4	124	8.75	9.26	14.3	
1,3-Dichloropropane	5.17	1.0	5	0	103	64	125	4.54	13.0	0	
1,4-Dichlorobenzene	9.34	1.0	10	0	93.4	70.8	127	8.6	8.25	14.4	
2-Butanone	8.66	5.0	10	0	86.6	60.5	123	8.14	6.19	15	
4-Methyl-2-pentanone	10.07	5.0	10	0	101	52.8	133	9.41	6.78	11.9	
Acetone	11.43	5.0	10	0	114	56.3	135	9.97	13.6	10.6	Z
Benzene	10.01	1.0	10	0	100	70.2	127	9.93	0.802	18.4	
Carbon disulfide	5.44	1.0	5	0	109	62.2	130	5.09	6.65	13.1	
Carbon tetrachloride	9.62	1.0	10	0	96.2	56.4	137	9.68	0.622	20.3	
Chlorobenzene	10.19	1.0	10	0	102	72.7	128	9.59	6.07	19.6	
Chloroethane	6	1.0	10	0	60	71.3	135	6.28	4.56	27.8	S
Chloroform	9.95	1.0	10	0	99.5	70.2	125	9.78	1.72	20.3	
Dibromochloromethane	8.66	1.0	10	0	86.6	69.5	123	8.8	1.60	18.8	
Ethylbenzene	10.29	1.0	10	0	103	71.9	129	9.23	10.9	16.3	
Methylene chloride	11.52	1.0	10	0.33	112	65.3	123	11.86	2.91	21.4	
Tetrachloroethene	11.11	1.0	10	0	111	74.5	121	10.7	3.76	20.9	
Toluene	10.15	1.0	10	0.25	99	73	122	10.31	1.56	19.4	
trans-1,2-Dichloroethene	11.32	1.0	10	0	113	69.1	133	11.31	0.0884	16.1	
Trichloroethene	10.51	1.0	10	0	105	71.1	126	10.05	4.47	16.6	
Vinyl chloride	5.42	1.0	10	0	54.2	65	137	5.37	0.927	20.5	S
Xylenes, Total	28.92	1.0	30	0.36	95.2	72	130	26.76	7.76	16.1	
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.95	5.0	50	0	91.9	76.5	125	0	0	0	
Surr: Toluene-d8	46.58	5.0	50	0	93.2	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190730066

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	Patt Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	073019-01-SW-D-A-1	7/30/19	1220	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A				1	metals (filtered)
002	073019-02-SW-A-A-1	7/30/19	1250	P	W		✓	2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A				1	metals (filtered)
003	073019-03-SW-D-A-1	7/30/19	1315	P	W		✓	2	VOCs
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patt Gehan		7/30/19 4:00 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/30/19 4:28PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 2.0c		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

190730066

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 19073006

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	073019-03-SW-U-A-1	7/30/19	1315	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	073019-04-SW-B-B-1	7/30/19	1110	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
005	073019-03-SW-U-A-2	7/30/19	1330	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P				2	PCBs
				A					
				P				1	metals/hardness

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/30/19 4:00 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/30/19 4:25 P

Temperature: Ambient or (Chilled) Notes: 2°C

AES Bottles: (Y) ☐ N

Properly Preserved: (Y) N Notes:

Received Within Holding Times: (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190730066

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
005	073019-03-SW-U-A-2	7/30/19	1330	A	W		✓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
006	073019-05-SW-B-B-1	7/30/19		A	W		✓	1	TSS
				P					
007	073019-TB01	7/30/19		A					trip blank
				P	~~TB~~				
008	073019-TB02	7/30/19		A					trip blank
				P	TB				
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/30/19 4:00 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/30/19 4:28 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 2°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190730066

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo



190730066

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project# :
ClientReferenceNo: 60323713

DateDue: 8/1/2019

QClevel: STD+

☐ Hard Copy

8/1/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190730066-001	073019-01-SW-D-A-1	Water	7/30/2019	8/1/2019	E	C	B	D	D	A	F
190730066-002	073019-02-SW-A-A-1	Water	7/30/2019	8/1/2019	E	C	B	D	D	A	F
190730066-003	073019-03-SW-U-A-1	Water	7/30/2019	8/1/2019	E	C	B	D	D	A	F
190730066-004	073019-04-SW-B-B-1	Water	7/30/2019	8/1/2019	E	C	B	D	D	A	F
190730066-005	073019-03-SW-U-A-2	Water	7/30/2019	8/1/2019	E	C	B	D	D	A	F
190730066-006	073019-05-SW-B-B-1	Water	7/30/2019	8/1/2019							A
190730066-007	073019-TB01	Trip Blank	7/30/2019	8/1/2019			A				
190730066-008	073019-TB02	Trip Blank	7/30/2019	8/1/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by KAM

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 02, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190731058
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 7/31/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*02-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190731058		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/31/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
PCB, Total	**ND**	0.065		µg/L	1	7/31/2019 6:09:32 PM
Surr: Decachlorobiphenyl	**78.6**	57.1-135		%REC	1	7/31/2019 6:09:32 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**1.4**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 11:50:00 AM
Barium	**0.022**	0.010		mg/L	1	8/2/2019 11:50:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 11:50:00 AM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 11:50:00 AM
Copper	**ND**	0.005		mg/L	1	8/2/2019 11:50:00 AM
Lead	**ND**	0.005		mg/L	1	8/2/2019 11:50:00 AM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 11:50:00 AM
Silver	**ND**	0.010		mg/L	1	8/2/2019 11:50:00 AM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 11:50:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 12:59:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/2/2019 12:59:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 12:59:00 PM
Chromium, Dissolved	**0.005**	0.005	J	mg/L	1	8/2/2019 12:59:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 12:59:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 12:59:00 PM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/1/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 12:59:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 12:59:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 12:59:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 1:40:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 1:40:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 1:40:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 1:40:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/2/2019 1:40:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/2/2019 1:40:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 1:40:00 AM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	8/2/2019 1:40:00 AM
Surr: 4-Bromofluorobenzene	**95.9**	76.5-125		%REC	1	8/2/2019 1:40:00 AM
Surr: Toluene-d8	**93.2**	80.4-121		%REC	1	8/2/2019 1:40:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**7.2**	1.0		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-B-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/31/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
PCB, Total	**ND**	0.065		µg/L	1	7/31/2019 6:22:54 PM
Surr: Decachlorobiphenyl	**85.4**	57.1-135		%REC	1	7/31/2019 6:22:54 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 11:55:00 AM
Barium	**0.022**	0.010		mg/L	1	8/2/2019 11:55:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 11:55:00 AM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 11:55:00 AM
Copper	**ND**	0.005		mg/L	1	8/2/2019 11:55:00 AM
Lead	**ND**	0.005		mg/L	1	8/2/2019 11:55:00 AM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 11:55:00 AM
Silver	**ND**	0.010		mg/L	1	8/2/2019 11:55:00 AM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 11:55:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:04:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/2/2019 1:04:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 1:04:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:04:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:04:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:04:00 PM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-B-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/1/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:04:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:04:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:04:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 2:02:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 2:02:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 2:02:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 2:02:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 2:02:00 AM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	8/2/2019 2:02:00 AM
Surr: 4-Bromofluorobenzene	**95.6**	76.5-125		%REC	1	8/2/2019 2:02:00 AM
Surr: Toluene-d8	**91.0**	80.4-121		%REC	1	8/2/2019 2:02:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073019-02-SW-A-B-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**6.7**	1.1		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-03-SW-D-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/31/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1242	**0.466**	0.065	Z	µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/31/2019 7:56:16 PM
PCB, Total	**0.466**	0.065	Z	µg/L	1	7/31/2019 7:56:16 PM
Surr: Decachlorobiphenyl	**93.6**	57.1-135		%REC	1	7/31/2019 7:56:16 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**14.8**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 11:59:00 AM
Barium	**0.025**	0.010		mg/L	1	8/2/2019 11:59:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 11:59:00 AM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 11:59:00 AM
Copper	**ND**	0.005		mg/L	1	8/2/2019 11:59:00 AM
Lead	**0.002**	0.005	J	mg/L	1	8/2/2019 11:59:00 AM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 11:59:00 AM
Silver	**ND**	0.010		mg/L	1	8/2/2019 11:59:00 AM
Zinc	**0.006**	0.010	J	mg/L	1	8/2/2019 11:59:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:08:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/2/2019 1:08:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 1:08:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:08:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:08:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:08:00 PM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-03-SW-D-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/1/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:08:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:08:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:08:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 2:23:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/2/2019 2:23:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 2:23:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 2:23:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 2:23:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 2:23:00 AM
Surr: 1,2-Dichloroethane-d4	**94.5**	80.9-122		%REC	1	8/2/2019 2:23:00 AM
Surr: 4-Bromofluorobenzene	**97.3**	76.5-125		%REC	1	8/2/2019 2:23:00 AM
Surr: Toluene-d8	**91.5**	80.4-121		%REC	1	8/2/2019 2:23:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-03-SW-D-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**19.5**	1.3		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-04-SW-B-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/31/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
PCB, Total	**ND**	0.065		µg/L	1	7/31/2019 6:49:34 PM
Surr: Decachlorobiphenyl	**100**	57.1-135		%REC	1	7/31/2019 6:49:34 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 12:05:00 PM
Barium	**0.022**	0.010		mg/L	1	8/2/2019 12:05:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 12:05:00 PM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 12:05:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 12:05:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 12:05:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 12:05:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 12:05:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 12:05:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:15:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/2/2019 1:15:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 1:15:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:15:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:15:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:15:00 PM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-04-SW-B-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/1/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:15:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:15:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:15:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/2/2019 2:44:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 2:44:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/2/2019 2:44:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 2:44:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 2:44:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	SN	µg/L	1	8/2/2019 2:44:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 2:44:00 AM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	8/2/2019 2:44:00 AM
Surr: 4-Bromofluorobenzene	**98.8**	76.5-125		%REC	1	8/2/2019 2:44:00 AM
Surr: Toluene-d8	**90.7**	80.4-121		%REC	1	8/2/2019 2:44:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-04-SW-B-A-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**5.6**	1.1		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-05-SW-B-B-1
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**11.2**	1.1		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-3
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 7/31/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
PCB, Total	**ND**	0.065		µg/L	1	7/31/2019 7:02:55 PM
Surr: Decachlorobiphenyl	**43.8**	57.1-135	S	%REC	1	7/31/2019 7:02:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 7/31/2019)						
Mercury	**ND**	0.5		ng/L	1	8/1/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 12:09:00 PM
Barium	**ND**	0.010		mg/L	1	8/2/2019 12:09:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 12:09:00 PM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 12:09:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 12:09:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 12:09:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 12:09:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 12:09:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 12:09:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/1/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:23:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:23:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 1:23:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:23:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:23:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:23:00 PM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-3
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/1/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 1:23:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:23:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 1:23:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Methylene chloride	**0.8**	1.0	J	µg/L	1	8/2/2019 3:06:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 3:06:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Chloroform	**8.4**	1.0	B	µg/L	1	8/2/2019 3:06:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 3:06:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 3:06:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 3:06:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 3:06:00 AM
Surr: 1,2-Dichloroethane-d4	**94.1**	80.9-122		%REC	1	8/2/2019 3:06:00 AM
Surr: 4-Bromofluorobenzene	**93.5**	76.5-125		%REC	1	8/2/2019 3:06:00 AM
Surr: Toluene-d8	**91.0**	80.4-121		%REC	1	8/2/2019 3:06:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-01-SW-U-A-3
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/1/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/1/2019

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-TB01
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Methylene chloride	**2.8**	1.0	B	µg/L	1	8/2/2019 3:27:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 3:27:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Chloroform	**0.3**	1.0	J	µg/L	1	8/2/2019 3:27:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/2/2019 3:27:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 3:27:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 3:27:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 3:27:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 3:27:00 AM
Surr: 1,2-Dichloroethane-d4	**97.0**	80.9-122		%REC	1	8/2/2019 3:27:00 AM
Surr: 4-Bromofluorobenzene	**97.8**	76.5-125		%REC	1	8/2/2019 3:27:00 AM
Surr: Toluene-d8	**92.0**	80.4-121		%REC	1	8/2/2019 3:27:00 AM

Adirondack Environmental Services, Inc

Date: *02-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	073119-TB02
Work Order:	**190731058**	**Collection Date:**	7/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190731058-008
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Methylene chloride	**2.7**	1.0	B	µg/L	1	8/2/2019 3:49:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/2/2019 3:49:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Chloroform	**0.3**	1.0	J	µg/L	1	8/2/2019 3:49:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 3:49:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 3:49:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 3:49:00 AM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/2/2019 3:49:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 3:49:00 AM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	8/2/2019 3:49:00 AM
Surr: 4-Bromofluorobenzene	**94.8**	76.5-125		%REC	1	8/2/2019 3:49:00 AM
Surr: Toluene-d8	**93.5**	80.4-121		%REC	1	8/2/2019 3:49:00 AM

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74746

MBLK

SeqNo: **2670160** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2670172** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2670178** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **MB-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2670161** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.79	0.500	10	0	87.9	77	123	0	0		

LCS

SeqNo: **2670173** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.91	0.500	10	0	89.1	77	123	0	0		

LCS

SeqNo: **2670179** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **LCS-74746** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.87	0.500	10	0	88.7	77	123	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74746

MS

SeqNo: **2670163** **PrepDate:** TestNo: **E1631** RunNo: **173854**
Samp ID: **190730066-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15	0.500	12.5	2.83	97.4	71	125	0	0		

MS

SeqNo: **2670170** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731058-001 (073119-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	1.36	79.5	71	125	0	0		

MS

SeqNo: **2670183** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731042-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.32	0.500	12.5	0.616	69.6	71	125	0	0		S

MSD

SeqNo: **2670164** **PrepDate:** TestNo: **E1631** RunNo: **173854**
Samp ID: **190730066-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.6	0.500	12.5	2.83	86.2	71	125	15	9.79	24	

MSD

SeqNo: **2670171** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731058-001 (073119-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	1.36	79.5	71	125	11.3	0	24	

MSD

SeqNo: **2670184** **PrepDate:7/31/2019** TestNo: **E1631** RunNo: **173854**
Samp ID: **190731042-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.14	0.500	12.5	0.616	68.2	71	125	9.32	1.95	24	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74762

dup

SeqNo: **2669459** PrepDate:**7/31/2019** TestNo: **E608** RunNo: **173816**
Samp ID: **190731039-001a** PrepRef: Units: **µg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	0.0654	0.0650	0	0	0	0	0	0.0578	12.3	31.2	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.1118	0	0.1	0	112	48.8	140	0	0	0	

mblk

SeqNo: **2669453** PrepDate:**7/31/2019** TestNo: **SW8082A** RunNo: **173816**
Samp ID: **mb-74762** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.0128	0.0650									J
Surr: Decachlorobiphenyl	0.0838	0.0100	0.1	0	83.8	57.1	135	0	0		

lcs

SeqNo: **2669460** PrepDate:**7/31/2019** TestNo: **SW8082A** RunNo: **173816**
Samp ID: **lcs-74762** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1658	0.0650	0.2	0	82.9	60	140	0	0		
Surr: Decachlorobiphenyl	0.1416	0.0100	0.1	0	142	57.1	135	0	0		S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74762

dup	SeqNo: **2669462**	**PrepDate:7/31/2019**	TestNo: **SW8082A**	RunNo: **173816**
	Samp ID: **190731058-003c**	**PrepRef:**	Units: **µg/L**	Analysis Date: **7/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1242	0.2934	0.0930	0	0	0	0	0	0.4656	45.4	30	Z
Aroclor 1248	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1262	ND	0.0930	0	0	0	0	0	0	0	30	
Aroclor 1268	ND	0.0930	0	0	0	0	0	0	0	30	
PCB, Total	0.2934	0.0930	0	0	0	0	0	0.4656	45.4	30	Z
Surr: Decachlorobiphenyl	0.1669	0.0140	0	0	0	0	0	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74764

LCS

SeqNo: **2670269** PrepDate:8/1/2019 8: TestNo: **SM2540D** RunNo: **173863**
Samp ID: **LCS-74764** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	490	0	95.5	86.5	114	0	0		

LCS

SeqNo: **2670803** PrepDate:8/1/2019 8: TestNo: **SM2540D** RunNo: **173884**
Samp ID: **LCS-74764** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	490	0	95.5	86.5	114	0	0		

DUP

SeqNo: **2670813** PrepDate:8/1/2019 8: TestNo: **SM2540D** RunNo: **173884**
Samp ID: **190729028-001** PrepRef: Units: **mg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	310	20.0	0	0	0	0	0	296	4.62	10	

DUP

SeqNo: **2670818** PrepDate:8/1/2019 8: TestNo: **SM2540D** RunNo: **173884**
Samp ID: **190730003-001** PrepRef: Units: **mg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	30.67	6.70	0	0	0	0	0	34	10.3	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74766

MBLK

SeqNo: **2671046** PrepDate:8/1/2019 8: TestNo: **E200.7F** RunNo: **173899**
Samp ID: **MB-74766** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2671047** PrepDate:8/1/2019 8: TestNo: **E200.7F** RunNo: **173899**
Samp ID: **LCS-74766** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.984	0.00500	2	0	99.2	85	115	0	0		
Barium, Dissolved	1.99	0.0100	2	0	99.5	89	112	0	0		
Cadmium, Dissolved	2.108	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.951	0.00500	2	0	97.6	89.1	109	0	0		
Copper, Dissolved	2.063	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.145	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.007	0.00500	2	0	100	85	115	0	0		
Silver, Dissolved	0.5276	0.0100	0.5	0	106	85	115	0	0		
Zinc, Dissolved	2.079	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2671059** PrepDate:8/1/2019 8: TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190731058-006 (073119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03885	0.00500	0.04	0	97.1	75	123	0	0		
Barium, Dissolved	2.033	0.0100	2	0	102	75	124	0	0		
Cadmium, Dissolved	0.0532	0.00500	0.05	0	106	75	125	0	0		
Chromium, Dissolved	0.1955	0.00500	0.2	0	97.7	77.2	117	0	0		
Copper, Dissolved	0.2538	0.00500	0.25	0	102	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74766

MS

SeqNo: **2671059** PrepDate:**8/1/2019 8:** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190731058-006 (073119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02196	0.00500	0.02	0	110	75	125	0	0		
Selenium, Dissolved	0.01121	0.00500	0.01	0	112	75	125	0	0		
Silver, Dissolved	0.04782	0.0100	0.05	0	95.6	75	125	0	0		
Zinc, Dissolved	0.5445	0.0100	0.5	0	109	75	121	0	0		

DUP

SeqNo: **2671053** PrepDate:**8/1/2019 8:** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190731058-006** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	ND	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.001736	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	0.001822	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0007572	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002022	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74767

MBLK

SeqNo: **2671033** PrepDate:8/1/2019 8: TestNo: **E200.7** RunNo: **173899**
Samp ID: **MB-74767** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2671034** PrepDate:8/1/2019 8: TestNo: **E200.7** RunNo: **173899**
Samp ID: **LCS-74767** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.966	0.00500	2	0	98.3	89.1	111	0	0		
Barium	1.988	0.0100	2	0	99.4	85	115	0	0		
Cadmium	2.112	0.00500	2	0	106	85	115	0	0		
Chromium	1.912	0.00500	2	0	95.6	89.7	109	0	0		
Copper	2.004	0.00500	2	0	100	85	115	0	0		
Lead	2.157	0.00500	2	0	108	88.1	112	0	0		
Selenium	2.016	0.00500	2	0	101	87.5	112	0	0		
Silver	0.5137	0.0100	0.5	0	103	85.2	115	0	0		
Zinc	2.071	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2671041** PrepDate:8/1/2019 8: TestNo: **E200.7** RunNo: **173899**
Samp ID: **190731058-006 (073119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03962	0.00500	0.04	0	99.1	75	125	0	0		
Barium	2.043	0.0100	2	0	102	75	119	0	0		
Cadmium	0.05394	0.00500	0.05	0	108	75	118	0	0		
Chromium	0.1888	0.00500	0.2	0	94.4	75	124	0	0		
Copper	0.2536	0.00500	0.25	0	101	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74767

MS

SeqNo: **2671041** PrepDate:**8/1/2019 8:** TestNo: **E200.7** RunNo: **173899**
Samp ID: **190731058-006 (073119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02163	0.00500	0.02	0	108	75	125	0	0		
Selenium	0.01136	0.00500	0.01	0	114	75	125	0	0		
Silver	0.05229	0.0100	0.05	0	105	75	125	0	0		
Zinc	0.5523	0.0100	0.5	0	110	76.9	125	0	0		

DUP

SeqNo: **2671040** PrepDate:**8/1/2019 8:** TestNo: **E200.7** RunNo: **173899**
Samp ID: **190731058-006** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	ND	0.0100	0	0	0	0	0	0	0	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.001577	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	0.00119	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.0007473	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173881

mblk

SeqNo: **2670722** TestNo: **SW8260C** RunNo: **173881**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.3	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.2	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.39	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	1.07	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	2.06	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.98	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.78	5.0	50	0	91.6	76.5	125	0	0		
Surr: Toluene-d8	44.42	5.0	50	0	88.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173881

lcs

SeqNo: **2670720** TestNo: **SW8260C** RunNo: **173881**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.86	1.0	10	0	88.6	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.38	1.0	10	0	63.8	72.3	118	0	0		S
1,1,2-Trichloroethane	9	1.0	10	0	90	73.1	123	0	0		
1,1-Dichloroethane	10.42	1.0	10	0	104	73.2	127	0	0		
1,1-Dichloroethene	9.84	1.0	10	0	98.4	70.3	128	0	0		
1,2,3-Trichloropropane	3.68	1.0	5	0	73.6	68.4	115	0	0		
1,2-Dichlorobenzene	7.6	1.0	10	0	76	71	124	0	0		
1,2-Dichloroethane	9.91	1.0	10	0	99.1	72.5	127	0	0		
1,3-Dichlorobenzene	7.8	1.0	10	0	78	72.2	121	0	0		
1,3-Dichloropropane	3.81	1.0	5	0	76.2	76	122	0	0		
1,4-Dichlorobenzene	7.39	1.0	10	0	73.9	71.7	127	0	0		
2-Butanone	10.26	5.0	10	0	103	65.1	132	0	0		
4-Methyl-2-pentanone	7	5.0	10	0	70	68.7	118	0	0		
Acetone	6.41	5.0	10	0	64.1	69.2	133	0	0		S
Benzene	9.02	1.0	10	0	90.2	71.2	122	0	0		
Carbon disulfide	4.32	1.0	5	0	86.4	67.8	134	0	0		
Carbon tetrachloride	8.28	1.0	10	0	82.8	74.5	122	0	0		
Chlorobenzene	8.86	1.0	10	0	88.6	72.7	124	0	0		
Chloroethane	9.5	1.0	10	0	95	72.3	136	0	0		
Chloroform	10.55	1.0	10	0	106	71.6	133	0	0		B
Dibromochloromethane	7.92	1.0	10	0	79.2	70.6	124	0	0		
Ethylbenzene	8.74	1.0	10	0	87.4	70.9	126	0	0		
Methylene chloride	12.9	1.0	10	0	129	66.3	130	0	0		B
Tetrachloroethene	9.08	1.0	10	0	90.8	72.4	119	0	0		
Toluene	9.17	1.0	10	0	91.7	71.8	116	0	0		
trans-1,2-Dichloroethene	10.25	1.0	10	0	103	70.3	120	0	0		
Trichloroethene	9.76	1.0	10	0	97.6	73	127	0	0		
Vinyl chloride	10.19	1.0	10	0	102	65.2	134	0	0		
Xylenes, Total	26.12	1.0	30	0	87.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.89	5.0	50	0	99.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.21	5.0	50	0	94.4	76.5	125	0	0		
Surr: Toluene-d8	45.61	5.0	50	0	91.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173881

lcsd

SeqNo: **2670721** TestNo: **SW8260C** RunNo: **173881**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.42	1.0	10	0	74.2	72.3	121	8.86	17.7	25	
1,1,2,2-Tetrachloroethane	5.11	1.0	10	0	51.1	72.3	118	6.38	22.1	25	S
1,1,2-Trichloroethane	8.07	1.0	10	0	80.7	73.1	123	9	10.9	25	
1,1-Dichloroethane	9.33	1.0	10	0	93.3	73.2	127	10.42	11.0	25	
1,1-Dichloroethene	7.73	1.0	10	0	77.3	70.3	128	9.84	24.0	25	
1,2,3-Trichloropropane	3.11	1.0	5	0	62.2	68.4	115	3.68	16.8	25	S
1,2-Dichlorobenzene	7.57	1.0	10	0	75.7	71	124	7.6	0.396	25	
1,2-Dichloroethane	9.1	1.0	10	0	91	72.5	127	9.91	8.52	25	
1,3-Dichlorobenzene	7.2	1.0	10	0	72	72.2	121	7.8	8.00	25	S
1,3-Dichloropropane	3.9	1.0	5	0	78	76	122	3.81	2.33	0	
1,4-Dichlorobenzene	7.7	1.0	10	0	77	71.7	127	7.39	4.11	25	
2-Butanone	9.28	5.0	10	0	92.8	65.1	132	10.26	10.0	25	
4-Methyl-2-pentanone	6.94	5.0	10	0	69.4	68.7	118	7	0.861	25	
Acetone	6.69	5.0	10	0	66.9	69.2	133	6.41	4.27	25	S
Benzene	8.07	1.0	10	0	80.7	71.2	122	9.02	11.1	25	
Carbon disulfide	3.9	1.0	5	0	78	67.8	134	4.32	10.2	25	
Carbon tetrachloride	5.32	1.0	10	0	53.2	74.5	122	8.28	43.5	25	SZ
Chlorobenzene	7.7	1.0	10	0	77	72.7	124	8.86	14.0	25	
Chloroethane	9.95	1.0	10	0	99.5	72.3	136	9.5	4.63	25	
Chloroform	9.68	1.0	10	0	96.8	71.6	133	10.55	8.60	25	B
Dibromochloromethane	7.14	1.0	10	0	71.4	70.6	124	7.92	10.4	25	
Ethylbenzene	7.29	1.0	10	0	72.9	70.9	126	8.74	18.1	25	
Methylene chloride	11.85	1.0	10	0	118	66.3	130	12.9	8.48	25	B
Tetrachloroethene	8.26	1.0	10	0	82.6	72.4	119	9.08	9.46	25	
Toluene	8	1.0	10	0	80	71.8	116	9.17	13.6	25	
trans-1,2-Dichloroethene	9.36	1.0	10	0	93.6	70.3	120	10.25	9.08	25	
Trichloroethene	9.15	1.0	10	0	91.5	73	127	9.76	6.45	25	
Vinyl chloride	9.77	1.0	10	0	97.7	65.2	134	10.19	4.21	25	
Surr: 1,2-Dichloroethane-d4	47.05	5.0	50	0	94.1	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	44.23	5.0	50	0	88.5	76.5	125	0	0	25	
Surr: Toluene-d8	45.78	5.0	50	0	91.6	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173881

ms	SeqNo: **2670730**	TestNo: **SW8260C**	RunNo: **173881**
	Samp ID: **190731058-004b (073119-04-SW-B-**	Units: **µg/L**	Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.79	1.0	10	0	87.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	5.86	1.0	10	0	58.6	70.1	123	0	0		S
1,1,2-Trichloroethane	8.56	1.0	10	0	85.6	72.1	119	0	0		
1,1-Dichloroethane	9.95	1.0	10	0	99.5	70.4	126	0	0		
1,1-Dichloroethene	9.95	1.0	10	0	99.5	70.2	125	0	0		
1,2,3-Trichloropropane	3.5	1.0	5	0	70	53.7	101	0	0		
1,2-Dichlorobenzene	7.19	1.0	10	0	71.9	70.2	123	0	0		
1,2-Dichloroethane	8.96	1.0	10	0.11	88.5	73.5	126	0	0		
1,3-Dichlorobenzene	7.35	1.0	10	0	73.5	70.4	124	0	0		
1,3-Dichloropropane	3.73	1.0	5	0	74.6	64	125	0	0		
1,4-Dichlorobenzene	6.76	1.0	10	0	67.6	70.8	127	0	0		S
2-Butanone	8.18	5.0	10	0	81.8	60.5	123	0	0		
4-Methyl-2-pentanone	6.79	5.0	10	0	67.9	52.8	133	0	0		
Acetone	5.96	5.0	10	0	59.6	56.3	135	0	0		
Benzene	8.78	1.0	10	0	87.8	70.2	127	0	0		
Carbon disulfide	4.29	1.0	5	0	85.8	62.2	130	0	0		
Carbon tetrachloride	8.43	1.0	10	0	84.3	56.4	137	0	0		
Chlorobenzene	9.17	1.0	10	0	91.7	72.7	128	0	0		
Chloroethane	9.61	1.0	10	0	96.1	71.3	135	0	0		
Chloroform	9.38	1.0	10	0	93.8	70.2	125	0	0		B
Dibromochloromethane	7.39	1.0	10	0	73.9	69.5	123	0	0		
Ethylbenzene	9.08	1.0	10	0	90.8	71.9	129	0	0		
Methylene chloride	10.78	1.0	10	0.32	105	65.3	123	0	0		B
Tetrachloroethene	9.16	1.0	10	0	91.6	74.5	121	0	0		
Toluene	8.78	1.0	10	0	87.8	73	122	0	0		
trans-1,2-Dichloroethene	9.73	1.0	10	0	97.3	69.1	133	0	0		
Trichloroethene	9.4	1.0	10	0	94	71.1	126	0	0		
Vinyl chloride	10.55	1.0	10	0	106	65	137	0	0		
Xylenes, Total	26.59	1.0	30	0	88.6	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.92	5.0	50	0	97.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.04	5.0	50	0	98.1	76.5	125	0	0		
Surr: Toluene-d8	46.13	5.0	50	0	92.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190731058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173881

msd

SeqNo: **2670731** TestNo: **SW8260C** RunNo: **173881**
Samp ID: **190731058-004b (073119-04-SW-B-** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.71	1.0	10	0	87.1	71.6	126	8.79	0.914	20.4	
1,1,2,2-Tetrachloroethane	6.14	1.0	10	0	61.4	70.1	123	5.86	4.67	18.6	S
1,1,2-Trichloroethane	8.29	1.0	10	0	82.9	72.1	119	8.56	3.20	20	
1,1-Dichloroethane	9.71	1.0	10	0	97.1	70.4	126	9.95	2.44	19.2	
1,1-Dichloroethene	9.47	1.0	10	0	94.7	70.2	125	9.95	4.94	16.1	
1,2,3-Trichloropropane	3.25	1.0	5	0	65	53.7	101	3.5	7.41	20	
1,2-Dichlorobenzene	7.95	1.0	10	0	79.5	70.2	123	7.19	10.0	17.9	
1,2-Dichloroethane	8.57	1.0	10	0.11	84.6	73.5	126	8.96	4.45	15.6	
1,3-Dichlorobenzene	7.78	1.0	10	0	77.8	70.4	124	7.35	5.68	14.3	
1,3-Dichloropropane	3.72	1.0	5	0	74.4	64	125	3.73	0.268	0	
1,4-Dichlorobenzene	7.64	1.0	10	0	76.4	70.8	127	6.76	12.2	14.4	
2-Butanone	8.53	5.0	10	0	85.3	60.5	123	8.18	4.19	15	
4-Methyl-2-pentanone	6.86	5.0	10	0	68.6	52.8	133	6.79	1.03	11.9	
Acetone	4.38	5.0	10	0	43.8	56.3	135	5.96	0	10.6	JS
Benzene	8.58	1.0	10	0	85.8	70.2	127	8.78	2.30	18.4	
Carbon disulfide	4.26	1.0	5	0	85.2	62.2	130	4.29	0.702	13.1	
Carbon tetrachloride	8.38	1.0	10	0	83.8	56.4	137	8.43	0.595	20.3	
Chlorobenzene	8.53	1.0	10	0	85.3	72.7	128	9.17	7.23	19.6	
Chloroethane	9.24	1.0	10	0	92.4	71.3	135	9.61	3.93	27.8	
Chloroform	8.99	1.0	10	0	89.9	70.2	125	9.38	4.25	20.3	B
Dibromochloromethane	7.35	1.0	10	0	73.5	69.5	123	7.39	0.543	18.8	
Ethylbenzene	8.22	1.0	10	0	82.2	71.9	129	9.08	9.94	16.3	
Methylene chloride	10.14	1.0	10	0.32	98.2	65.3	123	10.78	6.12	21.4	B
Tetrachloroethene	8.67	1.0	10	0	86.7	74.5	121	9.16	5.50	20.9	
Toluene	8.74	1.0	10	0	87.4	73	122	8.78	0.457	19.4	
trans-1,2-Dichloroethene	9.76	1.0	10	0	97.6	69.1	133	9.73	0.308	16.1	
Trichloroethene	9.11	1.0	10	0	91.1	71.1	126	9.4	3.13	16.6	
Vinyl chloride	9.87	1.0	10	0	98.7	65	137	10.55	6.66	20.5	
Xylenes, Total	24.43	1.0	30	0	81.4	72	130	26.59	8.47	16.1	
Surr: 1,2-Dichloroethane-d4	48.63	5.0	50	0	97.3	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.34	5.0	50	0	94.7	76.5	125	0	0	0	
Surr: Toluene-d8	45.35	5.0	50	0	90.7	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

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Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190731058

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Cohan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	073119-01-SW-U-A-1	7/31/19	0930	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	073019-02-SW-A-B-1	7/31/19	1000	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P				2	PCBs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	073119-03-SW-D-A-1	7/31/19	1015	A	W		✓	1	metals (filtered)
				P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/31/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/31/19 4:20PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 16°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental S

Demo
190731058

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CHAIN OF CUSTODY RECORD

AES Work Order # 19073105S

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gelan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
03001	073119-03-SW-D-A-1	7/31/19	1015	A	W		✓	2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
04002	073119-04-SW-B-A-1	7/31/19	0910	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
05003	073119-05-SW-B-B-1	7/31/19	1045	A	W		✓	1	TSS
				P					
06004	073119-01-SW-U-A-3	7/31/19	1145	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/31/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/31/19 4:20pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 16°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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CHAIN OF CUSTODY RECORD

AES Work Order # 1907310 5 8

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	073119-01-SW-U-A-3	7/31/19	1145	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A P	↓		↓	1	TSS
007	073119-TB01	7/31/19		A P	TB				trip blank
008	073119-TB02	7/31/19		A P	TB				trip blank
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/31/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		7/31/19 1720

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or ~~Chilled~~	Y ☒ N ☐	(Y) N	(Y) N
Notes: 16 °C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 05, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190801076
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/1/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*05-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190801076		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-01-SW-D-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/1/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1242	**0.057**	0.065	J	µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/1/2019 8:55:23 PM
PCB, Total	**0.057**	0.065	J	µg/L	1	8/1/2019 8:55:23 PM
Surr: Decachlorobiphenyl	**102**	57.1-135		%REC	1	8/1/2019 8:55:23 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.9**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 2:59:00 PM
Barium	**0.021**	0.010		mg/L	1	8/2/2019 2:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 2:59:00 PM
Chromium	**0.008**	0.005		mg/L	1	8/2/2019 2:59:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 2:59:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 2:59:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 2:59:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 2:59:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 2:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 3:54:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/2/2019 3:54:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 3:54:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 3:54:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 3:54:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 3:54:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-01-SW-D-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/2/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 3:54:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 3:54:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 3:54:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 1:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 1:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 1:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 1:13:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/2/2019 1:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 1:13:00 PM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	8/2/2019 1:13:00 PM
Surr: 4-Bromofluorobenzene	**92.5**	76.5-125		%REC	1	8/2/2019 1:13:00 PM
Surr: Toluene-d8	**90.5**	80.4-121		%REC	1	8/2/2019 1:13:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-01-SW-D-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/2/2019)						
TSS (Residue, Non-Filterable)	**23.6**	1.3		mg/L	1	8/2/2019

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-02-SW-A-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/1/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
PCB, Total	**ND**	0.065		µg/L	1	8/1/2019 9:08:42 PM
Surr: Decachlorobiphenyl	**98.8**	57.1-135		%REC	1	8/1/2019 9:08:42 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.3**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 3:29:00 PM
Barium	**0.021**	0.010		mg/L	1	8/2/2019 3:29:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 3:29:00 PM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 3:29:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 3:29:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 3:29:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 3:29:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 3:29:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 3:29:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:34:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/2/2019 4:34:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 4:34:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:34:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:34:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:34:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-02-SW-A-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/2/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:34:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:34:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:34:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 1:35:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 1:35:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 1:35:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 1:35:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/2/2019 1:35:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 1:35:00 PM
Surr: 1,2-Dichloroethane-d4	**94.7**	80.9-122		%REC	1	8/2/2019 1:35:00 PM
Surr: 4-Bromofluorobenzene	**97.4**	76.5-125		%REC	1	8/2/2019 1:35:00 PM
Surr: Toluene-d8	**90.2**	80.4-121		%REC	1	8/2/2019 1:35:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-02-SW-A-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/2/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	8/2/2019

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-03-SW-U-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/1/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1242	**0.034**	0.065	J	µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/1/2019 9:22:00 PM
PCB, Total	**0.034**	0.065	J	µg/L	1	8/1/2019 9:22:00 PM
Surr: Decachlorobiphenyl	**119**	57.1-135		%REC	1	8/1/2019 9:22:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 3:35:00 PM
Barium	**0.021**	0.010		mg/L	1	8/2/2019 3:35:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 3:35:00 PM
Chromium	**0.004**	0.005	J	mg/L	1	8/2/2019 3:35:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 3:35:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 3:35:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 3:35:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 3:35:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 3:35:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:40:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/2/2019 4:40:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 4:40:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:40:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:40:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:40:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-03-SW-U-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/2/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:40:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:40:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:40:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/2/2019 1:56:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 1:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 1:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 1:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 1:56:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 1:56:00 PM
Surr: 1,2-Dichloroethane-d4	**97.7**	80.9-122		%REC	1	8/2/2019 1:56:00 PM
Surr: 4-Bromofluorobenzene	**94.3**	76.5-125		%REC	1	8/2/2019 1:56:00 PM
Surr: Toluene-d8	**89.9**	80.4-121		%REC	1	8/2/2019 1:56:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-03-SW-U-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/2/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	8/2/2019

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-04-SW-B-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/1/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
PCB, Total	**ND**	0.065		µg/L	1	8/1/2019 9:35:19 PM
Surr: Decachlorobiphenyl	**101**	57.1-135		%REC	1	8/1/2019 9:35:19 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**2.1**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Total Hardness (As CaCO3)	**86**	5		mg/L CaCO3	1	8/2/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/2/2019 3:39:00 PM
Barium	**0.021**	0.010		mg/L	1	8/2/2019 3:39:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/2/2019 3:39:00 PM
Chromium	**ND**	0.005		mg/L	1	8/2/2019 3:39:00 PM
Copper	**ND**	0.005		mg/L	1	8/2/2019 3:39:00 PM
Lead	**ND**	0.005		mg/L	1	8/2/2019 3:39:00 PM
Selenium	**ND**	0.005		mg/L	1	8/2/2019 3:39:00 PM
Silver	**ND**	0.010		mg/L	1	8/2/2019 3:39:00 PM
Zinc	**ND**	0.010		mg/L	1	8/2/2019 3:39:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/2/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:48:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/2/2019 4:48:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/2/2019 4:48:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:48:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:48:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:48:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-04-SW-B-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/2/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/2/2019 4:48:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:48:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/2/2019 4:48:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/2/2019 2:18:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 2:18:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 2:18:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 2:18:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 2:18:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 2:18:00 PM
Surr: 1,2-Dichloroethane-d4	**97.8**	80.9-122		%REC	1	8/2/2019 2:18:00 PM
Surr: 4-Bromofluorobenzene	**94.8**	76.5-125		%REC	1	8/2/2019 2:18:00 PM
Surr: Toluene-d8	**90.8**	80.4-121		%REC	1	8/2/2019 2:18:00 PM

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-04-SW-B-A-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/2/2019)						
TSS (Residue, Non-Filterable)	**7.3**	1.0		mg/L	1	8/2/2019

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-05-SW-B-B-1
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/2/2019)						
TSS (Residue, Non-Filterable)	**5.4**	1.0		mg/L	1	8/2/2019

Adirondack Environmental Services, Inc

Date: *05-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080119-TB01
Work Order:	**190801076**	**Collection Date:**	8/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190801076-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Methylene chloride	**2.7**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 2:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Chloroform	**0.4**	1.0	J	µg/L	1	8/2/2019 2:39:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 2:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 2:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 2:39:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 2:39:00 PM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	8/2/2019 2:39:00 PM
Surr: 4-Bromofluorobenzene	**93.9**	76.5-125		%REC	1	8/2/2019 2:39:00 PM
Surr: Toluene-d8	**89.8**	80.4-121		%REC	1	8/2/2019 2:39:00 PM

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74793

mblk

SeqNo: **2670409** PrepDate:**8/1/2019** TestNo: **SW8082A** RunNo: **173875**
Samp ID: **mb-74793** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.0184	0.0650									J
Surr: Decachlorobiphenyl	0.072	0.0100	0.1	0	72	57.1	135	0	0		

lcs

SeqNo: **2670410** PrepDate:**8/1/2019** TestNo: **SW8082A** RunNo: **173875**
Samp ID: **lcs-74793** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3886	0.0650	0.5	0	77.7	60	140	0	0		
Surr: Decachlorobiphenyl	0.0906	0.0100	0.1	0	90.6	57.1	135	0	0		

lcsd

SeqNo: **2671304** PrepDate:**8/1/2019** TestNo: **SW8082A** RunNo: **173915**
Samp ID: **lcsd-74793** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.462	0.0650	0.5	0	92.4	60	140	0.3886	17.3	30	
Surr: Decachlorobiphenyl	0.1114	0.0100	0.1	0	111	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74796

LCS

SeqNo: **2672078** PrepDate:8/2/2019 9: TestNo: **SM2540D** RunNo: **173945**
Samp ID: **LCS-74796** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	504	40.0	490	0	103	86.5	114	0	0		

DUP

SeqNo: **2672080** PrepDate:8/2/2019 9: TestNo: **SM2540D** RunNo: **173945**
Samp ID: **190730010-003** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	306	20.0	0	0	0	0	0	278	9.59	10	

DUP

SeqNo: **2672084** PrepDate:8/2/2019 9: TestNo: **SM2540D** RunNo: **173945**
Samp ID: **190731012-001** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	28	3.30	0	0	0	0	0	25.67	8.70	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74798

MBLK

SeqNo: **2671687** PrepDate:**8/2/2019 1** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **MB-74798** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2671688** PrepDate:**8/2/2019 1** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **LCS-74798** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.003	0.00500	2	0	100	85	115	0	0		
Barium, Dissolved	2.004	0.0100	2	0	100	89	112	0	0		
Cadmium, Dissolved	2.112	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	1.962	0.00500	2	0	98.1	89.1	109	0	0		
Copper, Dissolved	2.068	0.00500	2	0	103	86.8	115	0	0		
Lead, Dissolved	2.144	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.013	0.00500	2	0	101	85	115	0	0		
Silver, Dissolved	0.5227	0.0100	0.5	0	105	85	115	0	0		
Zinc, Dissolved	2.079	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2671691** PrepDate:**8/2/2019 1** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190801076-001 (080119-01-SW-D-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04178	0.00500	0.04	0	104	75	123	0	0		
Barium, Dissolved	2.089	0.0100	2	0.02182	103	75	124	0	0		
Cadmium, Dissolved	0.0522	0.00500	0.05	0	104	75	125	0	0		
Chromium, Dissolved	0.2017	0.00500	0.2	0	101	77.2	117	0	0		
Copper, Dissolved	0.2647	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74798

MS

SeqNo: **2671691** PrepDate:**8/2/2019 1** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190801076-001 (080119-01-SW-D-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02144	0.00500	0.02	0	107	75	125	0	0		
Selenium, Dissolved	0.01209	0.00500	0.01	0	121	75	125	0	0		
Silver, Dissolved	0.05257	0.0100	0.05	0	105	75	125	0	0		
Zinc, Dissolved	0.5345	0.0100	0.5	0	107	75	121	0	0		

DUP

SeqNo: **2671690** PrepDate:**8/2/2019 1** TestNo: **E200.7F** RunNo: **173899**
Samp ID: **190801076-001** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001076	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02122	0.0100	0	0	0	0	0	0.02182	2.81	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.003088	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001213	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0006193	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.001853	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74800

MBLK

SeqNo: **2671675** PrepDate:8/2/2019 1 TestNo: **E200.7** RunNo: **173899**
Samp ID: **MB-74800** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2671676** PrepDate:8/2/2019 1 TestNo: **E200.7** RunNo: **173899**
Samp ID: **LCS-74800** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.993	0.00500	2	0	99.6	89.1	111	0	0		
Barium	2.012	0.0100	2	0	101	85	115	0	0		
Cadmium	2.13	0.00500	2	0	107	85	115	0	0		
Chromium	1.932	0.00500	2	0	96.6	89.7	109	0	0		
Copper	2.02	0.00500	2	0	101	85	115	0	0		
Lead	2.154	0.00500	2	0	108	88.1	112	0	0		
Selenium	2.046	0.00500	2	0	102	87.5	112	0	0		
Silver	0.522	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	2.085	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2671679** PrepDate:8/2/2019 1 TestNo: **E200.7** RunNo: **173899**
Samp ID: **190801076-001 (080119-01-SW-D-** PrepRef: Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0388	0.00500	0.04	0	97	75	125	0	0		
Barium	2.08	0.0100	2	0.02132	103	75	119	0	0		
Cadmium	0.05206	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.2057	0.00500	0.2	0.007617	99	75	124	0	0		
Copper	0.2657	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74800

MS

SeqNo: **2671679** **PrepDate:8/2/2019 1** TestNo: **E200.7** RunNo: **173899**
Samp ID: **190801076-001 (080119-01-SW-D-** **PrepRef:** Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02072	0.00500	0.02	0	104	75	125	0	0		
Selenium	0.00958	0.00500	0.01	0	95.8	75	125	0	0		
Silver	0.04906	0.0100	0.05	0	98.1	75	125	0	0		
Zinc	0.5352	0.0100	0.5	0	107	76.9	125	0	0		

DUP

SeqNo: **2671678** **PrepDate:8/2/2019 1** TestNo: **E200.7** RunNo: **173899**
Samp ID: **190801076-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.002152	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02136	0.0100	0	0	0	0	0	0.02132	0.187	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.006895	0.00500	0	0	0	0	0	0.007617	9.96	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	0.0002173	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002502	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74840

MBLK

SeqNo: **2672101** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **MB-74840** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2672102** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **LCS-74840** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.1	0.500	10	0	111	77	123	0	0		

MS

SeqNo: **2672104** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **190801076-001 (080119-01-SW-D-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	24.7	0.500	25	1.86	91.4	71	125	0	0		

MS

SeqNo: **2672111** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **190802076-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	28.9	0.500	25	2.54	105	71	125	0	0		

MSD

SeqNo: **2672105** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **190801076-001 (080119-01-SW-D-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.9	0.500	25	1.86	84.2	71	125	24.7	7.56	24	

MSD

SeqNo: **2672112** PrepDate:8/2/2019 3: TestNo: **E1631** RunNo: **173946**
Samp ID: **190802076-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	23.5	0.500	25	2.54	83.8	71	125	28.9	20.6	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

mblk

SeqNo: **2671435** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.21	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.27	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.58	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.52	5.0	50	0	95	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.8	5.0	50	0	93.6	76.5	125	0	0		
Surr: Toluene-d8	44.92	5.0	50	0	89.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

lcs

SeqNo: **2671433** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.75	1.0	10	0	87.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.55	1.0	10	0	65.5	72.3	118	0	0		S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	73.1	123	0	0		
1,1-Dichloroethane	10.82	1.0	10	0	108	73.2	127	0	0		
1,1-Dichloroethene	10.25	1.0	10	0	103	70.3	128	0	0		
1,2,3-Trichloropropane	3.36	1.0	5	0	67.2	68.4	115	0	0		S
1,2-Dichlorobenzene	8.06	1.0	10	0	80.6	71	124	0	0		
1,2-Dichloroethane	10.03	1.0	10	0	100	72.5	127	0	0		
1,3-Dichlorobenzene	8.25	1.0	10	0	82.5	72.2	121	0	0		
1,3-Dichloropropane	3.92	1.0	5	0	78.4	76	122	0	0		
1,4-Dichlorobenzene	7.36	1.0	10	0	73.6	71.7	127	0	0		
2-Butanone	10.41	5.0	10	0	104	65.1	132	0	0		
4-Methyl-2-pentanone	7.06	5.0	10	0	70.6	68.7	118	0	0		
Acetone	8.75	5.0	10	0	87.5	69.2	133	0	0		
Benzene	8.92	1.0	10	0	89.2	71.2	122	0	0		
Carbon disulfide	4.58	1.0	5	0	91.6	67.8	134	0	0		
Carbon tetrachloride	8.82	1.0	10	0	88.2	74.5	122	0	0		
Chlorobenzene	9.28	1.0	10	0	92.8	72.7	124	0	0		
Chloroethane	10.64	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.17	1.0	10	0	102	71.6	133	0	0		
Dibromochloromethane	7.92	1.0	10	0	79.2	70.6	124	0	0		
Ethylbenzene	8.98	1.0	10	0	89.8	70.9	126	0	0		
Methylene chloride	12.01	1.0	10	0	120	66.3	130	0	0		
Tetrachloroethene	10.02	1.0	10	0	100	72.4	119	0	0		
Toluene	8.92	1.0	10	0	89.2	71.8	116	0	0		
trans-1,2-Dichloroethene	10.57	1.0	10	0	106	70.3	120	0	0		
Trichloroethene	9.51	1.0	10	0	95.1	73	127	0	0		
Vinyl chloride	10.8	1.0	10	0	108	65.2	134	0	0		
Xylenes, Total	26.2	1.0	30	0	87.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.25	5.0	50	0	96.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48	5.0	50	0	96	76.5	125	0	0		
Surr: Toluene-d8	45.09	5.0	50	0	90.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

lcsd

SeqNo: **2671434** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.54	1.0	10	0	95.4	72.3	121	8.75	8.64	25	
1,1,2,2-Tetrachloroethane	6.68	1.0	10	0	66.8	72.3	118	6.55	1.97	25	S
1,1,2-Trichloroethane	9.71	1.0	10	0	97.1	73.1	123	8.91	8.59	25	
1,1-Dichloroethane	11.23	1.0	10	0	112	73.2	127	10.82	3.72	25	
1,1-Dichloroethene	10.92	1.0	10	0	109	70.3	128	10.25	6.33	25	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	68.4	115	3.36	12.3	25	
1,2-Dichlorobenzene	8.84	1.0	10	0	88.4	71	124	8.06	9.23	25	
1,2-Dichloroethane	9.9	1.0	10	0	99	72.5	127	10.03	1.30	25	
1,3-Dichlorobenzene	9.09	1.0	10	0	90.9	72.2	121	8.25	9.69	25	
1,3-Dichloropropane	4.57	1.0	5	0	91.4	76	122	3.92	15.3	0	
1,4-Dichlorobenzene	8.69	1.0	10	0	86.9	71.7	127	7.36	16.6	25	
2-Butanone	7.53	5.0	10	0	75.3	65.1	132	10.41	32.1	25	Z
4-Methyl-2-pentanone	7.87	5.0	10	0	78.7	68.7	118	7.06	10.9	25	
Acetone	9.22	5.0	10	0	92.2	69.2	133	8.75	5.23	25	
Benzene	9.46	1.0	10	0	94.6	71.2	122	8.92	5.88	25	
Carbon disulfide	4.84	1.0	5	0	96.8	67.8	134	4.58	5.52	25	
Carbon tetrachloride	9.4	1.0	10	0	94	74.5	122	8.82	6.37	25	
Chlorobenzene	9.95	1.0	10	0	99.5	72.7	124	9.28	6.97	25	
Chloroethane	9.84	1.0	10	0	98.4	72.3	136	10.64	7.81	25	
Chloroform	10.37	1.0	10	0	104	71.6	133	10.17	1.95	25	
Dibromochloromethane	8.46	1.0	10	0	84.6	70.6	124	7.92	6.59	25	
Ethylbenzene	9.86	1.0	10	0	98.6	70.9	126	8.98	9.34	25	
Methylene chloride	12.31	1.0	10	0	123	66.3	130	12.01	2.47	25	
Tetrachloroethene	10.74	1.0	10	0	107	72.4	119	10.02	6.94	25	
Toluene	9.76	1.0	10	0	97.6	71.8	116	8.92	8.99	25	
trans-1,2-Dichloroethene	10.75	1.0	10	0	108	70.3	120	10.57	1.69	25	
Trichloroethene	10.49	1.0	10	0	105	73	127	9.51	9.80	25	
Vinyl chloride	10.73	1.0	10	0	107	65.2	134	10.8	0.650	25	
Xylenes, Total	28.67	1.0	30	0	95.6	72.1	124	26.2	9.00	25	
Surr: 1,2-Dichloroethane-d4	49.88	5.0	50	0	99.8	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	48.12	5.0	50	0	96.2	76.5	125	0	0	25	
Surr: Toluene-d8	45.07	5.0	50	0	90.1	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

ms

SeqNo: **2671450** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **190802076-002b** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.54	1.0	10	0	75.4	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	4.72	1.0	10	0	47.2	70.1	123	0	0		S
1,1,2-Trichloroethane	7.11	1.0	10	0	71.1	72.1	119	0	0		S
1,1-Dichloroethane	9.44	1.0	10	0	94.4	70.4	126	0	0		
1,1-Dichloroethene	9.17	1.0	10	0	91.7	70.2	125	0	0		
1,2,3-Trichloropropane	2.64	1.0	5	0	52.8	53.7	101	0	0		S
1,2-Dichlorobenzene	6.71	1.0	10	0	67.1	70.2	123	0	0		S
1,2-Dichloroethane	8.78	1.0	10	0	87.8	73.5	126	0	0		
1,3-Dichlorobenzene	6.54	1.0	10	0	65.4	70.4	124	0	0		S
1,3-Dichloropropane	3.3	1.0	5	0	66	64	125	0	0		
1,4-Dichlorobenzene	5.85	1.0	10	0	58.5	70.8	127	0	0		S
2-Butanone	7.44	5.0	10	0	74.4	60.5	123	0	0		
4-Methyl-2-pentanone	5.88	5.0	10	0	58.8	52.8	133	0	0		
Acetone	4.81	5.0	10	0	48.1	56.3	135	0	0		JS
Benzene	7.8	1.0	10	0	78	70.2	127	0	0		
Carbon disulfide	3.88	1.0	5	0	77.6	62.2	130	0	0		
Carbon tetrachloride	7.98	1.0	10	0	79.8	56.4	137	0	0		
Chlorobenzene	7.63	1.0	10	0	76.3	72.7	128	0	0		
Chloroethane	7.91	1.0	10	0	79.1	71.3	135	0	0		
Chloroform	8.41	1.0	10	0	84.1	70.2	125	0	0		
Dibromochloromethane	6.65	1.0	10	0	66.5	69.5	123	0	0		S
Ethylbenzene	7.43	1.0	10	0	74.3	71.9	129	0	0		
Methylene chloride	9.33	1.0	10	0	93.3	65.3	123	0	0		
Tetrachloroethene	8.84	1.0	10	0	88.4	74.5	121	0	0		
Toluene	7.93	1.0	10	0	79.3	73	122	0	0		
trans-1,2-Dichloroethene	9.2	1.0	10	0	92	69.1	133	0	0		
Trichloroethene	8.35	1.0	10	0	83.5	71.1	126	0	0		
Vinyl chloride	8.13	1.0	10	0	81.3	65	137	0	0		
Xylenes, Total	21.59	1.0	30	0	72	72	130	0	0		S
Surr: 1,2-Dichloroethane-d4	48.99	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.32	5.0	50	0	92.6	76.5	125	0	0		
Surr: Toluene-d8	44.36	5.0	50	0	88.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190801076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

msd

SeqNo: **2671451** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **190802076-002b** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.7	1.0	10	0	77	71.6	126	7.54	2.10	20.4	
1,1,2,2-Tetrachloroethane	4.92	1.0	10	0	49.2	70.1	123	4.72	4.15	18.6	S
1,1,2-Trichloroethane	7.24	1.0	10	0	72.4	72.1	119	7.11	1.81	20	
1,1-Dichloroethane	9.01	1.0	10	0	90.1	70.4	126	9.44	4.66	19.2	
1,1-Dichloroethene	9.19	1.0	10	0	91.9	70.2	125	9.17	0.218	16.1	
1,2,3-Trichloropropane	3.26	1.0	5	0	65.2	53.7	101	2.64	21.0	20	Z
1,2-Dichlorobenzene	6.87	1.0	10	0	68.7	70.2	123	6.71	2.36	17.9	S
1,2-Dichloroethane	7.89	1.0	10	0	78.9	73.5	126	8.78	10.7	15.6	
1,3-Dichlorobenzene	6.67	1.0	10	0	66.7	70.4	124	6.54	1.97	14.3	S
1,3-Dichloropropane	3.56	1.0	5	0	71.2	64	125	3.3	7.58	0	
1,4-Dichlorobenzene	6.11	1.0	10	0	61.1	70.8	127	5.85	4.35	14.4	S
2-Butanone	2.68	5.0	10	0	26.8	60.5	123	7.44	0	15	JS
4-Methyl-2-pentanone	5.88	5.0	10	0	58.8	52.8	133	5.88	0	11.9	
Acetone	3.76	5.0	10	0	37.6	56.3	135	4.81	0	10.6	JS
Benzene	7.71	1.0	10	0	77.1	70.2	127	7.8	1.16	18.4	
Carbon disulfide	4.03	1.0	5	0	80.6	62.2	130	3.88	3.79	13.1	
Carbon tetrachloride	7.48	1.0	10	0	74.8	56.4	137	7.98	6.47	20.3	
Chlorobenzene	7.59	1.0	10	0	75.9	72.7	128	7.63	0.526	19.6	
Chloroethane	8.43	1.0	10	0	84.3	71.3	135	7.91	6.36	27.8	
Chloroform	8.02	1.0	10	0	80.2	70.2	125	8.41	4.75	20.3	
Dibromochloromethane	6.63	1.0	10	0	66.3	69.5	123	6.65	0.301	18.8	S
Ethylbenzene	7.66	1.0	10	0	76.6	71.9	129	7.43	3.05	16.3	
Methylene chloride	9.04	1.0	10	0	90.4	65.3	123	9.33	3.16	21.4	
Tetrachloroethene	8.34	1.0	10	0	83.4	74.5	121	8.84	5.82	20.9	
Toluene	7.57	1.0	10	0	75.7	73	122	7.93	4.65	19.4	
trans-1,2-Dichloroethene	8.89	1.0	10	0	88.9	69.1	133	9.2	3.43	16.1	
Trichloroethene	8.23	1.0	10	0	82.3	71.1	126	8.35	1.45	16.6	
Vinyl chloride	8.18	1.0	10	0	81.8	65	137	8.13	0.613	20.5	
Xylenes, Total	22.36	1.0	30	0	74.5	72	130	21.59	3.50	16.1	
Surr: 1,2-Dichloroethane-d4	48.52	5.0	50	0	97	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.51	5.0	50	0	95	76.5	125	0	0	0	
Surr: Toluene-d8	44.72	5.0	50	0	89.4	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

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CHAIN OF CUSTODY RECORD

AES Work Order # 190801076

Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Oehan
Client Phone No: 978-905-2124	**Client Email:** john.bleiler@aecom.com	**PO Number:** 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080119-01-SW-D-A-1	8/1/19	1320	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	080119-02-SW-A-B-1	8/1/19	1350	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
003	080119-03-SW-U-B-1	8/1/19	1420	P	W		✓	1	metals (filtered)
				A				2	VOCs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/1/19 1555
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/1/19 4:38 PM

Temperature Ambient or (Chilled) Notes: 18°C

AES Bottles Y ☒ N ☐

Properly Preserved (Y) N Notes:_____

Received Within Holding Times (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190801076

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 1908010216

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080119-03-SW-U-B-1	8/1/19	1420	A/P	W		✓	2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
004	080119-04-SW-B-A-1	8/1/19	1320	A/P	W		✓	1	metals (filtered)
				A/P				2	VOCs
				A/P				2	PCBs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
005	080119-05-SW-B-B-1	8/1/19	1440	A/P	W		✓	1	TSS
006	080119-TB01	8/1/19		A/P	TB				trip blank
				A/P					
				A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/1/19 1555
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/1/19 4:38

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190801076

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/5/2019

8/1/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190801076-001	080119-01-SW-D-A-1	Water	8/1/2019	8/5/2019	E	C	B	D	D	A	F
190801076-002	080119-02-SW-A-B-1	Water	8/1/2019	8/5/2019	E	C	B	D	D	A	F
190801076-003	080119-03-SW-U-B-1	Water	8/1/2019	8/5/2019	E	C	B	D	D	A	F
190801076-004	080119-04-SW-B-A-1	Water	8/1/2019	8/5/2019	E	C	B	D	D	A	F
190801076-005	080119-05-SW-B-B-1	Water	8/1/2019	8/5/2019							A
190801076-006	080119-TB01	Trip Blank	8/1/2019	8/5/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by 8/1/19 5:15

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 06, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190802076
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/2/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*06-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190802076		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-01-SW-U-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
PCB, Total	**ND**	0.065		µg/L	1	8/2/2019 7:13:29 PM
Surr: Decachlorobiphenyl	**64.8**	57.1-135		%REC	1	8/2/2019 7:13:29 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/5/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/5/2019 2:33:00 PM
Barium	**0.022**	0.010		mg/L	1	8/5/2019 2:33:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/5/2019 2:33:00 PM
Chromium	**ND**	0.005		mg/L	1	8/5/2019 2:33:00 PM
Copper	**0.007**	0.005		mg/L	1	8/5/2019 2:33:00 PM
Lead	**ND**	0.005		mg/L	1	8/5/2019 2:33:00 PM
Selenium	**ND**	0.005		mg/L	1	8/5/2019 2:33:00 PM
Silver	**ND**	0.010		mg/L	1	8/5/2019 2:33:00 PM
Zinc	**ND**	0.010		mg/L	1	8/5/2019 2:33:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 3:52:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/5/2019 3:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/5/2019 3:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 3:52:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 3:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 3:52:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-01-SW-U-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/5/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 3:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 3:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 3:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 7:18:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 7:18:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 7:18:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 7:18:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 7:18:00 PM
Surr: 1,2-Dichloroethane-d4	**88.4**	80.9-122		%REC	1	8/2/2019 7:18:00 PM
Surr: 4-Bromofluorobenzene	**91.2**	76.5-125		%REC	1	8/2/2019 7:18:00 PM
Surr: Toluene-d8	**92.0**	80.4-121		%REC	1	8/2/2019 7:18:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-01-SW-U-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**5.6**	1.1		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-02-SW-A-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
PCB, Total	**ND**	0.065		µg/L	1	8/2/2019 7:26:49 PM
Surr: Decachlorobiphenyl	**64.0**	57.1-135		%REC	1	8/2/2019 7:26:49 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**2.5**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/5/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic	**0.004**	0.005	J	mg/L	1	8/5/2019 2:39:00 PM
Barium	**0.023**	0.010		mg/L	1	8/5/2019 2:39:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/5/2019 2:39:00 PM
Chromium	**ND**	0.005		mg/L	1	8/5/2019 2:39:00 PM
Copper	**0.006**	0.005		mg/L	1	8/5/2019 2:39:00 PM
Lead	**ND**	0.005		mg/L	1	8/5/2019 2:39:00 PM
Selenium	**ND**	0.005		mg/L	1	8/5/2019 2:39:00 PM
Silver	**ND**	0.010		mg/L	1	8/5/2019 2:39:00 PM
Zinc	**ND**	0.010		mg/L	1	8/5/2019 2:39:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:00:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/5/2019 4:00:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/5/2019 4:00:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:00:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/5/2019 4:00:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:00:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-02-SW-A-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/5/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:00:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:00:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:00:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Acetone	**ND**	5.0	N	µg/L	1	8/2/2019 7:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 7:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Dibromochloromethane	**ND**	1.0	N	µg/L	1	8/2/2019 7:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 7:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	SN	µg/L	1	8/2/2019 7:39:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0	N	µg/L	1	8/2/2019 7:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0	N	µg/L	1	8/2/2019 7:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0	N	µg/L	1	8/2/2019 7:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 7:39:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	8/2/2019 7:39:00 PM
Surr: 4-Bromofluorobenzene	**91.3**	76.5-125		%REC	1	8/2/2019 7:39:00 PM
Surr: Toluene-d8	**92.1**	80.4-121		%REC	1	8/2/2019 7:39:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-02-SW-A-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**6.3**	1.0		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
PCB, Total	**ND**	0.065		µg/L	1	8/2/2019 7:40:09 PM
Surr: Decachlorobiphenyl	**72.6**	57.1-135		%REC	1	8/2/2019 7:40:09 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/5/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/5/2019 3:11:00 PM
Barium	**0.023**	0.010		mg/L	1	8/5/2019 3:11:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/5/2019 3:11:00 PM
Chromium	**ND**	0.005		mg/L	1	8/5/2019 3:11:00 PM
Copper	**0.007**	0.005		mg/L	1	8/5/2019 3:11:00 PM
Lead	**ND**	0.005		mg/L	1	8/5/2019 3:11:00 PM
Selenium	**ND**	0.005		mg/L	1	8/5/2019 3:11:00 PM
Silver	**ND**	0.010		mg/L	1	8/5/2019 3:11:00 PM
Zinc	**ND**	0.010		mg/L	1	8/5/2019 3:11:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:46:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/5/2019 4:46:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/5/2019 4:46:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:46:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:46:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:46:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/5/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:46:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:46:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:46:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/2/2019 8:01:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 8:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 8:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 8:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 8:01:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 8:01:00 PM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	8/2/2019 8:01:00 PM
Surr: 4-Bromofluorobenzene	**94.3**	76.5-125		%REC	1	8/2/2019 8:01:00 PM
Surr: Toluene-d8	**88.1**	80.4-121		%REC	1	8/2/2019 8:01:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**4.7**	1.1		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-04-SW-B-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
PCB, Total	**ND**	0.065		µg/L	1	8/2/2019 7:53:27 PM
Surr: Decachlorobiphenyl	**80.6**	57.1-135		%REC	1	8/2/2019 7:53:27 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/5/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/5/2019 3:19:00 PM
Barium	**0.023**	0.010		mg/L	1	8/5/2019 3:19:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/5/2019 3:19:00 PM
Chromium	**ND**	0.005		mg/L	1	8/5/2019 3:19:00 PM
Copper	**0.007**	0.005		mg/L	1	8/5/2019 3:19:00 PM
Lead	**ND**	0.005		mg/L	1	8/5/2019 3:19:00 PM
Selenium	**ND**	0.005		mg/L	1	8/5/2019 3:19:00 PM
Silver	**ND**	0.010		mg/L	1	8/5/2019 3:19:00 PM
Zinc	**ND**	0.010		mg/L	1	8/5/2019 3:19:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:52:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/5/2019 4:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/5/2019 4:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:52:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:52:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-04-SW-B-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/5/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 4:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 4:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 8:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 8:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 8:22:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 8:22:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 8:22:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	8/2/2019 8:22:00 PM
Surr: 4-Bromofluorobenzene	**92.8**	76.5-125		%REC	1	8/2/2019 8:22:00 PM
Surr: Toluene-d8	**88.9**	80.4-121		%REC	1	8/2/2019 8:22:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-04-SW-B-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**7.7**	1.1		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-05-SW-B-A-1
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**11.1**	1.1		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-2
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
PCB, Total	**ND**	0.065		µg/L	1	8/2/2019 8:33:30 PM
Surr: Decachlorobiphenyl	**134**	57.1-135		%REC	1	8/2/2019 8:33:30 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/2/2019)						
Mercury	**4.4**	0.5		ng/L	1	8/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/5/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/5/2019 3:36:00 PM
Barium	**0.023**	0.010		mg/L	1	8/5/2019 3:36:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/5/2019 3:36:00 PM
Chromium	**ND**	0.005		mg/L	1	8/5/2019 3:36:00 PM
Copper	**0.005**	0.005		mg/L	1	8/5/2019 3:36:00 PM
Lead	**ND**	0.005		mg/L	1	8/5/2019 3:36:00 PM
Selenium	**ND**	0.005		mg/L	1	8/5/2019 3:36:00 PM
Silver	**ND**	0.010		mg/L	1	8/5/2019 3:36:00 PM
Zinc	**ND**	0.010		mg/L	1	8/5/2019 3:36:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/5/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 5:03:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/5/2019 5:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/5/2019 5:03:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 5:03:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 5:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 5:03:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-2
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/5/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/5/2019 5:03:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 5:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/5/2019 5:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/2/2019 8:44:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 8:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 8:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 8:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 8:44:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 8:44:00 PM
Surr: 1,2-Dichloroethane-d4	**91.3**	80.9-122		%REC	1	8/2/2019 8:44:00 PM
Surr: 4-Bromofluorobenzene	**91.3**	76.5-125		%REC	1	8/2/2019 8:44:00 PM
Surr: Toluene-d8	**91.9**	80.4-121		%REC	1	8/2/2019 8:44:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-03-SW-U-B-2
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/5/2019)						
TSS (Residue, Non-Filterable)	**7.9**	1.1		mg/L	1	8/5/2019

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-TB01
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Methylene chloride	**3.6**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Acetone	**ND**	5.0		µg/L	1	8/2/2019 9:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Chloroform	**0.6**	1.0	J	µg/L	1	8/2/2019 9:05:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/2/2019 9:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 9:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 9:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 9:05:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 9:05:00 PM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	8/2/2019 9:05:00 PM
Surr: 4-Bromofluorobenzene	**96.2**	76.5-125		%REC	1	8/2/2019 9:05:00 PM
Surr: Toluene-d8	**89.6**	80.4-121		%REC	1	8/2/2019 9:05:00 PM

Adirondack Environmental Services, Inc

Date: *06-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080219-TB02
Work Order:	**190802076**	**Collection Date:**	8/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190802076-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Methylene chloride	**2.6**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Acetone	**3.1**	5.0	J	µg/L	1	8/2/2019 9:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/2/2019 9:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Benzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/2/2019 9:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/2/2019 9:27:00 PM
Toluene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/2/2019 9:27:00 PM
Surr: 1,2-Dichloroethane-d4	**98.9**	80.9-122		%REC	1	8/2/2019 9:27:00 PM
Surr: 4-Bromofluorobenzene	**92.4**	76.5-125		%REC	1	8/2/2019 9:27:00 PM
Surr: Toluene-d8	**89.3**	80.4-121		%REC	1	8/2/2019 9:27:00 PM

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74801

MBLK

SeqNo: **2672602** PrepDate:8/5/2019 8: TestNo: **E200.7** RunNo: **173978**
Samp ID: **MB-74801** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2672603** PrepDate:8/5/2019 8: TestNo: **E200.7** RunNo: **173978**
Samp ID: **LCS-74801** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.995	0.00500	2	0	99.7	89.1	111	0	0		
Barium	2.016	0.0100	2	0	101	85	115	0	0		
Cadmium	2.082	0.00500	2	0	104	85	115	0	0		
Chromium	1.989	0.00500	2	0	99.5	89.7	109	0	0		
Copper	2.083	0.00500	2	0	104	85	115	0	0		
Lead	2.106	0.00500	2	0	105	88.1	112	0	0		
Selenium	1.988	0.00500	2	0	99.4	87.5	112	0	0		
Silver	0.5202	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	2.057	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2672607** PrepDate:8/5/2019 8: TestNo: **E200.7** RunNo: **173978**
Samp ID: **190802076-002 (080219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0412	0.00500	0.04	0.003897	93.3	75	125	0	0		
Barium	2.136	0.0100	2	0.02322	106	75	119	0	0		
Cadmium	0.05208	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.2065	0.00500	0.2	0	103	75	124	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74801

MS

SeqNo: **2672607** PrepDate:8/5/2019 8: TestNo: **E200.7** RunNo: **173978**
Samp ID: **190802076-002 (080219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	0.279	0.00500	0.25	0.006373	109	75	125	0	0		
Lead	0.02156	0.00500	0.02	0	108	75	125	0	0		
Selenium	0.01169	0.00500	0.01	0	117	75	125	0	0		
Silver	0.05082	0.0100	0.05	0	102	75	125	0	0		
Zinc	0.5394	0.0100	0.5	0	108	76.9	125	0	0		

DUP

SeqNo: **2672606** PrepDate:8/5/2019 8: TestNo: **E200.7** RunNo: **173978**
Samp ID: **190802076-002** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00239	0.00500	0	0	0	0	0	0.003897	0	20	
Barium	0.02192	0.0100	0	0	0	0	0	0.02322	5.72	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.005434	0.00500	0	0	0	0	0	0.006373	15.9	20	
Lead	0.0007499	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.001422	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74822

mblk

SeqNo: **2671310** PrepDate:**8/2/2019** TestNo: **SW8082A** RunNo: **173915**
Samp ID: **mb-74822** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.1222	0.0100	0.1	0	122	57.1	135	0	0		

lcs

SeqNo: **2671313** PrepDate:**8/2/2019** TestNo: **SW8082A** RunNo: **173915**
Samp ID: **lcs-74822** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.413	0.0650	0.5	0	82.6	60	140	0	0		
Surr: Decachlorobiphenyl	0.0932	0.0100	0.1	0	93.2	57.1	135	0	0		

ms

SeqNo: **2671309** PrepDate:**8/2/2019** TestNo: **SW8082A** RunNo: **173915**
Samp ID: **190802076-002c (080219-02-SW-A-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4264	0.0650	0.5	0	85.3	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0914	0.0100	0.1	0	91.4	57.1	135	0	0		

msd

SeqNo: **2671312** PrepDate:**8/2/2019** TestNo: **SW8082A** RunNo: **173915**
Samp ID: **190802076-002c (080219-02-SW-A-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.6156	0.0650	0.5	0	123	46.7	130	0.4264	36.3	30	Z
Surr: Decachlorobiphenyl	0.118	0	0.1	0	118	57.1	135	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74824

MBLK

SeqNo: **2672615** PrepDate:8/5/2019 8: TestNo: **E200.7F** RunNo: **173978**
Samp ID: **MB-74824** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2672616** PrepDate:8/5/2019 8: TestNo: **E200.7F** RunNo: **173978**
Samp ID: **LCS-74824** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.003	0.00500	2	0	100	85	115	0	0		
Barium, Dissolved	2.055	0.0100	2	0	103	89	112	0	0		
Cadmium, Dissolved	2.097	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.984	0.00500	2	0	99.2	89.1	109	0	0		
Copper, Dissolved	2.073	0.00500	2	0	104	86.8	115	0	0		
Lead, Dissolved	2.13	0.00500	2	0	106	86.8	114	0	0		
Selenium, Dissolved	2.029	0.00500	2	0	101	85	115	0	0		
Silver, Dissolved	0.5255	0.0100	0.5	0	105	85	115	0	0		
Zinc, Dissolved	2.072	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2672620** PrepDate:8/5/2019 8: TestNo: **E200.7F** RunNo: **173978**
Samp ID: **190802076-002 (080219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04266	0.00500	0.04	0	107	75	123	0	0		
Barium, Dissolved	2.15	0.0100	2	0.02111	106	75	124	0	0		
Cadmium, Dissolved	0.05189	0.00500	0.05	0	104	75	125	0	0		
Chromium, Dissolved	0.2147	0.00500	0.2	0	107	77.2	117	0	0		
Copper, Dissolved	0.2808	0.00500	0.25	0.00404	111	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74824

MS

SeqNo: **2672620** PrepDate:**8/5/2019 8:** TestNo: **E200.7F** RunNo: **173978**
Samp ID: **190802076-002 (080219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02073	0.00500	0.02	0	104	75	125	0	0		
Selenium, Dissolved	0.01122	0.00500	0.01	0	112	75	125	0	0		
Silver, Dissolved	0.05149	0.0100	0.05	0	103	75	125	0	0		
Zinc, Dissolved	0.5359	0.0100	0.5	0	107	75	121	0	0		

DUP

SeqNo: **2672619** PrepDate:**8/5/2019 8:** TestNo: **E200.7F** RunNo: **173978**
Samp ID: **190802076-002** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.003378	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.0219	0.0100	0	0	0	0	0	0.02111	3.68	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.00509	0.00500	0	0	0	0	0	0.00404	23.0	20.1	Z
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.00221	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.001066	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74833

LCS

SeqNo: **2672683** PrepDate:8/5/2019 1 TestNo: **SM2540D** RunNo: **173980**
Samp ID: **LCS-74833** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	432	40.0	490	0	88.2	86.5	114	0	0		

DUP

SeqNo: **2672686** PrepDate:8/5/2019 1 TestNo: **SM2540D** RunNo: **173980**
Samp ID: **190801017-002** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1960	40.0	0	0	0	0	0	2040	4.00	10	

DUP

SeqNo: **2672701** PrepDate:8/5/2019 1 TestNo: **SM2540D** RunNo: **173980**
Samp ID: **190802076-002F** PrepRef: Units: **mg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	6.5	1.00	0	0	0	0	0	6.3	3.12	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74840

MBLK

SeqNo: **2672101** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **MB-74840** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2672102** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **LCS-74840** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.1	0.500	10	0	111	77	123	0	0		

MS

SeqNo: **2672104** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **190801076-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	24.7	0.500	25	1.86	91.4	71	125	0	0		

MS

SeqNo: **2672111** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **190802076-002 (080219-02-SW-A-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	28.9	0.500	25	2.54	105	71	125	0	0		

MSD

SeqNo: **2672105** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **190801076-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.9	0.500	25	1.86	84.2	71	125	24.7	7.56	24	

MSD

SeqNo: **2672112** **PrepDate:8/2/2019 3:** TestNo: **E1631** RunNo: **173946**
Samp ID: **190802076-002 (080219-02-SW-A-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	23.5	0.500	25	2.54	83.8	71	125	28.9	20.6	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

mblk

SeqNo: **2671435** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.21	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.27	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.58	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.52	5.0	50	0	95	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.8	5.0	50	0	93.6	76.5	125	0	0		
Surr: Toluene-d8	44.92	5.0	50	0	89.8	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

lcs

SeqNo: **2671433** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.75	1.0	10	0	87.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.55	1.0	10	0	65.5	72.3	118	0	0		S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	73.1	123	0	0		
1,1-Dichloroethane	10.82	1.0	10	0	108	73.2	127	0	0		
1,1-Dichloroethene	10.25	1.0	10	0	103	70.3	128	0	0		
1,2,3-Trichloropropane	3.36	1.0	5	0	67.2	68.4	115	0	0		S
1,2-Dichlorobenzene	8.06	1.0	10	0	80.6	71	124	0	0		
1,2-Dichloroethane	10.03	1.0	10	0	100	72.5	127	0	0		
1,3-Dichlorobenzene	8.25	1.0	10	0	82.5	72.2	121	0	0		
1,3-Dichloropropane	3.92	1.0	5	0	78.4	76	122	0	0		
1,4-Dichlorobenzene	7.36	1.0	10	0	73.6	71.7	127	0	0		
2-Butanone	10.41	5.0	10	0	104	65.1	132	0	0		
4-Methyl-2-pentanone	7.06	5.0	10	0	70.6	68.7	118	0	0		
Acetone	8.75	5.0	10	0	87.5	69.2	133	0	0		
Benzene	8.92	1.0	10	0	89.2	71.2	122	0	0		
Carbon disulfide	4.58	1.0	5	0	91.6	67.8	134	0	0		
Carbon tetrachloride	8.82	1.0	10	0	88.2	74.5	122	0	0		
Chlorobenzene	9.28	1.0	10	0	92.8	72.7	124	0	0		
Chloroethane	10.64	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.17	1.0	10	0	102	71.6	133	0	0		
Dibromochloromethane	7.92	1.0	10	0	79.2	70.6	124	0	0		
Ethylbenzene	8.98	1.0	10	0	89.8	70.9	126	0	0		
Methylene chloride	12.01	1.0	10	0	120	66.3	130	0	0		
Tetrachloroethene	10.02	1.0	10	0	100	72.4	119	0	0		
Toluene	8.92	1.0	10	0	89.2	71.8	116	0	0		
trans-1,2-Dichloroethene	10.57	1.0	10	0	106	70.3	120	0	0		
Trichloroethene	9.51	1.0	10	0	95.1	73	127	0	0		
Vinyl chloride	10.8	1.0	10	0	108	65.2	134	0	0		
Xylenes, Total	26.2	1.0	30	0	87.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.25	5.0	50	0	96.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48	5.0	50	0	96	76.5	125	0	0		
Surr: Toluene-d8	45.09	5.0	50	0	90.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

lcsd

SeqNo: **2671434** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.54	1.0	10	0	95.4	72.3	121	8.75	8.64	25	
1,1,2,2-Tetrachloroethane	6.68	1.0	10	0	66.8	72.3	118	6.55	1.97	25	S
1,1,2-Trichloroethane	9.71	1.0	10	0	97.1	73.1	123	8.91	8.59	25	
1,1-Dichloroethane	11.23	1.0	10	0	112	73.2	127	10.82	3.72	25	
1,1-Dichloroethene	10.92	1.0	10	0	109	70.3	128	10.25	6.33	25	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	68.4	115	3.36	12.3	25	
1,2-Dichlorobenzene	8.84	1.0	10	0	88.4	71	124	8.06	9.23	25	
1,2-Dichloroethane	9.9	1.0	10	0	99	72.5	127	10.03	1.30	25	
1,3-Dichlorobenzene	9.09	1.0	10	0	90.9	72.2	121	8.25	9.69	25	
1,3-Dichloropropane	4.57	1.0	5	0	91.4	76	122	3.92	15.3	0	
1,4-Dichlorobenzene	8.69	1.0	10	0	86.9	71.7	127	7.36	16.6	25	
2-Butanone	7.53	5.0	10	0	75.3	65.1	132	10.41	32.1	25	Z
4-Methyl-2-pentanone	7.87	5.0	10	0	78.7	68.7	118	7.06	10.9	25	
Acetone	9.22	5.0	10	0	92.2	69.2	133	8.75	5.23	25	
Benzene	9.46	1.0	10	0	94.6	71.2	122	8.92	5.88	25	
Carbon disulfide	4.84	1.0	5	0	96.8	67.8	134	4.58	5.52	25	
Carbon tetrachloride	9.4	1.0	10	0	94	74.5	122	8.82	6.37	25	
Chlorobenzene	9.95	1.0	10	0	99.5	72.7	124	9.28	6.97	25	
Chloroethane	9.84	1.0	10	0	98.4	72.3	136	10.64	7.81	25	
Chloroform	10.37	1.0	10	0	104	71.6	133	10.17	1.95	25	
Dibromochloromethane	8.46	1.0	10	0	84.6	70.6	124	7.92	6.59	25	
Ethylbenzene	9.86	1.0	10	0	98.6	70.9	126	8.98	9.34	25	
Methylene chloride	12.31	1.0	10	0	123	66.3	130	12.01	2.47	25	
Tetrachloroethene	10.74	1.0	10	0	107	72.4	119	10.02	6.94	25	
Toluene	9.76	1.0	10	0	97.6	71.8	116	8.92	8.99	25	
trans-1,2-Dichloroethene	10.75	1.0	10	0	108	70.3	120	10.57	1.69	25	
Trichloroethene	10.49	1.0	10	0	105	73	127	9.51	9.80	25	
Vinyl chloride	10.73	1.0	10	0	107	65.2	134	10.8	0.650	25	
Xylenes, Total	28.67	1.0	30	0	95.6	72.1	124	26.2	9.00	25	
Surr: 1,2-Dichloroethane-d4	49.88	5.0	50	0	99.8	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	48.12	5.0	50	0	96.2	76.5	125	0	0	25	
Surr: Toluene-d8	45.07	5.0	50	0	90.1	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

ms	SeqNo: **2671450**	TestNo: **SW8260C**	RunNo: **173917**
	Samp ID: **190802076-002b (080219-02-SW-A-**	Units: **µg/L**	Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.54	1.0	10	0	75.4	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	4.72	1.0	10	0	47.2	70.1	123	0	0		S
1,1,2-Trichloroethane	7.11	1.0	10	0	71.1	72.1	119	0	0		S
1,1-Dichloroethane	9.44	1.0	10	0	94.4	70.4	126	0	0		
1,1-Dichloroethene	9.17	1.0	10	0	91.7	70.2	125	0	0		
1,2,3-Trichloropropane	2.64	1.0	5	0	52.8	53.7	101	0	0		S
1,2-Dichlorobenzene	6.71	1.0	10	0	67.1	70.2	123	0	0		S
1,2-Dichloroethane	8.78	1.0	10	0	87.8	73.5	126	0	0		
1,3-Dichlorobenzene	6.54	1.0	10	0	65.4	70.4	124	0	0		S
1,3-Dichloropropane	3.3	1.0	5	0	66	64	125	0	0		
1,4-Dichlorobenzene	5.85	1.0	10	0	58.5	70.8	127	0	0		S
2-Butanone	7.44	5.0	10	0	74.4	60.5	123	0	0		
4-Methyl-2-pentanone	5.88	5.0	10	0	58.8	52.8	133	0	0		
Acetone	4.81	5.0	10	0	48.1	56.3	135	0	0		JS
Benzene	7.8	1.0	10	0	78	70.2	127	0	0		
Carbon disulfide	3.88	1.0	5	0	77.6	62.2	130	0	0		
Carbon tetrachloride	7.98	1.0	10	0	79.8	56.4	137	0	0		
Chlorobenzene	7.63	1.0	10	0	76.3	72.7	128	0	0		
Chloroethane	7.91	1.0	10	0	79.1	71.3	135	0	0		
Chloroform	8.41	1.0	10	0	84.1	70.2	125	0	0		
Dibromochloromethane	6.65	1.0	10	0	66.5	69.5	123	0	0		S
Ethylbenzene	7.43	1.0	10	0	74.3	71.9	129	0	0		
Methylene chloride	9.33	1.0	10	0	93.3	65.3	123	0	0		
Tetrachloroethene	8.84	1.0	10	0	88.4	74.5	121	0	0		
Toluene	7.93	1.0	10	0	79.3	73	122	0	0		
trans-1,2-Dichloroethene	9.2	1.0	10	0	92	69.1	133	0	0		
Trichloroethene	8.35	1.0	10	0	83.5	71.1	126	0	0		
Vinyl chloride	8.13	1.0	10	0	81.3	65	137	0	0		
Xylenes, Total	21.59	1.0	30	0	72	72	130	0	0		S
Surr: 1,2-Dichloroethane-d4	48.99	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.32	5.0	50	0	92.6	76.5	125	0	0		
Surr: Toluene-d8	44.36	5.0	50	0	88.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190802076
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R173917

msd

SeqNo: **2671451** TestNo: **SW8260C** RunNo: **173917**
Samp ID: **190802076-002b (080219-02-SW-A-** Units: **µg/L** Analysis Date: **8/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.7	1.0	10	0	77	71.6	126	7.54	2.10	20.4	
1,1,2,2-Tetrachloroethane	4.92	1.0	10	0	49.2	70.1	123	4.72	4.15	18.6	S
1,1,2-Trichloroethane	7.24	1.0	10	0	72.4	72.1	119	7.11	1.81	20	
1,1-Dichloroethane	9.01	1.0	10	0	90.1	70.4	126	9.44	4.66	19.2	
1,1-Dichloroethene	9.19	1.0	10	0	91.9	70.2	125	9.17	0.218	16.1	
1,2,3-Trichloropropane	3.26	1.0	5	0	65.2	53.7	101	2.64	21.0	20	Z
1,2-Dichlorobenzene	6.87	1.0	10	0	68.7	70.2	123	6.71	2.36	17.9	S
1,2-Dichloroethane	7.89	1.0	10	0	78.9	73.5	126	8.78	10.7	15.6	
1,3-Dichlorobenzene	6.67	1.0	10	0	66.7	70.4	124	6.54	1.97	14.3	S
1,3-Dichloropropane	3.56	1.0	5	0	71.2	64	125	3.3	7.58	0	
1,4-Dichlorobenzene	6.11	1.0	10	0	61.1	70.8	127	5.85	4.35	14.4	S
2-Butanone	2.68	5.0	10	0	26.8	60.5	123	7.44	0	15	JS
4-Methyl-2-pentanone	5.88	5.0	10	0	58.8	52.8	133	5.88	0	11.9	
Acetone	3.76	5.0	10	0	37.6	56.3	135	4.81	0	10.6	JS
Benzene	7.71	1.0	10	0	77.1	70.2	127	7.8	1.16	18.4	
Carbon disulfide	4.03	1.0	5	0	80.6	62.2	130	3.88	3.79	13.1	
Carbon tetrachloride	7.48	1.0	10	0	74.8	56.4	137	7.98	6.47	20.3	
Chlorobenzene	7.59	1.0	10	0	75.9	72.7	128	7.63	0.526	19.6	
Chloroethane	8.43	1.0	10	0	84.3	71.3	135	7.91	6.36	27.8	
Chloroform	8.02	1.0	10	0	80.2	70.2	125	8.41	4.75	20.3	
Dibromochloromethane	6.63	1.0	10	0	66.3	69.5	123	6.65	0.301	18.8	S
Ethylbenzene	7.66	1.0	10	0	76.6	71.9	129	7.43	3.05	16.3	
Methylene chloride	9.04	1.0	10	0	90.4	65.3	123	9.33	3.16	21.4	
Tetrachloroethene	8.34	1.0	10	0	83.4	74.5	121	8.84	5.82	20.9	
Toluene	7.57	1.0	10	0	75.7	73	122	7.93	4.65	19.4	
trans-1,2-Dichloroethene	8.89	1.0	10	0	88.9	69.1	133	9.2	3.43	16.1	
Trichloroethene	8.23	1.0	10	0	82.3	71.1	126	8.35	1.45	16.6	
Vinyl chloride	8.18	1.0	10	0	81.8	65	137	8.13	0.613	20.5	
Xylenes, Total	22.36	1.0	30	0	74.5	72	130	21.59	3.50	16.1	
Surr: 1,2-Dichloroethane-d4	48.52	5.0	50	0	97	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.51	5.0	50	0	95	76.5	125	0	0	0	
Surr: Toluene-d8	44.72	5.0	50	0	89.4	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190802076

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080219-01-SW-U-A-1	8/2/19	1300	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	080219-02-SW-A-A-1	8/2/19	1325	A	W		✓	3	metals (filtered)
				P				6	PCBs
				A				6	VOCs
				P				3	metals/hardness
				A				9	mercury
				P				3	TSS
003	080219-03-SW-U-B-1	8/2/19	1405	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:
080219-02-SW-A-A-1 MS/MSD

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/2/19 1555
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/2/19 4:22 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or ~~Chilled~~	Y ☒ N ☐	(Y) N	(Y) N
Notes: 15°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190802076

Adirondack Environmental Services, Inc.

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 1908O2076

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	2296O8

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080219-03-SW-U-B-1	8/2/19	1405	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	080219-04-SW-B-A-1	8/2/19	1248	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
				P					
005	080219-05-SW-B-A-1	8/2/19	1435	A	W		✓	1	TSS
				P					
006	080219-03-SW-U-B-2	8/2/19	1415	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/2/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/2/19 4:22 P.m.

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 15°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19080206

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleile@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	080219-03-SW-U-B-2	8/2/19	1415	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
								1	TSS
007	080219-TB01	8/2/19			TB				trip blank
008	080219-TB02	8/2/19			TB				trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/2/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/2/19 4:27 pm

Temperature: Ambient or (Chilled) Notes: 15°C

AES Bottles: (Y) ☒ (N) ☐

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190802076

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190802076

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project# :
ClientReferenceNo: 60323713

DateDue: 8/6/2019

QClevel: STD+

☐ Hard Copy

8/2/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190802076-001	080219-01-SW-U-A-1	Water	8/2/2019	8/6/2019	E	C	B	D	D	A	F
190802076-002	080219-02-SW-A-A-1	Water	8/2/2019	8/6/2019	E	C	B	D	D	A	F
190802076-003	080219-03-SW-U-B-1	Water	8/2/2019	8/6/2019	E	C	B	D	D	A	F
190802076-004	080219-04-SW-B-A-1	Water	8/2/2019	8/6/2019	E	C	B	D	D	A	F
190802076-005	080219-05-SW-B-A-1	Water	8/2/2019	8/6/2019							A
190802076-006	080219-03-SW-U-B-2	Water	8/2/2019	8/6/2019	E	C	B	D	D	A	F
190802076-007	080219-TB01	Trip Blank	8/2/2019	8/6/2019			A				
190802076-008	080219-TB02	Trip Blank	8/2/2019	8/6/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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August 07, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190805048
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/5/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*07-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190805048		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/5/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
PCB, Total	**ND**	0.065		µg/L	1	8/5/2019 10:01:41 PM
Surr: Decachlorobiphenyl	**81.6**	57.1-135		%REC	1	8/5/2019 10:01:41 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**2.5**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/6/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/6/2019 12:52:00 PM
Barium	**0.024**	0.010		mg/L	1	8/6/2019 12:52:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/6/2019 12:52:00 PM
Chromium	**ND**	0.005		mg/L	1	8/6/2019 12:52:00 PM
Copper	**0.006**	0.005		mg/L	1	8/6/2019 12:52:00 PM
Lead	**ND**	0.005		mg/L	1	8/6/2019 12:52:00 PM
Selenium	**ND**	0.005		mg/L	1	8/6/2019 12:52:00 PM
Silver	**ND**	0.010		mg/L	1	8/6/2019 12:52:00 PM
Zinc	**ND**	0.010		mg/L	1	8/6/2019 12:52:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:27:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/6/2019 2:27:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/6/2019 2:27:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:27:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/6/2019 2:27:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:27:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/6/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:27:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:27:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:27:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 2:12:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 2:12:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 2:12:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	8/6/2019 2:12:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:12:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	8/6/2019 2:12:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	8/6/2019 2:12:00 PM
Surr: 4-Bromofluorobenzene	**96.1**	76.5-125		%REC	1	8/6/2019 2:12:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/6/2019 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**5.9**	1.0		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-02-SW-A-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/5/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
PCB, Total	**ND**	0.065		µg/L	1	8/5/2019 10:15:01 PM
Surr: Decachlorobiphenyl	**86.8**	57.1-135		%REC	1	8/5/2019 10:15:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**3.6**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/6/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/6/2019 1:00:00 PM
Barium	**0.024**	0.010		mg/L	1	8/6/2019 1:00:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/6/2019 1:00:00 PM
Chromium	**ND**	0.005		mg/L	1	8/6/2019 1:00:00 PM
Copper	**0.006**	0.005		mg/L	1	8/6/2019 1:00:00 PM
Lead	**ND**	0.005		mg/L	1	8/6/2019 1:00:00 PM
Selenium	**ND**	0.005		mg/L	1	8/6/2019 1:00:00 PM
Silver	**ND**	0.010		mg/L	1	8/6/2019 1:00:00 PM
Zinc	**0.017**	0.010		mg/L	1	8/6/2019 1:00:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:37:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/6/2019 2:37:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/6/2019 2:37:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:37:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:37:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:37:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-02-SW-A-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/6/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:37:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:37:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:37:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/6/2019 2:34:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 2:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/6/2019 2:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 2:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 2:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 2:34:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	8/6/2019 2:34:00 PM
Surr: 4-Bromofluorobenzene	**97.5**	76.5-125		%REC	1	8/6/2019 2:34:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/6/2019 2:34:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-02-SW-A-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**8.4**	1.1		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-03-SW-D-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/5/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
PCB, Total	**ND**	0.065		µg/L	1	8/5/2019 10:28:20 PM
Surr: Decachlorobiphenyl	**94.2**	57.1-135		%REC	1	8/5/2019 10:28:20 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**3.8**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/6/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/6/2019 1:09:00 PM
Barium	**0.024**	0.010		mg/L	1	8/6/2019 1:09:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/6/2019 1:09:00 PM
Chromium	**ND**	0.005		mg/L	1	8/6/2019 1:09:00 PM
Copper	**ND**	0.005		mg/L	1	8/6/2019 1:09:00 PM
Lead	**ND**	0.005		mg/L	1	8/6/2019 1:09:00 PM
Selenium	**ND**	0.005		mg/L	1	8/6/2019 1:09:00 PM
Silver	**ND**	0.010		mg/L	1	8/6/2019 1:09:00 PM
Zinc	**ND**	0.010		mg/L	1	8/6/2019 1:09:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:45:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/6/2019 2:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/6/2019 2:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:45:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	8/6/2019 2:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-03-SW-D-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/6/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 2:55:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 2:55:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 2:55:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 2:55:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	8/6/2019 2:55:00 PM
Surr: 4-Bromofluorobenzene	**87.7**	76.5-125		%REC	1	8/6/2019 2:55:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/6/2019 2:55:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-03-SW-D-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**7.6**	1.0		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-04-SW-B-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/5/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
PCB, Total	**ND**	0.065		µg/L	1	8/5/2019 10:41:41 PM
Surr: Decachlorobiphenyl	**96.8**	57.1-135		%REC	1	8/5/2019 10:41:41 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**2.4**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/6/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/6/2019 1:23:00 PM
Barium	**0.024**	0.010		mg/L	1	8/6/2019 1:23:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/6/2019 1:23:00 PM
Chromium	**ND**	0.005		mg/L	1	8/6/2019 1:23:00 PM
Copper	**0.007**	0.005		mg/L	1	8/6/2019 1:23:00 PM
Lead	**ND**	0.005		mg/L	1	8/6/2019 1:23:00 PM
Selenium	**ND**	0.005		mg/L	1	8/6/2019 1:23:00 PM
Silver	**ND**	0.010		mg/L	1	8/6/2019 1:23:00 PM
Zinc	**ND**	0.010		mg/L	1	8/6/2019 1:23:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:58:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/6/2019 2:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/6/2019 2:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:58:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/6/2019 2:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:58:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-04-SW-B-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/6/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 2:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:58:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 2:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 3:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/6/2019 3:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 3:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 3:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 3:17:00 PM
Surr: 1,2-Dichloroethane-d4	**94.8**	80.9-122		%REC	1	8/6/2019 3:17:00 PM
Surr: 4-Bromofluorobenzene	**99.6**	76.5-125		%REC	1	8/6/2019 3:17:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/6/2019 3:17:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-04-SW-B-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**6.7**	1.1		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-05-SW-B-A-1
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**12.9**	1.1		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-3
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/5/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
PCB, Total	**ND**	0.065		µg/L	1	8/5/2019 10:55:01 PM
Surr: Decachlorobiphenyl	**45.4**	57.1-135	S	%REC	1	8/5/2019 10:55:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**ND**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/6/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/6/2019 2:07:00 PM
Barium	**ND**	0.010		mg/L	1	8/6/2019 2:07:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/6/2019 2:07:00 PM
Chromium	**ND**	0.005		mg/L	1	8/6/2019 2:07:00 PM
Copper	**ND**	0.005		mg/L	1	8/6/2019 2:07:00 PM
Lead	**ND**	0.005		mg/L	1	8/6/2019 2:07:00 PM
Selenium	**ND**	0.005		mg/L	1	8/6/2019 2:07:00 PM
Silver	**ND**	0.010		mg/L	1	8/6/2019 2:07:00 PM
Zinc	**ND**	0.010		mg/L	1	8/6/2019 2:07:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/6/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 4:21:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 4:21:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/6/2019 4:21:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 4:21:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 4:21:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 4:21:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-3
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/6/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/6/2019 4:21:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 4:21:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/6/2019 4:21:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Methylene chloride	**1.1**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 3:38:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Chloroform	**3.1**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 3:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 3:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 3:38:00 PM
Surr: 1,2-Dichloroethane-d4	**95.1**	80.9-122		%REC	1	8/6/2019 3:38:00 PM
Surr: 4-Bromofluorobenzene	**90.7**	76.5-125		%REC	1	8/6/2019 3:38:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/6/2019 3:38:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-01-SW-U-A-3
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/6/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/6/2019

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-TB01
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Methylene chloride	**1.6**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 4:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/6/2019 4:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 4:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 4:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/6/2019 4:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 4:00:00 PM
Surr: 1,2-Dichloroethane-d4	**97.1**	80.9-122		%REC	1	8/6/2019 4:00:00 PM
Surr: 4-Bromofluorobenzene	**92.2**	76.5-125		%REC	1	8/6/2019 4:00:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/6/2019 4:00:00 PM

Adirondack Environmental Services, Inc

Date: *07-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080519-TB02
Work Order:	**190805048**	**Collection Date:**	8/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190805048-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Methylene chloride	**2.5**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Acetone	**3.6**	5.0	J	µg/L	1	8/6/2019 4:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Chloroform	**0.3**	1.0	J	µg/L	1	8/6/2019 4:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 4:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 4:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 4:21:00 PM
Surr: 1,2-Dichloroethane-d4	**93.5**	80.9-122		%REC	1	8/6/2019 4:21:00 PM
Surr: 4-Bromofluorobenzene	**95.0**	76.5-125		%REC	1	8/6/2019 4:21:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/6/2019 4:21:00 PM

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74825

MBLK

SeqNo: **2673230** PrepDate: TestNo: **E200.7** RunNo: **173997**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

MBLK

SeqNo: **2673800** PrepDate:**8/6/2019 8:** TestNo: **E200.7** RunNo: **174028**
Samp ID: **MB-74825** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2673231** PrepDate: TestNo: **E200.7** RunNo: **173997**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.977	0.00500	2	0	98.9	89.1	111	0	0		
Barium	1.949	0.0100	2	0	97.5	85	115	0	0		
Cadmium	1.861	0.00500	2	0	93	85	115	0	0		
Chromium	1.948	0.00500	2	0	97.4	89.7	109	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74825

LCS

SeqNo: **2673231** PrepDate: TestNo: **E200.7** RunNo: **173997**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	1.869	0.00500	2	0	93.4	85	115	0	0		
Lead	1.876	0.00500	2	0	93.8	88.1	112	0	0		
Selenium	2.026	0.00500	2	0	101	87.5	112	0	0		
Silver	0.4729	0.0100	0.5	0	94.6	85.2	115	0	0		
Zinc	2.048	0.0100	2	0	102	88.3	113	0	0		

LCS

SeqNo: **2673801** PrepDate:8/6/2019 8: TestNo: **E200.7** RunNo: **174028**
Samp ID: **LCS-74825** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.001	0.00500	2	0	100	89.1	111	0	0		
Barium	2.056	0.0100	2	0	103	85	115	0	0		
Cadmium	1.922	0.00500	2	0	96.1	85	115	0	0		
Chromium	1.97	0.00500	2	0	98.5	89.7	109	0	0		
Copper	2.079	0.00500	2	0	104	85	115	0	0		
Lead	2.148	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.043	0.00500	2	0	102	87.5	112	0	0		
Silver	0.5201	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	2.076	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2673807** PrepDate:8/6/2019 8: TestNo: **E200.7** RunNo: **174028**
Samp ID: **190805048-004 (080519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04159	0.00500	0.04	0	104	75	125	0	0		
Barium	2.193	0.0100	2	0.02408	108	75	119	0	0		
Cadmium	0.04792	0.00500	0.05	0	95.8	75	118	0	0		
Chromium	0.2116	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2822	0.00500	0.25	0.007404	110	75	125	0	0		
Lead	0.0219	0.00500	0.02	0	110	75	125	0	0		
Selenium	0.009563	0.00500	0.01	0	95.6	75	125	0	0		
Silver	0.05134	0.0100	0.05	0	103	75	125	0	0		
Zinc	0.5532	0.0100	0.5	0	111	76.9	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74825

DUP					
SeqNo: **2673805**	**PrepDate:8/6/2019 8:**	TestNo: **E200.7**	RunNo: **174028**
Samp ID: **190805048-004**	**PrepRef:**	Units: **mg/L**	Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02351	0.0100	0	0	0	0	0	0.02408	2.40	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.003877	0.00500	0	0	0	0	0	0.007404	0	20	
Lead	0.00008065	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003363	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74844

mblk SeqNo: **2672325** PrepDate:8/5/2019 5: TestNo: **E608** RunNo: **173962**
Samp ID: **mb-74844** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0732	0	0.1	0	73.2	48.8	140	0	0		

lcs SeqNo: **2672328** PrepDate:8/5/2019 5: TestNo: **E608** RunNo: **173962**
Samp ID: **lcs-74844** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1232	0.353	0.0650	0.5	0	70.6	61	134	0	0		
Aroclor 1262	0.6056	0.0650	0.5	0	121	52.9	127	0	0		
Surr: Decachlorobiphenyl	0.0748	0	0.1	0	74.8	48.8	140	0	0		

mblk SeqNo: **2672344** PrepDate:8/5/2019 5: TestNo: **SW8082A** RunNo: **173964**
Samp ID: **mb-74844** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0656	0.0100	0.1	0	65.6	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74844

lcs					
SeqNo: **2672345**	**PrepDate:8/5/2019 5:**	TestNo: **SW8082A**	RunNo: **173964**
Samp ID: **lcs-74844**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **8/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1232	0.3576	0.0650	0.5	0	71.5	60	140	0	0		
Aroclor 1262	0.6006	0.0650	0.5	0	120	0	0	0	0		S
Surr: Decachlorobiphenyl	0.0646	0.0100	0.1	0	64.6	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74852

LCS

SeqNo: **2673530** PrepDate:8/6/2019 9: TestNo: **SM2540D** RunNo: **174014**
Samp ID: **LCS-74852** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	556	40.0	490	0	113	86.5	114	0	0		

DUP

SeqNo: **2673532** PrepDate:8/6/2019 9: TestNo: **SM2540D** RunNo: **174014**
Samp ID: **190730013-005** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1268	40.0	0	0	0	0	0	1208	4.85	10	

DUP

SeqNo: **2673546** PrepDate:8/6/2019 9: TestNo: **SM2540D** RunNo: **174014**
Samp ID: **190802040-003** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	128	10.0	0	0	0	0	0	120	6.45	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74854

MBLK

SeqNo: **2673813** PrepDate:8/6/2019 9: TestNo: **E200.7F** RunNo: **174028**
Samp ID: **MB-74854** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2673814** PrepDate:8/6/2019 9: TestNo: **E200.7F** RunNo: **174028**
Samp ID: **LCS-74854** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.044	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.045	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	1.911	0.00500	2	0	95.6	85.3	112	0	0		
Chromium, Dissolved	1.999	0.00500	2	0	100	89.1	109	0	0		
Copper, Dissolved	2.112	0.00500	2	0	106	86.8	115	0	0		
Lead, Dissolved	2.18	0.00500	2	0	109	86.8	114	0	0		
Selenium, Dissolved	2.056	0.00500	2	0	103	85	115	0	0		
Silver, Dissolved	0.5387	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	2.105	0.0100	2	0	105	85	115	0	0		

MS

SeqNo: **2673825** PrepDate:8/6/2019 9: TestNo: **E200.7F** RunNo: **174028**
Samp ID: **190805048-004 (080519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03992	0.00500	0.04	0	99.8	75	123	0	0		
Barium, Dissolved	2.124	0.0100	2	0.02187	105	75	124	0	0		
Cadmium, Dissolved	0.04546	0.00500	0.05	0	90.9	75	125	0	0		
Chromium, Dissolved	0.2076	0.00500	0.2	0	104	77.2	117	0	0		
Copper, Dissolved	0.2706	0.00500	0.25	0.004379	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74854

MS

SeqNo: **2673825** PrepDate:8/6/2019 9: TestNo: **E200.7F** RunNo: **174028**
Samp ID: **190805048-004 (080519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02126	0.00500	0.02	0	106	75	125	0	0		
Selenium, Dissolved	0.01051	0.00500	0.01	0	105	75	125	0	0		
Silver, Dissolved	0.0497	0.0100	0.05	0	99.4	75	125	0	0		
Zinc, Dissolved	0.5356	0.0100	0.5	0	107	75	121	0	0		

DUP

SeqNo: **2673819** PrepDate:8/6/2019 9: TestNo: **E200.7F** RunNo: **174028**
Samp ID: **190805048-004** PrepRef: Units: **mg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0006279	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02267	0.0100	0	0	0	0	0	0.02187	3.58	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.003322	0.00500	0	0	0	0	0	0.004379	0	20.1	
Lead, Dissolved	0.001588	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0005494	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.003407	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74867

MBLK

SeqNo: **2674055** PrepDate:8/6/2019 3: TestNo: **E1631** RunNo: **174039**
Samp ID: **MB-74867** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2674056** PrepDate:8/6/2019 3: TestNo: **E1631** RunNo: **174039**
Samp ID: **LCS-74867** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.28	0.500	10	0	92.8	77	123	0	0		

MS

SeqNo: **2674062** PrepDate:8/6/2019 3: TestNo: **E1631** RunNo: **174039**
Samp ID: **190805048-006 (080519-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.8	0.500	12.5	0.095	85.6	71	125	0	0		

MSD

SeqNo: **2674063** PrepDate:8/6/2019 3: TestNo: **E1631** RunNo: **174039**
Samp ID: **190805048-006 (080519-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.5	0.500	12.5	0.095	83.2	71	125	10.8	2.82	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

mblk

SeqNo: **2673500** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.24	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.57	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.48	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.2	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.02	5.0	50	0	96	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.89	5.0	50	0	91.8	76.5	125	0	0		
Surr: Toluene-d8	51.36	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

lcs

SeqNo: **2673498** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.27	1.0	10	0	92.7	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.88	1.0	10	0	78.8	72.3	118	0	0		
1,1,2-Trichloroethane	10.2	1.0	10	0	102	73.1	123	0	0		
1,1-Dichloroethane	9.11	1.0	10	0	91.1	73.2	127	0	0		
1,1-Dichloroethene	7.82	1.0	10	0	78.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.37	1.0	5	0	87.4	68.4	115	0	0		
1,2-Dichlorobenzene	9.96	1.0	10	0	99.6	71	124	0	0		
1,2-Dichloroethane	9.08	1.0	10	0	90.8	72.5	127	0	0		
1,3-Dichlorobenzene	9.78	1.0	10	0	97.8	72.2	121	0	0		
1,3-Dichloropropane	4.8	1.0	5	0	96	76	122	0	0		
1,4-Dichlorobenzene	9.15	1.0	10	0	91.5	71.7	127	0	0		
2-Butanone	9.44	5.0	10	0	94.4	65.1	132	0	0		
4-Methyl-2-pentanone	9.22	5.0	10	0	92.2	68.7	118	0	0		
Acetone	6.72	5.0	10	0	67.2	69.2	133	0	0		S
Benzene	9.92	1.0	10	0	99.2	71.2	122	0	0		
Carbon disulfide	3.44	1.0	5	0	68.8	67.8	134	0	0		
Carbon tetrachloride	8.93	1.0	10	0	89.3	74.5	122	0	0		
Chlorobenzene	10.85	1.0	10	0	108	72.7	124	0	0		
Chloroethane	8.31	1.0	10	0	83.1	72.3	136	0	0		
Chloroform	9.14	1.0	10	0	91.4	71.6	133	0	0		
Dibromochloromethane	8.18	1.0	10	0	81.8	70.6	124	0	0		
Ethylbenzene	10.91	1.0	10	0	109	70.9	126	0	0		
Methylene chloride	10.7	1.0	10	0	107	66.3	130	0	0		
Tetrachloroethene	10.62	1.0	10	0	106	72.4	119	0	0		
Toluene	10.39	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	8.82	1.0	10	0	88.2	70.3	120	0	0		
Trichloroethene	10.51	1.0	10	0	105	73	127	0	0		
Vinyl chloride	7.93	1.0	10	0	79.3	65.2	134	0	0		
Xylenes, Total	32.48	1.0	30	0	108	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.42	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.01	5.0	50	0	94	76.5	125	0	0		
Surr: Toluene-d8	52.18	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

lcsd

SeqNo: **2673499** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.97	1.0	10	0	99.7	72.3	121	9.27	7.28	25	
1,1,2,2-Tetrachloroethane	8.34	1.0	10	0	83.4	72.3	118	7.88	5.67	25	
1,1,2-Trichloroethane	10.36	1.0	10	0	104	73.1	123	10.2	1.56	25	
1,1-Dichloroethane	9.73	1.0	10	0	97.3	73.2	127	9.11	6.58	25	
1,1-Dichloroethene	9.47	1.0	10	0	94.7	70.3	128	7.82	19.1	25	
1,2,3-Trichloropropane	4.64	1.0	5	0	92.8	68.4	115	4.37	5.99	25	
1,2-Dichlorobenzene	10.77	1.0	10	0	108	71	124	9.96	7.81	25	
1,2-Dichloroethane	8.85	1.0	10	0	88.5	72.5	127	9.08	2.57	25	
1,3-Dichlorobenzene	10.19	1.0	10	0	102	72.2	121	9.78	4.11	25	
1,3-Dichloropropane	4.8	1.0	5	0	96	76	122	4.8	0	0	
1,4-Dichlorobenzene	10.18	1.0	10	0	102	71.7	127	9.15	10.7	25	
2-Butanone	9.48	5.0	10	0	94.8	65.1	132	9.44	0.423	25	
4-Methyl-2-pentanone	9.43	5.0	10	0	94.3	68.7	118	9.22	2.25	25	
Acetone	7.76	5.0	10	0	77.6	69.2	133	6.72	14.4	25	
Benzene	10.1	1.0	10	0	101	71.2	122	9.92	1.80	25	
Carbon disulfide	4.03	1.0	5	0	80.6	67.8	134	3.44	15.8	25	
Carbon tetrachloride	9.76	1.0	10	0	97.6	74.5	122	8.93	8.88	25	
Chlorobenzene	11.23	1.0	10	0	112	72.7	124	10.85	3.44	25	
Chloroethane	8.1	1.0	10	0	81	72.3	136	8.31	2.56	25	
Chloroform	8.96	1.0	10	0	89.6	71.6	133	9.14	1.99	25	
Dibromochloromethane	8.96	1.0	10	0	89.6	70.6	124	8.18	9.10	25	
Ethylbenzene	11.28	1.0	10	0	113	70.9	126	10.91	3.33	25	
Methylene chloride	11.3	1.0	10	0	113	66.3	130	10.7	5.45	25	
Tetrachloroethene	11.1	1.0	10	0	111	72.4	119	10.62	4.42	25	
Toluene	10.67	1.0	10	0	107	71.8	116	10.39	2.66	25	
trans-1,2-Dichloroethene	9.54	1.0	10	0	95.4	70.3	120	8.82	7.84	25	
Trichloroethene	10.57	1.0	10	0	106	73	127	10.51	0.569	25	
Vinyl chloride	8.35	1.0	10	0	83.5	65.2	134	7.93	5.16	25	
Xylenes, Total	33.14	1.0	30	0	110	72.1	124	32.48	2.01	25	
Surr: 1,2-Dichloroethane-d4	48.35	5.0	50	0	96.7	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	47.28	5.0	50	0	94.6	76.5	125	0	0	25	
Surr: Toluene-d8	51.9	5.0	50	0	104	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

ms	SeqNo: **2673516**	TestNo: **SW8260C**	RunNo: **174012**
	Samp ID: **190805048-001b (080519-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.99	1.0	10	0	89.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.55	1.0	10	0	75.5	70.1	123	0	0		
1,1,2-Trichloroethane	9.17	1.0	10	0	91.7	72.1	119	0	0		
1,1-Dichloroethane	8.78	1.0	10	0	87.8	70.4	126	0	0		
1,1-Dichloroethene	8.54	1.0	10	0	85.4	70.2	125	0	0		
1,2,3-Trichloropropane	3.92	1.0	5	0	78.4	53.7	101	0	0		
1,2-Dichlorobenzene	8.98	1.0	10	0	89.8	70.2	123	0	0		
1,2-Dichloroethane	8.21	1.0	10	0	82.1	73.5	126	0	0		
1,3-Dichlorobenzene	8.94	1.0	10	0	89.4	70.4	124	0	0		
1,3-Dichloropropane	4.2	1.0	5	0	84	64	125	0	0		
1,4-Dichlorobenzene	8.19	1.0	10	0	81.9	70.8	127	0	0		
2-Butanone	8.58	5.0	10	0	85.8	60.5	123	0	0		
4-Methyl-2-pentanone	7.68	5.0	10	0	76.8	52.8	133	0	0		
Acetone	5.87	5.0	10	0	58.7	56.3	135	0	0		
Benzene	9.08	1.0	10	0	90.8	70.2	127	0	0		
Carbon disulfide	3.72	1.0	5	0	74.4	62.2	130	0	0		
Carbon tetrachloride	8.91	1.0	10	0	89.1	56.4	137	0	0		
Chlorobenzene	10.71	1.0	10	0	107	72.7	128	0	0		
Chloroethane	8.51	1.0	10	0	85.1	71.3	135	0	0		
Chloroform	7.97	1.0	10	0	79.7	70.2	125	0	0		
Dibromochloromethane	7.73	1.0	10	0	77.3	69.5	123	0	0		
Ethylbenzene	10.83	1.0	10	0	108	71.9	129	0	0		
Methylene chloride	9.25	1.0	10	0	92.5	65.3	123	0	0		
Tetrachloroethene	10.25	1.0	10	0	103	74.5	121	0	0		
Toluene	9.53	1.0	10	0.2	93.3	73	122	0	0		
trans-1,2-Dichloroethene	8.47	1.0	10	0	84.7	69.1	133	0	0		
Trichloroethene	9.83	1.0	10	0	98.3	71.1	126	0	0		
Vinyl chloride	8.25	1.0	10	0	82.5	65	137	0	0		
Xylenes, Total	31.01	1.0	30	0.36	102	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.93	5.0	50	0	97.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.54	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	52.25	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

msd

SeqNo: **2673517** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **190805048-001b (080519-01-SW-U-** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.97	1.0	10	0	89.7	71.6	126	8.99	0.223	20.4	
1,1,2,2-Tetrachloroethane	6.78	1.0	10	0	67.8	70.1	123	7.55	10.7	18.6	S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	72.1	119	9.17	2.88	20	
1,1-Dichloroethane	8.31	1.0	10	0	83.1	70.4	126	8.78	5.50	19.2	
1,1-Dichloroethene	7.22	1.0	10	0	72.2	70.2	125	8.54	16.8	16.1	Z
1,2,3-Trichloropropane	3.41	1.0	5	0	68.2	53.7	101	3.92	13.9	20	
1,2-Dichlorobenzene	9.41	1.0	10	0	94.1	70.2	123	8.98	4.68	17.9	
1,2-Dichloroethane	7.33	1.0	10	0	73.3	73.5	126	8.21	11.3	15.6	S
1,3-Dichlorobenzene	9.19	1.0	10	0	91.9	70.4	124	8.94	2.76	14.3	
1,3-Dichloropropane	4.03	1.0	5	0	80.6	64	125	4.2	4.13	0	
1,4-Dichlorobenzene	8.91	1.0	10	0	89.1	70.8	127	8.19	8.42	14.4	
2-Butanone	7.65	5.0	10	0	76.5	60.5	123	8.58	11.5	15	
4-Methyl-2-pentanone	7.12	5.0	10	0	71.2	52.8	133	7.68	7.57	11.9	
Acetone	4.38	5.0	10	0	43.8	56.3	135	5.87	0	10.6	JS
Benzene	8.78	1.0	10	0	87.8	70.2	127	9.08	3.36	18.4	
Carbon disulfide	3.36	1.0	5	0	67.2	62.2	130	3.72	10.2	13.1	
Carbon tetrachloride	8.98	1.0	10	0	89.8	56.4	137	8.91	0.783	20.3	
Chlorobenzene	9.49	1.0	10	0	94.9	72.7	128	10.71	12.1	19.6	
Chloroethane	8.3	1.0	10	0	83	71.3	135	8.51	2.50	27.8	
Chloroform	7.86	1.0	10	0	78.6	70.2	125	7.97	1.39	20.3	
Dibromochloromethane	7.83	1.0	10	0	78.3	69.5	123	7.73	1.29	18.8	
Ethylbenzene	8.93	1.0	10	0	89.3	71.9	129	10.83	19.2	16.3	Z
Methylene chloride	9.33	1.0	10	0	93.3	65.3	123	9.25	0.861	21.4	
Tetrachloroethene	9.76	1.0	10	0	97.6	74.5	121	10.25	4.90	20.9	
Toluene	8.95	1.0	10	0.2	87.5	73	122	9.53	6.28	19.4	
trans-1,2-Dichloroethene	8.18	1.0	10	0	81.8	69.1	133	8.47	3.48	16.1	
Trichloroethene	9.54	1.0	10	0	95.4	71.1	126	9.83	2.99	16.6	
Vinyl chloride	7.43	1.0	10	0	74.3	65	137	8.25	10.5	20.5	
Xylenes, Total	26.63	1.0	30	0.36	87.6	72	130	31.01	15.2	16.1	
Surr: 1,2-Dichloroethane-d4	48.62	5.0	50	0	97.2	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.71	5.0	50	0	91.4	76.5	125	0	0	0	
Surr: Toluene-d8	51.28	5.0	50	0	103	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190805048
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

dup

SeqNo: **2673515** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **190805048-006b** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2,2-Tetrachloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
1,2,3-Trichloropropane	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,3-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,3-Dichloropropane	ND	1.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
2-Butanone	ND	5.0	0	0	0	0	0	0	0	25	
4-Methyl-2-pentanone	ND	5.0	0	0	0	0	0	0	0	25	
Acetone	ND	5.0	0	0	0	0	0	0	0	25	
Benzene	ND	1.0	0	0	0	0	0	0	0	25	
Carbon disulfide	ND	1.0	0	0	0	0	0	0	0	25	
Carbon tetrachloride	ND	1.0	0	0	0	0	0	0	0	25	
Chlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
Chloroethane	ND	1.0	0	0	0	0	0	0	0	25	
Chloroform	3.31	1.0	0	0	0	0	0	3.14	5.27	25	
Dibromochloromethane	ND	1.0	0	0	0	0	0	0	0	25	
Ethylbenzene	ND	1.0	0	0	0	0	0	0	0	25	
Methylene chloride	0.98	1.0	0	0	0	0	0	1.12	0	25	
Tetrachloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Toluene	0.1	1.0	0	0	0	0	0	0	0	25	
trans-1,2-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Trichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Vinyl chloride	ND	1.0	0	0	0	0	0	0	0	25	
Xylenes, Total	ND	1.0	0	0	0	0	0	0	0	0	
Surr: 1,2-Dichloroethane-d4	48.28	5.0	50	0	96.6	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.02	5.0	50	0	98	76.5	125	0	0	25	
Surr: Toluene-d8	51	5.0	50	0	102	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190805048

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gebar
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080519-01-SW-U-A-1	8/5/19	0945	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	080519-02-SW-A-A-1	8/5/19	1010	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	080519-03-SW-D-A-1	8/5/19	1030	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other: _____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/5/19 1605
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/5/19 1629

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190805048

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 19080548

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will ~~post~~ to portal	BASF Rensselaer NY	Patrick Geha
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080519-03-SW-D-A-1	8/5/19	1030	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	metals/hardness
				A				3	mercury
				P				1	TSS
004	080519-04-SW-B-A-1	8/5/19	0915	A	W		✓	1	metals (filtered)
	↓	↓	↓	P	↓		↓	2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	080519-05-SW-B-A-1	8/5/19	1055	A	W		✓	1	TSS
007	080519-TB01	8/5/19		P	TB			1	trip blank
006	080519-01-SW-U-A-3	8/5/19	1215	A	W		✓	1	metals (filtered)
	↓	↓	↓	P	↓		↓	2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/5/19 1605
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/5/19 4:29 pm

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190805048

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A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Geheran	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	080519-01-SW-U-A-3	8/5/19	1215	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	metals/hardness
				A				3	mercury
				P				1	TSS
008	080519-TB02	8/5/19		A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/5/19 1605
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/5/19 4:29 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10c		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190805048

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/7/2019

8/5/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190805048-001	080519-01-SW-U-A-1	Water	8/5/2019	8/7/2019	E	C	B	D	D	A	F
190805048-002	080519-02-SW-A-A-1	Water	8/5/2019	8/7/2019	E	C	B	D	D	A	F
190805048-003	080519-03-SW-D-1	Water	8/5/2019	8/7/2019	E	C	B	D	D	A	F
190805048-004	080519-04-SW-B-A-1	Water	8/5/2019	8/7/2019	E	C	B	D	D	A	F
190805048-005	080519-05-SW-B-A-1	Water	8/5/2019	8/7/2019							A
190805048-006	080519-01-SW-U-A-3	Water	8/5/2019	8/7/2019	E	C	B	D	D	A	F
190805048-007	080519-TB01	Trip Blank	8/5/2019	8/7/2019			A				
190805048-008	080519-TB02	Trip Blank	8/5/2019	8/7/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/6/19 – 8/12/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 8/6/19 through 8/12/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were not any exceedances of the water quality criteria.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU, however there were a few high readings (max = 51.85 NTU) over the reporting period. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (less than 20 NTU). The lab TSS values collected at the same time were never higher than 16 mg/L. Overall, the turbidity readings continued to be in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis (completed on 8/13/19). After the data from the first month's samples is received, AECOM will prepare a summary memorandum detailing the Turbidity/ TSS relationship and submit it to the NYSDEC for review/ approval. AECOM will Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the dredging operations while the summary memorandum is prepared.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
080619-01-SW-U-A-1	09:50	AROCLOR-1242	T	ug/l	0.2	0.038	J		U	20	28.63	4.1	High	7.2	Moon Pool	7:30
080619-01-SW-U-A-1	09:50	COPPER	D	mg/l	0.01	0.004	J		U	20	28.63	4.1	High	7.2	Moon Pool	7:30
080619-02-SW-A-A-1	10:25	AROCLOR-1242	T	ug/l	0.2	0.042	J		A	24	6.49	3.06	High	4.7	Moon Pool	7:30
080619-03-SW-D-C-1	11:05	AROCLOR-1242	T	ug/l	0.2	0.048	J		D	19	7.52	2.45	Outgoing (Ebb)	11	Moon Pool	7:30
080619-03-SW-D-C-1	11:05	CHROMIUM, TOTAL	D	mg/l	0.17	0.005	J		D	19	7.52	2.45	Outgoing (Ebb)	11	Moon Pool	7:30
080619-03-SW-D-C-1	11:05	COPPER	D	mg/l	0.01	0.005	J		D	19	7.52	2.45	Outgoing (Ebb)	11	Moon Pool	7:30
080619-04-SW-B-A-1	09:20	AROCLOR-1242	T	ug/l	0.2	0.064	J		B	20	7.48	4.43	High	14.6	Moon Pool	7:30
080619-04-SW-B-A-1	09:20	COPPER	D	mg/l	0.01	0.006			B	20	7.48	4.43	High	14.6	Moon Pool	7:30
080719-01-SW-U-A-1	09:00	COPPER	D	mg/l	0.01	0.004	J		U	20	51.85	5.03	Incoming (Flood)	7	N/A	N/A
080719-02-SW-A-A-1	09:25	ARSENIC	D	mg/l	0.15	0.003	J		A	24	23.37	5.06	Incoming (Flood)	5.5	N/A	N/A
080719-03-SW-D-B-1	09:55	COPPER	D	mg/l	0.01	0.007			D	18.5	3.45	4.76	High	4.1	N/A	N/A
080719-04-SW-B-A-1	08:25	COPPER	D	mg/l	0.01	0.007			B	18	8.90	4.87	Incoming (Flood)	7.4	N/A	N/A
080819-01-SW-D-B-1	07:55	CADMIUM	D	mg/l	0.004	0.002			D	10	3.51	3.27	Incoming (Flood)	7.4	Moon Pool	7:05
080819-01-SW-D-B-1	07:55	ZINC	D	mg/l	0.02	0.007	J		D	10	3.51	3.27	Incoming (Flood)	7.4	Moon Pool	7:05
080819-02-SW-A-A-1	08:25	COPPER	D	mg/l	0.01	0.007			A	23	3.11	4.18	Incoming (Flood)	8.1	Moon Pool	7:05
080819-04-SW-B-A-1	07:30	AROCLOR-1242	T	ug/l	0.2	0.034	J		B	16	3.56	2.83	Incoming (Flood)	10.3	Moon Pool	7:05
080919-01-SW-D-B-1	08:25	COPPER	D	mg/l	0.01	0.005			D	10	7.70	3.14	Incoming (Flood)	7.6	Moon Pool	8:20
080919-04-SW-B-A-1	07:35	AROCLOR-1242	T	ug/l	0.2	0.037	J		B	15	4.49	1.25	Low	8.6	Moon Pool	8:20
080919-04-SW-B-A-1	07:35	CHROMIUM, TOTAL	D	mg/l	0.17	0.008			B	15	4.49	1.25	Low	8.6	Moon Pool	8:20
080919-04-SW-B-A-1	07:35	COPPER	D	mg/l	0.01	0.005	J		B	15	4.49	1.25	Low	8.6	Moon Pool	8:20
081219-01-SW-U-B-1	08:55	COPPER	D	mg/l	0.01	0.005	J		U	8	1.74	-0.93	Outgoing (Ebb)	6.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
081219-01-SW-U-B-1	08:55	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.8			U	8	1.74	-0.93	Outgoing (Ebb)	6.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
081219-02-SW-A-A-2	09:40	COPPER	D	mg/l	0.01	0.004	J		A	20	2.43	-0.91	Low	6.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
081219-03-SW-D-C-1	10:20	AROCLOR-1242	T	ug/l	0.2	0.064	J		D	3	4.23	-0.23	Low	10	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
081219-04-SW-B-A-1	08:30	COPPER	D	mg/l	0.01	0.006			B	13	1.76	-0.67	Outgoing (Ebb)	6.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 08, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190806066
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/6/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*08-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190806066		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-01-SW-U-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1242	**0.038**	0.065	J	µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/6/2019 7:36:58 PM
PCB, Total	**0.038**	0.065	J	µg/L	1	8/6/2019 7:36:58 PM
Surr: Decachlorobiphenyl	**92.4**	57.1-135		%REC	1	8/6/2019 7:36:58 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**2.7**	0.5	N	ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 11:52:00 AM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 11:52:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 11:52:00 AM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 11:52:00 AM
Copper	**0.008**	0.005		mg/L	1	8/8/2019 11:52:00 AM
Lead	**ND**	0.005		mg/L	1	8/8/2019 11:52:00 AM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 11:52:00 AM
Silver	**ND**	0.010		mg/L	1	8/8/2019 11:52:00 AM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 11:52:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:18:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/8/2019 1:18:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 1:18:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:18:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/8/2019 1:18:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:18:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-01-SW-U-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:18:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:18:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:18:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 6:55:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 6:55:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 6:55:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 6:55:00 PM
Surr: 1,2-Dichloroethane-d4	**94.6**	80.9-122		%REC	1	8/6/2019 6:55:00 PM
Surr: 4-Bromofluorobenzene	**99.3**	76.5-125		%REC	1	8/6/2019 6:55:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/6/2019 6:55:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-01-SW-U-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**7.2**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-02-SW-A-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1242	**0.042**	0.065	J	µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/6/2019 7:50:18 PM
PCB, Total	**0.042**	0.065	J	µg/L	1	8/6/2019 7:50:18 PM
Surr: Decachlorobiphenyl	**86.4**	57.1-135		%REC	1	8/6/2019 7:50:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**2.1**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 11:57:00 AM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 11:57:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 11:57:00 AM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 11:57:00 AM
Copper	**0.006**	0.005		mg/L	1	8/8/2019 11:57:00 AM
Lead	**ND**	0.005		mg/L	1	8/8/2019 11:57:00 AM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 11:57:00 AM
Silver	**ND**	0.010		mg/L	1	8/8/2019 11:57:00 AM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 11:57:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:22:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/8/2019 1:22:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 1:22:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:22:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:22:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:22:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-02-SW-A-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/7/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:22:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:22:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:22:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 7:16:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 7:16:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 7:16:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 7:16:00 PM
Surr: 1,2-Dichloroethane-d4	**91.7**	80.9-122		%REC	1	8/6/2019 7:16:00 PM
Surr: 4-Bromofluorobenzene	**93.1**	76.5-125		%REC	1	8/6/2019 7:16:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/6/2019 7:16:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-02-SW-A-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**4.7**	1.1		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-03-SW-D-C-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1242	**0.048**	0.065	J	µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 10:16:54 PM
PCB, Total	**0.048**	0.065	J	µg/L	1	8/7/2019 10:16:54 PM
Surr: Decachlorobiphenyl	**87.0**	57.1-135		%REC	1	8/7/2019 10:16:54 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**7.8**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 12:04:00 PM
Barium	**0.026**	0.010		mg/L	1	8/8/2019 12:04:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 12:04:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 12:04:00 PM
Copper	**0.008**	0.005		mg/L	1	8/8/2019 12:04:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 12:04:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 12:04:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 12:04:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	8/8/2019 12:04:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:30:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/8/2019 1:30:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 1:30:00 PM
Chromium, Dissolved	**0.005**	0.005	J	mg/L	1	8/8/2019 1:30:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/8/2019 1:30:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:30:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-03-SW-D-C-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:30:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:30:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:30:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 7:38:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 7:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 7:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 7:38:00 PM
Surr: 1,2-Dichloroethane-d4	**93.2**	80.9-122		%REC	1	8/6/2019 7:38:00 PM
Surr: 4-Bromofluorobenzene	**98.3**	76.5-125		%REC	1	8/6/2019 7:38:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/6/2019 7:38:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-03-SW-D-C-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**11.0**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-04-SW-B-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1242	**0.064**	0.065	J	µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/6/2019 8:17:01 PM
PCB, Total	**0.064**	0.065	J	µg/L	1	8/6/2019 8:17:01 PM
Surr: Decachlorobiphenyl	**97.0**	57.1-135		%REC	1	8/6/2019 8:17:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/6/2019)						
Mercury	**4.9**	0.5		ng/L	1	8/7/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/8/2019 12:09:00 PM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 12:09:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 12:09:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 12:09:00 PM
Copper	**0.008**	0.005		mg/L	1	8/8/2019 12:09:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 12:09:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 12:09:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 12:09:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 12:09:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/7/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:40:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/8/2019 1:40:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 1:40:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:40:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	8/8/2019 1:40:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:40:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-04-SW-B-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/7/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 1:40:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:40:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 1:40:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 7:59:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/6/2019 7:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 7:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 7:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 7:59:00 PM
Surr: 1,2-Dichloroethane-d4	**94.6**	80.9-122		%REC	1	8/6/2019 7:59:00 PM
Surr: 4-Bromofluorobenzene	**93.9**	76.5-125		%REC	1	8/6/2019 7:59:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/6/2019 7:59:00 PM

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-04-SW-B-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**14.6**	1.1		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-05-SW-B-A-1
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**13.3**	1.1		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *08-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080619-TB01
Work Order:	**190806066**	**Collection Date:**	8/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190806066-006
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Methylene chloride	**2.5**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Acetone	**ND**	5.0		µg/L	1	8/6/2019 8:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/6/2019 8:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Benzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/6/2019 8:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Toluene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/6/2019 8:21:00 PM
Surr: 1,2-Dichloroethane-d4	**97.4**	80.9-122		%REC	1	8/6/2019 8:21:00 PM
Surr: 4-Bromofluorobenzene	**96.3**	76.5-125		%REC	1	8/6/2019 8:21:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/6/2019 8:21:00 PM

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74873

mblk

SeqNo: **2673374** PrepDate:**8/6/2019** TestNo: **SW8082A** RunNo: **174010**
Samp ID: **MB-74873** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0588	0.0100	0.1	0	58.8	57.1	135	0	0		

lcs

SeqNo: **2673381** PrepDate:**8/6/2019** TestNo: **SW8082A** RunNo: **174010**
Samp ID: **LCS-74873** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5744	0.0650	0.5	0	115	60	140	0	0		
Surr: Decachlorobiphenyl	0.099	0.0100	0.1	0	99	57.1	135	0	0		

lcsd

SeqNo: **2673382** PrepDate:**8/6/2019** TestNo: **SW8082A** RunNo: **174010**
Samp ID: **LCSD-74873** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5522	0.0650	0.5	0	110	60	140	0.5744	3.94	30	
Surr: Decachlorobiphenyl	0.0916	0.0100	0.1	0	91.6	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74878

LCS

SeqNo: **2674901** PrepDate:8/7/2019 8: TestNo: **SM2540D** RunNo: **174083**
Samp ID: **LCS-74878** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	528	40.0	490	0	108	86.5	114	0	0		

DUP

SeqNo: **2674904** PrepDate:8/7/2019 8: TestNo: **SM2540D** RunNo: **174083**
Samp ID: **190802045-001** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	2973	67.0	0	0	0	0	0	2887	2.96	10	

DUP

SeqNo: **2674906** PrepDate:8/7/2019 8: TestNo: **SM2540D** RunNo: **174083**
Samp ID: **190802045-002** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	3165	50.0	0	0	0	0	0	3165000000000359		10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74880

MBLK

SeqNo: **2674105** PrepDate:8/7/2019 8: TestNo: **E200.7F** RunNo: **174042**
Samp ID: **MB-74880** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

MBLK

SeqNo: **2675013** PrepDate:8/7/2019 8: TestNo: **E200.7F** RunNo: **174089**
Samp ID: **MB-74880** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2674106** PrepDate:8/7/2019 8: TestNo: **E200.7F** RunNo: **174042**
Samp ID: **LCS-74880** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.002	0.00500	2	0	100	85	115	0	0		
Barium, Dissolved	2.001	0.0100	2	0	100	89	112	0	0		
Cadmium, Dissolved	2.09	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.935	0.00500	2	0	96.8	89.1	109	0	0		
Copper, Dissolved	1.998	0.00500	2	0	99.9	86.8	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74880

LCS

SeqNo: **2674106** PrepDate:**8/7/2019 8:** TestNo: **E200.7F** RunNo: **174042**
Samp ID: **LCS-74880** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	2.141	0.00500	2	0	107	86.8	114	0	0		
Selenium, Dissolved	2.041	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5234	0.0100	0.5	0	105	85	115	0	0		
Zinc, Dissolved	2.086	0.0100	2	0	104	85	115	0	0		

LCS

SeqNo: **2675014** PrepDate:**8/7/2019 8:** TestNo: **E200.7F** RunNo: **174089**
Samp ID: **LCS-74880** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.04	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.036	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	2.124	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	1.989	0.00500	2	0	99.5	89.1	109	0	0		
Copper, Dissolved	2.1	0.00500	2	0	105	86.8	115	0	0		
Lead, Dissolved	2.158	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.039	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.4955	0.0100	0.5	0	99.1	85	115	0	0		
Zinc, Dissolved	2.08	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2675020** PrepDate:**8/7/2019 8:** TestNo: **E200.7F** RunNo: **174089**
Samp ID: **190806066-004 (080619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0375	0.00500	0.04	0	93.8	75	123	0	0		
Barium, Dissolved	2.219	0.0100	2	0.0228	110	75	124	0	0		
Cadmium, Dissolved	0.05492	0.00500	0.05	0	110	75	125	0	0		
Chromium, Dissolved	0.2188	0.00500	0.2	0	109	77.2	117	0	0		
Copper, Dissolved	0.2914	0.00500	0.25	0.006254	114	75	125	0	0		
Lead, Dissolved	0.02078	0.00500	0.02	0	104	75	125	0	0		
Selenium, Dissolved	0.01209	0.00500	0.01	0	121	75	125	0	0		
Silver, Dissolved	0.0516	0.0100	0.05	0	103	75	125	0	0		
Zinc, Dissolved	0.5576	0.0100	0.5	0	112	75	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74880

DUP	SeqNo: **2675019**	PrepDate:8/7/2019 8:	TestNo: **E200.7F**	RunNo: **174089**
	Samp ID: **190806066-004**	PrepRef:	Units: **mg/L**	Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02365	0.0100	0	0	0	0	0	0.0228	3.69	15.4	
Cadmium, Dissolved	0.00002734	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.0014	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.00634	0.00500	0	0	0	0	0	0.006254	1.36	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.00238	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74881

MBLK

SeqNo: **2675003** PrepDate:8/7/2019 8: TestNo: **E200.7** RunNo: **174089**
Samp ID: **MB-74881** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2675004** PrepDate:8/7/2019 8: TestNo: **E200.7** RunNo: **174089**
Samp ID: **LCS-74881** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.019	0.00500	2	0	101	89.1	111	0	0		
Barium	2.038	0.0100	2	0	102	85	115	0	0		
Cadmium	2.111	0.00500	2	0	106	85	115	0	0		
Chromium	1.988	0.00500	2	0	99.4	89.7	109	0	0		
Copper	2.096	0.00500	2	0	105	85	115	0	0		
Lead	2.152	0.00500	2	0	108	88.1	112	0	0		
Selenium	2.022	0.00500	2	0	101	87.5	112	0	0		
Silver	0.5255	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.072	0.0100	2	0	104	88.3	113	0	0		

MS

SeqNo: **2675010** PrepDate:8/7/2019 8: TestNo: **E200.7** RunNo: **174089**
Samp ID: **190806066-004 (080619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04548	0.00500	0.04	0.003066	106	75	125	0	0		
Barium	2.228	0.0100	2	0.02433	110	75	119	0	0		
Cadmium	0.05538	0.00500	0.05	0	111	75	118	0	0		
Chromium	0.2119	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2907	0.00500	0.25	0.007601	113	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74881

MS

SeqNo: **2675010** PrepDate:**8/7/2019 8:** TestNo: **E200.7** RunNo: **174089**
Samp ID: **190806066-004 (080619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02095	0.00500	0.02	0	105	75	125	0	0		
Selenium	0.01198	0.00500	0.01	0	120	75	125	0	0		
Silver	0.05952	0.0100	0.05	0	119	75	125	0	0		
Zinc	0.5653	0.0100	0.5	0	113	76.9	125	0	0		

DUP

SeqNo: **2675009** PrepDate:**8/7/2019 8:** TestNo: **E200.7** RunNo: **174089**
Samp ID: **190806066-004** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.003016	0.00500	0	0	0	0	0	0.003066	0	20	
Barium	0.02409	0.0100	0	0	0	0	0	0.02433	0.991	20	
Cadmium	0.0001208	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.006025	0.00500	0	0	0	0	0	0.007601	23.1	20	Z
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.002199	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003697	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74894

MBLK

SeqNo: **2674070** PrepDate:8/6/2019 2: TestNo: **E1631** RunNo: **174039**
Samp ID: **MB-74894** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2674071** PrepDate:8/6/2019 2: TestNo: **E1631** RunNo: **174039**
Samp ID: **LCS-74894** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.21	0.500	10	0	92.1	77	123	0	0		

MS

SeqNo: **2674065** PrepDate:8/6/2019 2: TestNo: **E1631** RunNo: **174039**
Samp ID: **190806066-001 (080619-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.8	0.500	12.5	2.69	64.9	71	125	0	0		S

MSD

SeqNo: **2674066** PrepDate:8/6/2019 2: TestNo: **E1631** RunNo: **174039**
Samp ID: **190806066-001 (080619-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.5	0.500	12.5	2.69	70.5	71	125	10.8	6.28	24	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

mblk	SeqNo: **2673500**	TestNo: **SW8260C**	RunNo: **174012**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.24	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.57	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.48	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.2	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.02	5.0	50	0	96	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.89	5.0	50	0	91.8	76.5	125	0	0		
Surr: Toluene-d8	51.36	5.0	50	0	103	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

lcs

SeqNo: **2673498** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.27	1.0	10	0	92.7	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.88	1.0	10	0	78.8	72.3	118	0	0		
1,1,2-Trichloroethane	10.2	1.0	10	0	102	73.1	123	0	0		
1,1-Dichloroethane	9.11	1.0	10	0	91.1	73.2	127	0	0		
1,1-Dichloroethene	7.82	1.0	10	0	78.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.37	1.0	5	0	87.4	68.4	115	0	0		
1,2-Dichlorobenzene	9.96	1.0	10	0	99.6	71	124	0	0		
1,2-Dichloroethane	9.08	1.0	10	0	90.8	72.5	127	0	0		
1,3-Dichlorobenzene	9.78	1.0	10	0	97.8	72.2	121	0	0		
1,3-Dichloropropane	4.8	1.0	5	0	96	76	122	0	0		
1,4-Dichlorobenzene	9.15	1.0	10	0	91.5	71.7	127	0	0		
2-Butanone	9.44	5.0	10	0	94.4	65.1	132	0	0		
4-Methyl-2-pentanone	9.22	5.0	10	0	92.2	68.7	118	0	0		
Acetone	6.72	5.0	10	0	67.2	69.2	133	0	0		S
Benzene	9.92	1.0	10	0	99.2	71.2	122	0	0		
Carbon disulfide	3.44	1.0	5	0	68.8	67.8	134	0	0		
Carbon tetrachloride	8.93	1.0	10	0	89.3	74.5	122	0	0		
Chlorobenzene	10.85	1.0	10	0	108	72.7	124	0	0		
Chloroethane	8.31	1.0	10	0	83.1	72.3	136	0	0		
Chloroform	9.14	1.0	10	0	91.4	71.6	133	0	0		
Dibromochloromethane	8.18	1.0	10	0	81.8	70.6	124	0	0		
Ethylbenzene	10.91	1.0	10	0	109	70.9	126	0	0		
Methylene chloride	10.7	1.0	10	0	107	66.3	130	0	0		
Tetrachloroethene	10.62	1.0	10	0	106	72.4	119	0	0		
Toluene	10.39	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	8.82	1.0	10	0	88.2	70.3	120	0	0		
Trichloroethene	10.51	1.0	10	0	105	73	127	0	0		
Vinyl chloride	7.93	1.0	10	0	79.3	65.2	134	0	0		
Xylenes, Total	32.48	1.0	30	0	108	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.42	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.01	5.0	50	0	94	76.5	125	0	0		
Surr: Toluene-d8	52.18	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

lcsd

SeqNo: **2673499** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.97	1.0	10	0	99.7	72.3	121	9.27	7.28	25	
1,1,2,2-Tetrachloroethane	8.34	1.0	10	0	83.4	72.3	118	7.88	5.67	25	
1,1,2-Trichloroethane	10.36	1.0	10	0	104	73.1	123	10.2	1.56	25	
1,1-Dichloroethane	9.73	1.0	10	0	97.3	73.2	127	9.11	6.58	25	
1,1-Dichloroethene	9.47	1.0	10	0	94.7	70.3	128	7.82	19.1	25	
1,2,3-Trichloropropane	4.64	1.0	5	0	92.8	68.4	115	4.37	5.99	25	
1,2-Dichlorobenzene	10.77	1.0	10	0	108	71	124	9.96	7.81	25	
1,2-Dichloroethane	8.85	1.0	10	0	88.5	72.5	127	9.08	2.57	25	
1,3-Dichlorobenzene	10.19	1.0	10	0	102	72.2	121	9.78	4.11	25	
1,3-Dichloropropane	4.8	1.0	5	0	96	76	122	4.8	0	0	
1,4-Dichlorobenzene	10.18	1.0	10	0	102	71.7	127	9.15	10.7	25	
2-Butanone	9.48	5.0	10	0	94.8	65.1	132	9.44	0.423	25	
4-Methyl-2-pentanone	9.43	5.0	10	0	94.3	68.7	118	9.22	2.25	25	
Acetone	7.76	5.0	10	0	77.6	69.2	133	6.72	14.4	25	
Benzene	10.1	1.0	10	0	101	71.2	122	9.92	1.80	25	
Carbon disulfide	4.03	1.0	5	0	80.6	67.8	134	3.44	15.8	25	
Carbon tetrachloride	9.76	1.0	10	0	97.6	74.5	122	8.93	8.88	25	
Chlorobenzene	11.23	1.0	10	0	112	72.7	124	10.85	3.44	25	
Chloroethane	8.1	1.0	10	0	81	72.3	136	8.31	2.56	25	
Chloroform	8.96	1.0	10	0	89.6	71.6	133	9.14	1.99	25	
Dibromochloromethane	8.96	1.0	10	0	89.6	70.6	124	8.18	9.10	25	
Ethylbenzene	11.28	1.0	10	0	113	70.9	126	10.91	3.33	25	
Methylene chloride	11.3	1.0	10	0	113	66.3	130	10.7	5.45	25	
Tetrachloroethene	11.1	1.0	10	0	111	72.4	119	10.62	4.42	25	
Toluene	10.67	1.0	10	0	107	71.8	116	10.39	2.66	25	
trans-1,2-Dichloroethene	9.54	1.0	10	0	95.4	70.3	120	8.82	7.84	25	
Trichloroethene	10.57	1.0	10	0	106	73	127	10.51	0.569	25	
Vinyl chloride	8.35	1.0	10	0	83.5	65.2	134	7.93	5.16	25	
Xylenes, Total	33.14	1.0	30	0	110	72.1	124	32.48	2.01	25	
Surr: 1,2-Dichloroethane-d4	48.35	5.0	50	0	96.7	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	47.28	5.0	50	0	94.6	76.5	125	0	0	25	
Surr: Toluene-d8	51.9	5.0	50	0	104	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

ms

SeqNo: **2673516** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **190805048-001b** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.99	1.0	10	0	89.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.55	1.0	10	0	75.5	70.1	123	0	0		
1,1,2-Trichloroethane	9.17	1.0	10	0	91.7	72.1	119	0	0		
1,1-Dichloroethane	8.78	1.0	10	0	87.8	70.4	126	0	0		
1,1-Dichloroethene	8.54	1.0	10	0	85.4	70.2	125	0	0		
1,2,3-Trichloropropane	3.92	1.0	5	0	78.4	53.7	101	0	0		
1,2-Dichlorobenzene	8.98	1.0	10	0	89.8	70.2	123	0	0		
1,2-Dichloroethane	8.21	1.0	10	0	82.1	73.5	126	0	0		
1,3-Dichlorobenzene	8.94	1.0	10	0	89.4	70.4	124	0	0		
1,3-Dichloropropane	4.2	1.0	5	0	84	64	125	0	0		
1,4-Dichlorobenzene	8.19	1.0	10	0	81.9	70.8	127	0	0		
2-Butanone	8.58	5.0	10	0	85.8	60.5	123	0	0		
4-Methyl-2-pentanone	7.68	5.0	10	0	76.8	52.8	133	0	0		
Acetone	5.87	5.0	10	0	58.7	56.3	135	0	0		
Benzene	9.08	1.0	10	0	90.8	70.2	127	0	0		
Carbon disulfide	3.72	1.0	5	0	74.4	62.2	130	0	0		
Carbon tetrachloride	8.91	1.0	10	0	89.1	56.4	137	0	0		
Chlorobenzene	10.71	1.0	10	0	107	72.7	128	0	0		
Chloroethane	8.51	1.0	10	0	85.1	71.3	135	0	0		
Chloroform	7.97	1.0	10	0	79.7	70.2	125	0	0		
Dibromochloromethane	7.73	1.0	10	0	77.3	69.5	123	0	0		
Ethylbenzene	10.83	1.0	10	0	108	71.9	129	0	0		
Methylene chloride	9.25	1.0	10	0	92.5	65.3	123	0	0		
Tetrachloroethene	10.25	1.0	10	0	103	74.5	121	0	0		
Toluene	9.53	1.0	10	0.2	93.3	73	122	0	0		
trans-1,2-Dichloroethene	8.47	1.0	10	0	84.7	69.1	133	0	0		
Trichloroethene	9.83	1.0	10	0	98.3	71.1	126	0	0		
Vinyl chloride	8.25	1.0	10	0	82.5	65	137	0	0		
Xylenes, Total	31.01	1.0	30	0.36	102	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.93	5.0	50	0	97.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.54	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	52.25	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

msd	SeqNo: **2673517**	TestNo: **SW8260C**	RunNo: **174012**
	Samp ID: **190805048-001b**	Units: **µg/L**	Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.97	1.0	10	0	89.7	71.6	126	8.99	0.223	20.4	
1,1,2,2-Tetrachloroethane	6.78	1.0	10	0	67.8	70.1	123	7.55	10.7	18.6	S
1,1,2-Trichloroethane	8.91	1.0	10	0	89.1	72.1	119	9.17	2.88	20	
1,1-Dichloroethane	8.31	1.0	10	0	83.1	70.4	126	8.78	5.50	19.2	
1,1-Dichloroethene	7.22	1.0	10	0	72.2	70.2	125	8.54	16.8	16.1	Z
1,2,3-Trichloropropane	3.41	1.0	5	0	68.2	53.7	101	3.92	13.9	20	
1,2-Dichlorobenzene	9.41	1.0	10	0	94.1	70.2	123	8.98	4.68	17.9	
1,2-Dichloroethane	7.33	1.0	10	0	73.3	73.5	126	8.21	11.3	15.6	S
1,3-Dichlorobenzene	9.19	1.0	10	0	91.9	70.4	124	8.94	2.76	14.3	
1,3-Dichloropropane	4.03	1.0	5	0	80.6	64	125	4.2	4.13	0	
1,4-Dichlorobenzene	8.91	1.0	10	0	89.1	70.8	127	8.19	8.42	14.4	
2-Butanone	7.65	5.0	10	0	76.5	60.5	123	8.58	11.5	15	
4-Methyl-2-pentanone	7.12	5.0	10	0	71.2	52.8	133	7.68	7.57	11.9	
Acetone	4.38	5.0	10	0	43.8	56.3	135	5.87	0	10.6	JS
Benzene	8.78	1.0	10	0	87.8	70.2	127	9.08	3.36	18.4	
Carbon disulfide	3.36	1.0	5	0	67.2	62.2	130	3.72	10.2	13.1	
Carbon tetrachloride	8.98	1.0	10	0	89.8	56.4	137	8.91	0.783	20.3	
Chlorobenzene	9.49	1.0	10	0	94.9	72.7	128	10.71	12.1	19.6	
Chloroethane	8.3	1.0	10	0	83	71.3	135	8.51	2.50	27.8	
Chloroform	7.86	1.0	10	0	78.6	70.2	125	7.97	1.39	20.3	
Dibromochloromethane	7.83	1.0	10	0	78.3	69.5	123	7.73	1.29	18.8	
Ethylbenzene	8.93	1.0	10	0	89.3	71.9	129	10.83	19.2	16.3	Z
Methylene chloride	9.33	1.0	10	0	93.3	65.3	123	9.25	0.861	21.4	
Tetrachloroethene	9.76	1.0	10	0	97.6	74.5	121	10.25	4.90	20.9	
Toluene	8.95	1.0	10	0.2	87.5	73	122	9.53	6.28	19.4	
trans-1,2-Dichloroethene	8.18	1.0	10	0	81.8	69.1	133	8.47	3.48	16.1	
Trichloroethene	9.54	1.0	10	0	95.4	71.1	126	9.83	2.99	16.6	
Vinyl chloride	7.43	1.0	10	0	74.3	65	137	8.25	10.5	20.5	
Xylenes, Total	26.63	1.0	30	0.36	87.6	72	130	31.01	15.2	16.1	
Surr: 1,2-Dichloroethane-d4	48.62	5.0	50	0	97.2	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.71	5.0	50	0	91.4	76.5	125	0	0	0	
Surr: Toluene-d8	51.28	5.0	50	0	103	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190806066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174012

dup

SeqNo: **2673515** TestNo: **SW8260C** RunNo: **174012**
Samp ID: **190805048-006b** Units: **µg/L** Analysis Date: **8/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2,2-Tetrachloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
1,2,3-Trichloropropane	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,3-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,3-Dichloropropane	ND	1.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
2-Butanone	ND	5.0	0	0	0	0	0	0	0	25	
4-Methyl-2-pentanone	ND	5.0	0	0	0	0	0	0	0	25	
Acetone	ND	5.0	0	0	0	0	0	0	0	25	
Benzene	ND	1.0	0	0	0	0	0	0	0	25	
Carbon disulfide	ND	1.0	0	0	0	0	0	0	0	25	
Carbon tetrachloride	ND	1.0	0	0	0	0	0	0	0	25	
Chlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
Chloroethane	ND	1.0	0	0	0	0	0	0	0	25	
Chloroform	3.31	1.0	0	0	0	0	0	3.14	5.27	25	
Dibromochloromethane	ND	1.0	0	0	0	0	0	0	0	25	
Ethylbenzene	ND	1.0	0	0	0	0	0	0	0	25	
Methylene chloride	0.98	1.0	0	0	0	0	0	1.12	0	25	
Tetrachloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Toluene	0.1	1.0	0	0	0	0	0	0	0	25	
trans-1,2-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Trichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Vinyl chloride	ND	1.0	0	0	0	0	0	0	0	25	
Xylenes, Total	ND	1.0	0	0	0	0	0	0	0	0	
Surr: 1,2-Dichloroethane-d4	48.28	5.0	50	0	96.6	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.02	5.0	50	0	98	76.5	125	0	0	25	
Surr: Toluene-d8	51	5.0	50	0	102	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190806066

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080619-01-SW-U-A-1	8/6/19	0950	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
002	080619-02-SW-A-A-1	8/6/19	1025	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
003	080619-03-SW-D-C-1	8/6/19	1105	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/6/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/6/19 4:41 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

Demo
190806066

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314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190806066

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080619-03-SW-D-C-1	8/6/19	1105	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	080619-04-SW-B-A-1	8/6/19	0920	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	080619-05-SW-B-A-1	8/6/19	1115	A	W		✓	1	TSS
006	080619-TB01	[redacted]		P	TB				trip blank
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/6/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/6/19 4:44 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10 °C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190806066

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

8/6/2019



TAT: **2**

DateDue: 8/8/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190806066-001	080619-01-SW-U-A-1	Water	8/6/2019	8/8/2019	E	C	B	D	D	A	F
190806066-002	080619-02-SW-A-A-1	Water	8/6/2019	8/8/2019	E	C	B	D	D	A	F
190806066-003	080619-03-SW-D-C-1	Water	8/6/2019	8/8/2019	E	C	B	D	D	A	F
190806066-004	080619-04-SW-B-A-1	Water	8/6/2019	8/8/2019	E	C	B	D	D	A	F
190806066-005	080619-05-SW-B-A-1	Water	8/6/2019	8/8/2019							A
190806066-006	080619-TB01	Trip Blank	8/6/2019	8/8/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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August 09, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190807084
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/7/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*09-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190807084		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-01-SW-U-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
PCB, Total	**ND**	0.065		µg/L	1	8/7/2019 7:55:40 PM
Surr: Decachlorobiphenyl	**75.0**	57.1-135		%REC	1	8/7/2019 7:55:40 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.8**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 2:40:00 PM
Barium	**0.023**	0.010		mg/L	1	8/8/2019 2:40:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 2:40:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 2:40:00 PM
Copper	**0.005**	0.005		mg/L	1	8/8/2019 2:40:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 2:40:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 2:40:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 2:40:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 2:40:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 3:54:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/8/2019 3:54:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 3:54:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 3:54:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/8/2019 3:54:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 3:54:00 PM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-01-SW-U-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/8/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 3:54:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 3:54:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 3:54:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 11:12:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 11:12:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 11:12:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 11:12:00 AM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 11:12:00 AM
Surr: 1,2-Dichloroethane-d4	**95.6**	80.9-122		%REC	1	8/9/2019 11:12:00 AM
Surr: 4-Bromofluorobenzene	**92.8**	76.5-125		%REC	1	8/9/2019 11:12:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/9/2019 11:12:00 AM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-01-SW-U-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**7.0**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-02-SW-A-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
PCB, Total	**ND**	0.065		µg/L	1	8/7/2019 8:09:00 PM
Surr: Decachlorobiphenyl	**61.4**	57.1-135		%REC	1	8/7/2019 8:09:00 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 3:13:00 PM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 3:13:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 3:13:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 3:13:00 PM
Copper	**0.009**	0.005		mg/L	1	8/8/2019 3:13:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 3:13:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 3:13:00 PM
Silver	**0.004**	0.010	J	mg/L	1	8/8/2019 3:13:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 3:13:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/8/2019 4:18:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/8/2019 4:18:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 4:18:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:18:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:18:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:18:00 PM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-02-SW-A-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/8/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:18:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:18:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:18:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/9/2019 11:34:00 AM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 11:34:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 11:34:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 11:34:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 11:34:00 AM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 11:34:00 AM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	8/9/2019 11:34:00 AM
Surr: 4-Bromofluorobenzene	**92.0**	76.5-125		%REC	1	8/9/2019 11:34:00 AM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	8/9/2019 11:34:00 AM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-02-SW-A-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**5.5**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-03-SW-D-B-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
PCB, Total	**ND**	0.065		µg/L	1	8/7/2019 7:28:55 PM
Surr: Decachlorobiphenyl	**78.0**	57.1-135		%REC	1	8/7/2019 7:28:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 3:18:00 PM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 3:18:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 3:18:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 3:18:00 PM
Copper	**0.007**	0.005		mg/L	1	8/8/2019 3:18:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 3:18:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 3:18:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 3:18:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 3:18:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:33:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/8/2019 4:33:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 4:33:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:33:00 PM
Copper, Dissolved	**0.007**	0.005		mg/L	1	8/8/2019 4:33:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:33:00 PM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-03-SW-D-B-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/8/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:33:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:33:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:33:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/9/2019 11:55:00 AM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 11:55:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 11:55:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 11:55:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 11:55:00 AM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 11:55:00 AM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	8/9/2019 11:55:00 AM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	8/9/2019 11:55:00 AM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/9/2019 11:55:00 AM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-03-SW-D-B-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**4.1**	1.1		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-04-SW-B-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-004
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
PCB, Total	**ND**	0.065		µg/L	1	8/7/2019 7:42:19 PM
Surr: Decachlorobiphenyl	**50.6**	57.1-135	S	%REC	1	8/7/2019 7:42:19 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 3:36:00 PM
Barium	**0.024**	0.010		mg/L	1	8/8/2019 3:36:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 3:36:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 3:36:00 PM
Copper	**0.006**	0.005		mg/L	1	8/8/2019 3:36:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 3:36:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 3:36:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 3:36:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 3:36:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:44:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/8/2019 4:44:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 4:44:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:44:00 PM
Copper, Dissolved	**0.007**	0.005		mg/L	1	8/8/2019 4:44:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:44:00 PM

CLIENT: AECOM Environment
Work Order: **190807084**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# : 60323713

Client Sample ID: 080719-04-SW-B-A-1
Collection Date: 8/7/2019
Lab Sample ID: 190807084-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/8/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:44:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:44:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:44:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/9/2019 12:17:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 12:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 12:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 12:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 12:17:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 12:17:00 PM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	8/9/2019 12:17:00 PM
Surr: 4-Bromofluorobenzene	**95.4**	76.5-125		%REC	1	8/9/2019 12:17:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 12:17:00 PM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-04-SW-B-A-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**7.4**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-05-SW-B-B-1
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**5.7**	1.1		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-04-SW-B-A-2
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-006
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
PCB, Total	**ND**	0.065		µg/L	1	8/7/2019 8:35:43 PM
Surr: Decachlorobiphenyl	**78.2**	57.1-135		%REC	1	8/7/2019 8:35:43 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/8/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/8/2019 3:39:00 PM
Barium	**0.023**	0.010		mg/L	1	8/8/2019 3:39:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/8/2019 3:39:00 PM
Chromium	**ND**	0.005		mg/L	1	8/8/2019 3:39:00 PM
Copper	**ND**	0.005		mg/L	1	8/8/2019 3:39:00 PM
Lead	**ND**	0.005		mg/L	1	8/8/2019 3:39:00 PM
Selenium	**ND**	0.005		mg/L	1	8/8/2019 3:39:00 PM
Silver	**ND**	0.010		mg/L	1	8/8/2019 3:39:00 PM
Zinc	**ND**	0.010		mg/L	1	8/8/2019 3:39:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/8/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:49:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/8/2019 4:49:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/8/2019 4:49:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:49:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:49:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:49:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-04-SW-B-A-2
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-006
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/8/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/8/2019 4:49:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:49:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/8/2019 4:49:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/9/2019 12:38:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 12:38:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 12:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 12:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 12:38:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 12:38:00 PM
Surr: 1,2-Dichloroethane-d4	**93.9**	80.9-122		%REC	1	8/9/2019 12:38:00 PM
Surr: 4-Bromofluorobenzene	**92.9**	76.5-125		%REC	1	8/9/2019 12:38:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 12:38:00 PM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-04-SW-B-A-2
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/7/2019)						
TSS (Residue, Non-Filterable)	**5.5**	1.0		mg/L	1	8/7/2019

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-TB01
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Methylene chloride	**1.8**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Acetone	**3.6**	5.0	J	µg/L	1	8/9/2019 10:29:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/9/2019 10:29:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 10:29:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 10:29:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 10:29:00 AM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/9/2019 10:29:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/9/2019 10:29:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 10:29:00 AM
Surr: 1,2-Dichloroethane-d4	**93.1**	80.9-122		%REC	1	8/9/2019 10:29:00 AM
Surr: 4-Bromofluorobenzene	**98.8**	76.5-125		%REC	1	8/9/2019 10:29:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/9/2019 10:29:00 AM

Adirondack Environmental Services, Inc

Date: *09-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080719-TB02
Work Order:	**190807084**	**Collection Date:**	8/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190807084-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

VOLATILE ORGANICS EPA 8260C (SW5030C PREP) Analyst: **SMD**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Methylene chloride	**1.6**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Acetone	**5.3**	5.0		µg/L	1	8/9/2019 10:51:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 10:51:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 10:51:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 10:51:00 AM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/9/2019 10:51:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 10:51:00 AM
Surr: 1,2-Dichloroethane-d4	**95.2**	80.9-122		%REC	1	8/9/2019 10:51:00 AM
Surr: 4-Bromofluorobenzene	**87.7**	76.5-125		%REC	1	8/9/2019 10:51:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/9/2019 10:51:00 AM

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74875

dup

SeqNo: **2674503** PrepDate:**8/7/2019** TestNo: **E608** RunNo: **174062**
Samp ID: **190807081-004a** PrepRef: Units: **µg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	0.0326	0.0650	0	0	0	0	0	0.0294	0	31.2	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.081	0	0.1	0	81	48.8	140	0	0	0	

mblk

SeqNo: **2674494** PrepDate:**8/7/2019** TestNo: **SW8082A** RunNo: **174062**
Samp ID: **mb-74875** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0814	0.0100	0.1	0	81.4	57.1	135	0	0		

lcs

SeqNo: **2674495** PrepDate:**8/7/2019** TestNo: **SW8082A** RunNo: **174062**
Samp ID: **lcs-74875** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4016	0.0650	0.5	0	80.3	60	140	0	0		
Surr: Decachlorobiphenyl	0.0652	0.0100	0.1	0	65.2	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74899

LCS

SeqNo: **2674924** PrepDate:**8/7/2019 4:** TestNo: **SM2540D** RunNo: **174084**
Samp ID: **LCS-74899** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	500	40.0	490	0	102	86.5	114	0	0		

DUP

SeqNo: **2674929** PrepDate:**8/7/2019 4:** TestNo: **SM2540D** RunNo: **174084**
Samp ID: **190807069-002** PrepRef: Units: **mg/L** Analysis Date: **8/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1107	67.0	0	0	0	0	0	1247	11.9	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74908

MBLK

SeqNo: **2675379** PrepDate:8/8/2019 9: TestNo: **E200.7F** RunNo: **174089**
Samp ID: **MB-74908** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

MBLK

SeqNo: **2675747** PrepDate: TestNo: **E200.7F** RunNo: **174129**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2675380** PrepDate:8/8/2019 9: TestNo: **E200.7F** RunNo: **174089**
Samp ID: **LCS-74908** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.044	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.054	0.0100	2	0	103	89	112	0	0		
Cadmium, Dissolved	2.128	0.00500	2	0	106	85.3	112	0	0		
Chromium, Dissolved	2.01	0.00500	2	0	100	89.1	109	0	0		
Copper, Dissolved	2.143	0.00500	2	0	107	86.8	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74908

LCS

SeqNo: **2675380** PrepDate:8/8/2019 9: TestNo: **E200.7F** RunNo: **174089**
Samp ID: **LCS-74908** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	2.154	0.00500	2	0	108	86.8	114	0	0		
Selenium, Dissolved	2.052	0.00500	2	0	103	85	115	0	0		
Silver, Dissolved	0.4926	0.0100	0.5	0	98.5	85	115	0	0		
Zinc, Dissolved	2.077	0.0100	2	0	104	85	115	0	0		

LCS

SeqNo: **2675748** PrepDate: TestNo: **E200.7F** RunNo: **174129**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.906	0.00500	2	0	95.3	85	115	0	0		
Barium, Dissolved	1.849	0.0100	2	0	92.4	89	112	0	0		
Cadmium, Dissolved	1.927	0.00500	2	0	96.3	85.3	112	0	0		
Chromium, Dissolved	1.894	0.00500	2	0	94.7	89.1	109	0	0		
Copper, Dissolved	1.934	0.00500	2	0	96.7	86.8	115	0	0		
Lead, Dissolved	1.942	0.00500	2	0	97.1	86.8	114	0	0		
Selenium, Dissolved	1.961	0.00500	2	0	98.1	85	115	0	0		
Silver, Dissolved	0.4735	0.0100	0.5	0	94.7	85	115	0	0		
Zinc, Dissolved	1.987	0.0100	2	0	99.4	85	115	0	0		

MS

SeqNo: **2675383** PrepDate:8/8/2019 9: TestNo: **E200.7F** RunNo: **174089**
Samp ID: **190807084-001 (080719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04451	0.00500	0.04	0	111	75	123	0	0		
Barium, Dissolved	2.208	0.0100	2	0.0227	109	75	124	0	0		
Cadmium, Dissolved	0.05429	0.00500	0.05	0	109	75	125	0	0		
Chromium, Dissolved	0.2254	0.00500	0.2	0	113	77.2	117	0	0		
Copper, Dissolved	0.2927	0.00500	0.25	0.00447	115	75	125	0	0		
Lead, Dissolved	0.02052	0.00500	0.02	0	103	75	125	0	0		
Selenium, Dissolved	0.01062	0.00500	0.01	0	106	75	125	0	0		
Silver, Dissolved	0.05429	0.0100	0.05	0	109	75	125	0	0		
Zinc, Dissolved	0.5487	0.0100	0.5	0	110	75	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74908

DUP	SeqNo: **2675382**	PrepDate:8/8/2019 9:	TestNo: **E200.7F**	RunNo: **174089**
	Samp ID: **190807084-001**	PrepRef:	Units: **mg/L**	Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.002238	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02222	0.0100	0	0	0	0	0	0.0227	2.12	15.4	
Cadmium, Dissolved	0.00006904	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.006248	0.00500	0	0	0	0	0	0.00447	33.2	20.1	Z
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0003143	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.003403	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74909

MBLK

SeqNo: **2675366** PrepDate:8/8/2019 9: TestNo: **E200.7** RunNo: **174089**
Samp ID: **MB-74909** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2675367** PrepDate:8/8/2019 9: TestNo: **E200.7** RunNo: **174089**
Samp ID: **LCS-74909** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.031	0.00500	2	0	102	89.1	111	0	0		
Barium	2.044	0.0100	2	0	102	85	115	0	0		
Cadmium	2.116	0.00500	2	0	106	85	115	0	0		
Chromium	1.997	0.00500	2	0	99.8	89.7	109	0	0		
Copper	2.115	0.00500	2	0	106	85	115	0	0		
Lead	2.145	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.035	0.00500	2	0	102	87.5	112	0	0		
Silver	0.4952	0.0100	0.5	0	99	85.2	115	0	0		
Zinc	2.07	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2675370** PrepDate:8/8/2019 9: TestNo: **E200.7** RunNo: **174089**
Samp ID: **190807084-001 (080719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0429	0.00500	0.04	0	107	75	125	0	0		
Barium	2.197	0.0100	2	0.02347	109	75	119	0	0		
Cadmium	0.05455	0.00500	0.05	0	109	75	118	0	0		
Chromium	0.2212	0.00500	0.2	0	111	75	124	0	0		
Copper	0.2895	0.00500	0.25	0.005291	114	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74909

MS

SeqNo: **2675370** PrepDate:**8/8/2019 9:** TestNo: **E200.7** RunNo: **174089**
Samp ID: **190807084-001 (080719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0213	0.00500	0.02	0	107	75	125	0	0		
Selenium	0.009802	0.00500	0.01	0	98	75	125	0	0		
Silver	0.05085	0.0100	0.05	0	102	75	125	0	0		
Zinc	0.554	0.0100	0.5	0	111	76.9	125	0	0		

DUP

SeqNo: **2675369** PrepDate:**8/8/2019 9:** TestNo: **E200.7** RunNo: **174089**
Samp ID: **190807084-001** PrepRef: Units: **mg/L** Analysis Date: **8/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.003307	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02347	0.0100	0	0	0	0	0	0.02347	0.0170	20	
Cadmium	0.00009492	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.007058	0.00500	0	0	0	0	0	0.005291	28.6	20	Z
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.0009088	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002755	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
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CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74921

MBLK

SeqNo: **2675872** PrepDate:8/8/2019 2: TestNo: **E1631** RunNo: **174139**
Samp ID: **MB-74921** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2675873** PrepDate:8/8/2019 2: TestNo: **E1631** RunNo: **174139**
Samp ID: **LCS-74921** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.3	0.500	10	0	83	77	123	0	0		

MS

SeqNo: **2675875** PrepDate:8/8/2019 2: TestNo: **E1631** RunNo: **174139**
Samp ID: **190807084-001 (080719-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.7	0.500	12.5	1.79	71.3	71	125	0	0		

MSD

SeqNo: **2675876** PrepDate:8/8/2019 2: TestNo: **E1631** RunNo: **174139**
Samp ID: **190807084-001 (080719-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.7	0.500	12.5	1.79	71.3	71	125	10.7	0	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

mblk

SeqNo: **2675871** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.24	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.24	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.38	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.28	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.4	5.0	50	0	94.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.28	5.0	50	0	92.6	76.5	125	0	0		
Surr: Toluene-d8	50.18	5.0	50	0	100	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

lcs

SeqNo: **2675861** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.72	1.0	10	0	87.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.7	1.0	10	0	67	72.3	118	0	0		S
1,1,2-Trichloroethane	9.08	1.0	10	0	90.8	73.1	123	0	0		
1,1-Dichloroethane	8.57	1.0	10	0	85.7	73.2	127	0	0		
1,1-Dichloroethene	7.89	1.0	10	0	78.9	70.3	128	0	0		
1,2,3-Trichloropropane	4.11	1.0	5	0	82.2	68.4	115	0	0		
1,2-Dichlorobenzene	9.13	1.0	10	0	91.3	71	124	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	7.92	1.0	10	0	79.2	71.7	127	0	0		
2-Butanone	9.45	5.0	10	0	94.5	65.1	132	0	0		
4-Methyl-2-pentanone	7.61	5.0	10	0	76.1	68.7	118	0	0		
Acetone	5.74	5.0	10	0	57.4	69.2	133	0	0		S
Benzene	8.99	1.0	10	0	89.9	71.2	122	0	0		
Carbon disulfide	3.46	1.0	5	0	69.2	67.8	134	0	0		
Carbon tetrachloride	8.49	1.0	10	0	84.9	74.5	122	0	0		
Chlorobenzene	10.32	1.0	10	0	103	72.7	124	0	0		
Chloroethane	9.7	1.0	10	0	97	72.3	136	0	0		
Chloroform	7.93	1.0	10	0	79.3	71.6	133	0	0		
Dibromochloromethane	8.17	1.0	10	0	81.7	70.6	124	0	0		
Ethylbenzene	9.5	1.0	10	0	95	70.9	126	0	0		
Methylene chloride	10.15	1.0	10	0	102	66.3	130	0	0		
Tetrachloroethene	10.41	1.0	10	0	104	72.4	119	0	0		
Toluene	9	1.0	10	0	90	71.8	116	0	0		
trans-1,2-Dichloroethene	8.52	1.0	10	0	85.2	70.3	120	0	0		
Trichloroethene	9.93	1.0	10	0	99.3	73	127	0	0		
Vinyl chloride	10.58	1.0	10	0	106	65.2	134	0	0		
Xylenes, Total	28.56	1.0	30	0	95.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.41	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.61	5.0	50	0	95.2	76.5	125	0	0		
Surr: Toluene-d8	50.92	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190807084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

lcsd

SeqNo: **2675862** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.39	1.0	10	0	83.9	72.3	121	8.72	3.86	25	
1,1,2,2-Tetrachloroethane	6.87	1.0	10	0	68.7	72.3	118	6.7	2.51	25	S
1,1,2-Trichloroethane	9.4	1.0	10	0	94	73.1	123	9.08	3.46	25	
1,1-Dichloroethane	8.72	1.0	10	0	87.2	73.2	127	8.57	1.74	25	
1,1-Dichloroethene	7.98	1.0	10	0	79.8	70.3	128	7.89	1.13	25	
1,2,3-Trichloropropane	3.59	1.0	5	0	71.8	68.4	115	4.11	13.5	25	
1,2-Dichlorobenzene	9.34	1.0	10	0	93.4	71	124	9.13	2.27	25	
1,2-Dichloroethane	8.19	1.0	10	0	81.9	72.5	127	8.32	1.57	25	
1,3-Dichlorobenzene	9.34	1.0	10	0	93.4	72.2	121	8.85	5.39	25	
1,3-Dichloropropane	4.3	1.0	5	0	86	76	122	4.35	1.16	0	
1,4-Dichlorobenzene	8.48	1.0	10	0	84.8	71.7	127	7.92	6.83	25	
2-Butanone	8.51	5.0	10	0	85.1	65.1	132	9.45	10.5	25	
4-Methyl-2-pentanone	8.31	5.0	10	0	83.1	68.7	118	7.61	8.79	25	
Acetone	7.07	5.0	10	0	70.7	69.2	133	5.74	20.8	25	
Benzene	9.06	1.0	10	0	90.6	71.2	122	8.99	0.776	25	
Carbon disulfide	3.34	1.0	5	0	66.8	67.8	134	3.46	3.53	25	S
Carbon tetrachloride	8.49	1.0	10	0	84.9	74.5	122	8.49	0	25	
Chlorobenzene	9.98	1.0	10	0	99.8	72.7	124	10.32	3.35	25	
Chloroethane	9.81	1.0	10	0	98.1	72.3	136	9.7	1.13	25	
Chloroform	7.88	1.0	10	0	78.8	71.6	133	7.93	0.633	25	
Dibromochloromethane	8.34	1.0	10	0	83.4	70.6	124	8.17	2.06	25	
Ethylbenzene	9.75	1.0	10	0	97.5	70.9	126	9.5	2.60	25	
Methylene chloride	9.93	1.0	10	0	99.3	66.3	130	10.15	2.19	25	
Tetrachloroethene	9.47	1.0	10	0	94.7	72.4	119	10.41	9.46	25	
Toluene	9.1	1.0	10	0	91	71.8	116	9	1.10	25	
trans-1,2-Dichloroethene	8.01	1.0	10	0	80.1	70.3	120	8.52	6.17	25	
Trichloroethene	9.71	1.0	10	0	97.1	73	127	9.93	2.24	25	
Vinyl chloride	9.92	1.0	10	0	99.2	65.2	134	10.58	6.44	25	
Surr: 1,2-Dichloroethane-d4	48.36	5.0	50	0	96.7	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	47.92	5.0	50	0	95.8	76.5	125	0	0	25	
Surr: Toluene-d8	51.51	5.0	50	0	103	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190807084

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080719-01-SW-[illegible]-A-1	8/7/19	0900	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	080719-02-SW-A-A-1	8/7/19	0925	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
003	080719-03-SW-D-B-1	8/7/19	0955	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/7/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/7/19 4:23PM

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 16°C	☒	☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

Demo
190807084

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190802084

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080719-03-SW-D-B-1	8/7/19	0955	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	metals/hardness
				A				3	mercury
				P				1	TSS
004	080719-04-SW-B-A-1	8/7/19	0825	A	W		✓	1	metals (filtered)
	↓	↓	↓	P	↓		↓	2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	080719-05-SW-B-B-1	8/7/19	1015	A	W		✓	1	TSS
006	080719-04-SW-B-A-2	8/7/19	0840	P	W		✓	1	metals (filtered)
	↓	↓	↓	A	↓		↓	2	PCBs
				P				2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/7/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/7/19 4:23pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190807084

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.kleiker@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	080719-04-SW-B-A-2	8/7/19	0840	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A P	↓		↓	1	TSS
007	080719-TB01	8/7/19		A P	TB				trip blank
008	080719-TB02	8/7/19		A P	TB				trip blank
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/7/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/7/19 4:23 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 1.6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190807084

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190807084

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/9/2019

8/7/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Must Go in 48 Hour TAT

☑ **EDD** Portal Completed by_____
PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190807084-001	080719-01-SW-U-A-1	Water	8/7/2019	8/9/2019	E	C	B	D	D	A	F
190807084-002	080719-02-SW-A-A-1	Water	8/7/2019	8/9/2019	E	C	B	D	D	A	F
190807084-003	080719-03-SW-D-B-1	Water	8/7/2019	8/9/2019	E	C	B	D	D	A	F
190807084-004	080719-04-SW-B-A-1	Water	8/7/2019	8/9/2019	E	C	B	D	D	A	F
190807084-005	080719-05-SW-B-B-1	Water	8/7/2019	8/9/2019							A
190807084-006	080719-04-SW-B-A-2	Water	8/7/2019	8/9/2019	E	C	B	D	D	A	F
190807084-007	080719-TB01	Trip Blank	8/7/2019	8/9/2019			A				
190807084-008	080719-TB02	Trip Blank	8/7/2019	8/9/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 12, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190808092
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/8/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *12-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190808092	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-01-SW-D-B-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-001
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 7:10:53 PM
Surr: Decachlorobiphenyl	**65.2**	57.1-135		%REC	1	8/9/2019 7:10:53 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Total Hardness (As CaCO3)	**86**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 12:33:00 PM
Barium	**0.022**	0.010		mg/L	1	8/12/2019 12:33:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 12:33:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 12:33:00 PM
Copper	**ND**	0.005		mg/L	1	8/12/2019 12:33:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 12:33:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 12:33:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 12:33:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 12:33:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 1:58:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/12/2019 1:58:00 PM
Cadmium, Dissolved	**0.002**	0.001		mg/L	1	8/12/2019 1:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 1:58:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 1:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 1:58:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-01-SW-D-B-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/9/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 1:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 1:58:00 PM
Zinc, Dissolved	**0.007**	0.010	J	mg/L	1	8/12/2019 1:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/9/2019 1:00:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 1:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 1:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 1:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 1:00:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 1:00:00 PM
Surr: 1,2-Dichloroethane-d4	**92.2**	80.9-122		%REC	1	8/9/2019 1:00:00 PM
Surr: 4-Bromofluorobenzene	**92.3**	76.5-125		%REC	1	8/9/2019 1:00:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 1:00:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-01-SW-D-B-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**7.4**	1.0		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-02-SW-A-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 7:24:15 PM
Surr: Decachlorobiphenyl	**74.6**	57.1-135		%REC	1	8/9/2019 7:24:15 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Total Hardness (As CaCO3)	**83**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 12:40:00 PM
Barium	**0.021**	0.010		mg/L	1	8/12/2019 12:40:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 12:40:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 12:40:00 PM
Copper	**0.005**	0.005		mg/L	1	8/12/2019 12:40:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 12:40:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 12:40:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 12:40:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 12:40:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:07:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/12/2019 2:07:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 2:07:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:07:00 PM
Copper, Dissolved	**0.007**	0.005		mg/L	1	8/12/2019 2:07:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:07:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-02-SW-A-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/9/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:07:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:07:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:07:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/9/2019 1:21:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 1:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 1:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 1:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 1:21:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 1:21:00 PM
Surr: 1,2-Dichloroethane-d4	**93.4**	80.9-122		%REC	1	8/9/2019 1:21:00 PM
Surr: 4-Bromofluorobenzene	**93.3**	76.5-125		%REC	1	8/9/2019 1:21:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/9/2019 1:21:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-02-SW-A-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**8.1**	1.1		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 7:37:37 PM
Surr: Decachlorobiphenyl	**65.0**	57.1-135		%REC	1	8/9/2019 7:37:37 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**2.2**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Total Hardness (As CaCO3)	**84**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 12:50:00 PM
Barium	**0.022**	0.010		mg/L	1	8/12/2019 12:50:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 12:50:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 12:50:00 PM
Copper	**ND**	0.005		mg/L	1	8/12/2019 12:50:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 12:50:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 12:50:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 12:50:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	8/12/2019 12:50:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:12:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/12/2019 2:12:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 2:12:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:12:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:12:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/9/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:12:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:12:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:12:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/9/2019 1:43:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 1:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 1:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 1:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 1:43:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 1:43:00 PM
Surr: 1,2-Dichloroethane-d4	**93.4**	80.9-122		%REC	1	8/9/2019 1:43:00 PM
Surr: 4-Bromofluorobenzene	**96.0**	76.5-125		%REC	1	8/9/2019 1:43:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/9/2019 1:43:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**7.9**	1.1		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-04-SW-B-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1242	**0.034**	0.065	J	µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 7:50:57 PM
PCB, Total	**0.034**	0.065	J	µg/L	1	8/9/2019 7:50:57 PM
Surr: Decachlorobiphenyl	**63.8**	57.1-135		%REC	1	8/9/2019 7:50:57 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**6.8**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Total Hardness (As CaCO3)	**86**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 12:56:00 PM
Barium	**0.023**	0.010		mg/L	1	8/12/2019 12:56:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 12:56:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 12:56:00 PM
Copper	**ND**	0.005		mg/L	1	8/12/2019 12:56:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 12:56:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 12:56:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 12:56:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	8/12/2019 12:56:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:31:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/12/2019 2:31:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 2:31:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:31:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:31:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:31:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-04-SW-B-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/9/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:31:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:31:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:31:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/9/2019 2:04:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 2:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/9/2019 2:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 2:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 2:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 2:04:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 2:04:00 PM
Surr: 1,2-Dichloroethane-d4	**96.0**	80.9-122		%REC	1	8/9/2019 2:04:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	8/9/2019 2:04:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 2:04:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-04-SW-B-A-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**10.3**	1.1		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-05-SW-B-B-1
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**10.9**	1.1		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-3
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 8:17:42 PM
Surr: Decachlorobiphenyl	**42.0**	57.1-135	S	%REC	1	8/9/2019 8:17:42 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/8/2019)						
Mercury	**ND**	0.5		ng/L	1	8/9/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 1:04:00 PM
Barium	**ND**	0.010		mg/L	1	8/12/2019 1:04:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 1:04:00 PM
Chromium	**0.005**	0.005	J	mg/L	1	8/12/2019 1:04:00 PM
Copper	**ND**	0.005		mg/L	1	8/12/2019 1:04:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 1:04:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 1:04:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 1:04:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 1:04:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/9/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:36:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:36:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 2:36:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:36:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:36:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:36:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-3
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/9/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 2:36:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:36:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 2:36:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Methylene chloride	**0.9**	1.0	J	µg/L	1	8/9/2019 2:26:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 2:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Chloroform	**6.9**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/9/2019 2:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 2:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 2:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 2:26:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 2:26:00 PM
Surr: 1,2-Dichloroethane-d4	**93.6**	80.9-122		%REC	1	8/9/2019 2:26:00 PM
Surr: 4-Bromofluorobenzene	**96.3**	76.5-125		%REC	1	8/9/2019 2:26:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 2:26:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-03-SW-U-A-3
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/9/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/9/2019

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-TB01
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Methylene chloride	**1.3**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 2:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 2:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 2:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 2:47:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 2:47:00 PM
Surr: 1,2-Dichloroethane-d4	**96.6**	80.9-122		%REC	1	8/9/2019 2:47:00 PM
Surr: 4-Bromofluorobenzene	**91.3**	76.5-125		%REC	1	8/9/2019 2:47:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 2:47:00 PM

Adirondack Environmental Services, Inc

Date: *12-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080819-TB02
Work Order:	**190808092**	**Collection Date:**	8/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190808092-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Methylene chloride	**1.4**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 3:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Chloroform	**0.3**	1.0	J	µg/L	1	8/9/2019 3:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 3:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 3:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 3:09:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 3:09:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	8/9/2019 3:09:00 PM
Surr: 4-Bromofluorobenzene	**94.8**	76.5-125		%REC	1	8/9/2019 3:09:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/9/2019 3:09:00 PM

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74922

MBLK

SeqNo: **2675886** **PrepDate:8/8/2019 2:** TestNo: **E1631** RunNo: **174139**
Samp ID: **MB-74922** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2675887** **PrepDate:8/8/2019 2:** TestNo: **E1631** RunNo: **174139**
Samp ID: **LCS-74922** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	8.23	0.500	10	0	82.3	77	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74931

MBLK

SeqNo: **2677313** PrepDate: TestNo: **E200.7F** RunNo: **174194**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2677314** PrepDate: TestNo: **E200.7F** RunNo: **174194**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.976	0.00500	2	0	98.8	85	115	0	0		
Barium, Dissolved	1.998	0.0100	2	0	99.9	89	112	0	0		
Cadmium, Dissolved	2.109	0.00500	2	0	105	85.3	112	0	0		
Chromium, Dissolved	1.984	0.00500	2	0	99.2	89.1	109	0	0		
Copper, Dissolved	2.043	0.00500	2	0	102	86.8	115	0	0		
Lead, Dissolved	2.12	0.00500	2	0	106	86.8	114	0	0		
Selenium, Dissolved	2.024	0.00500	2	0	101	85	115	0	0		
Silver, Dissolved	0.5401	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	2.077	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2677322** PrepDate:**8/9/2019 1** TestNo: **E200.7F** RunNo: **174194**
Samp ID: **190808092-006A (080819-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04055	0.00500	0.04	0	101	75	123	0	0		
Barium, Dissolved	2.051	0.0100	2	0	103	75	124	0	0		
Cadmium, Dissolved	0.05432	0.00500	0.05	0	109	75	125	0	0		
Chromium, Dissolved	0.2062	0.00500	0.2	0	103	77.2	117	0	0		
Copper, Dissolved	0.2692	0.00500	0.25	0	108	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74931

MS

SeqNo: **2677322** PrepDate:8/9/2019 1 TestNo: **E200.7F** RunNo: **174194**
Samp ID: **190808092-006A (080819-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02136	0.00500	0.02	0	107	75	125	0	0		
Selenium, Dissolved	0.01197	0.00500	0.01	0	120	75	125	0	0		
Silver, Dissolved	0.05234	0.0100	0.05	0	105	75	125	0	0		
Zinc, Dissolved	0.5499	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2677321** PrepDate:8/9/2019 1 TestNo: **E200.7F** RunNo: **174194**
Samp ID: **190808092-006A** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	ND	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	0.0001496	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.0008971	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001204	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	0.001512	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002693	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74933

MBLK

SeqNo: **2676114** PrepDate: TestNo: **E200.7** RunNo: **174148**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	0.002782	0.0100									J
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

MBLK

SeqNo: **2677300** PrepDate: TestNo: **E200.7** RunNo: **174194**
Samp ID: **MBLK-W** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2676115** PrepDate: TestNo: **E200.7** RunNo: **174148**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.084	0.00500	2	0	104	89.1	111	0	0		
Barium	1.875	0.0100	2	0	93.7	85	115	0	0		
Cadmium	2.009	0.00500	2	0	100	85	115	0	0		
Chromium	1.986	0.00500	2	0	99.3	89.7	109	0	0		
Copper	1.918	0.00500	2	0	95.9	85	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74933

LCS

SeqNo: **2676115** PrepDate: TestNo: **E200.7** RunNo: **174148**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.964	0.00500	2	0	98.2	88.1	112	0	0		
Selenium	2.126	0.00500	2	0	106	87.5	112	0	0		
Silver	0.4766	0.0100	0.5	0	95.3	85.2	115	0	0		
Zinc	2.144	0.0100	2	0	107	88.3	113	0	0		

LCS

SeqNo: **2677301** PrepDate: TestNo: **E200.7** RunNo: **174194**
Samp ID: **LCS-W** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.98	0.00500	2	0	99	89.1	111	0	0		
Barium	1.973	0.0100	2	0	98.7	85	115	0	0		
Cadmium	2.085	0.00500	2	0	104	85	115	0	0		
Chromium	1.992	0.00500	2	0	99.6	89.7	109	0	0		
Copper	2.04	0.00500	2	0	102	85	115	0	0		
Lead	2.104	0.00500	2	0	105	88.1	112	0	0		
Selenium	1.98	0.00500	2	0	99	87.5	112	0	0		
Silver	0.537	0.0100	0.5	0	107	85.2	115	0	0		
Zinc	2.067	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2677308** PrepDate:**8/9/2019 1** TestNo: **E200.7** RunNo: **174194**
Samp ID: **190808092-006 (080819-03-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03858	0.00500	0.04	0	96.5	75	125	0	0		
Barium	2.03	0.0100	2	0	102	75	119	0	0		
Cadmium	0.0532	0.00500	0.05	0	106	75	118	0	0		
Chromium	0.2047	0.00500	0.2	0.004677	100	75	124	0	0		
Copper	0.264	0.00500	0.25	0	106	75	125	0	0		
Lead	0.01998	0.00500	0.02	0	99.9	75	125	0	0		
Selenium	0.01242	0.00500	0.01	0	124	75	125	0	0		
Silver	0.05205	0.0100	0.05	0	104	75	125	0	0		
Zinc	0.5424	0.0100	0.5	0	108	76.9	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74933

DUP

SeqNo: **2677307** **PrepDate:8/9/2019 1** TestNo: **E200.7** RunNo: **174194**
Samp ID: **190808092-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	ND	0.0100	0	0	0	0	0	0	0	20	
Cadmium	0.0001002	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.003939	0.00500	0	0	0	0	0	0.004677	0	20	
Copper	0.002764	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	0.002024	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002368	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74940

LCS

SeqNo: **2677136** **PrepDate:8/9/2019 1** TestNo: **SM2540D** RunNo: **174182**
Samp ID: **LCS-74940** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	548	40.0	490	0	112	86.5	114	0	0		

DUP

SeqNo: **2677140** **PrepDate:8/9/2019 1** TestNo: **SM2540D** RunNo: **174182**
Samp ID: **190807019-001A** **PrepRef:** Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1170	20.0	0	0	0	0	0	1084	7.63	10	

DUP

SeqNo: **2677147** **PrepDate:8/9/2019 1** TestNo: **SM2540D** RunNo: **174182**
Samp ID: **190808008-001A** **PrepRef:** Units: **mg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	314	20.0	0	0	0	0	0	294	6.58	10	

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74953

mblk

SeqNo: **2676411** PrepDate:8/9/2019 TestNo: **SW8082A** RunNo: **174163**
Samp ID: **mb-74953** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0718	0.0100	0.1	0	71.8	57.1	135	0	0		

lcs

SeqNo: **2676426** PrepDate:8/9/2019 TestNo: **SW8082A** RunNo: **174163**
Samp ID: **lcs-74953** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4056	0.0650	0.5	0	81.1	60	140	0	0		
Surr: Decachlorobiphenyl	0.075	0.0100	0.1	0	75	57.1	135	0	0		

ms

SeqNo: **2676423** PrepDate:8/9/2019 TestNo: **SW8082A** RunNo: **174163**
Samp ID: **190809101-004c** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4406	0.0650	0.5	0.0366	80.8	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0822	0.0100	0.1	0	82.2	57.1	135	0	0		

msd

SeqNo: **2676425** PrepDate:8/9/2019 TestNo: **SW8082A** RunNo: **174163**
Samp ID: **190809101-004c** PrepRef:(SW3535A) Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4222	0.0650	0.5	0.0366	77.1	46.7	130	0.4406	4.27	30	
Surr: Decachlorobiphenyl	0.0754	0.0100	0.1	0	75.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
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B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

mblk

SeqNo: **2675871** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.24	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.24	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.38	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.28	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.4	5.0	50	0	94.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.28	5.0	50	0	92.6	76.5	125	0	0		
Surr: Toluene-d8	50.18	5.0	50	0	100	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

lcs

SeqNo: **2675861** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.72	1.0	10	0	87.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.7	1.0	10	0	67	72.3	118	0	0		S
1,1,2-Trichloroethane	9.08	1.0	10	0	90.8	73.1	123	0	0		
1,1-Dichloroethane	8.57	1.0	10	0	85.7	73.2	127	0	0		
1,1-Dichloroethene	7.89	1.0	10	0	78.9	70.3	128	0	0		
1,2,3-Trichloropropane	4.11	1.0	5	0	82.2	68.4	115	0	0		
1,2-Dichlorobenzene	9.13	1.0	10	0	91.3	71	124	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	7.92	1.0	10	0	79.2	71.7	127	0	0		
2-Butanone	9.45	5.0	10	0	94.5	65.1	132	0	0		
4-Methyl-2-pentanone	7.61	5.0	10	0	76.1	68.7	118	0	0		
Acetone	5.74	5.0	10	0	57.4	69.2	133	0	0		S
Benzene	8.99	1.0	10	0	89.9	71.2	122	0	0		
Carbon disulfide	3.46	1.0	5	0	69.2	67.8	134	0	0		
Carbon tetrachloride	8.49	1.0	10	0	84.9	74.5	122	0	0		
Chlorobenzene	10.32	1.0	10	0	103	72.7	124	0	0		
Chloroethane	9.7	1.0	10	0	97	72.3	136	0	0		
Chloroform	7.93	1.0	10	0	79.3	71.6	133	0	0		
Dibromochloromethane	8.17	1.0	10	0	81.7	70.6	124	0	0		
Ethylbenzene	9.5	1.0	10	0	95	70.9	126	0	0		
Methylene chloride	10.15	1.0	10	0	102	66.3	130	0	0		
Tetrachloroethene	10.41	1.0	10	0	104	72.4	119	0	0		
Toluene	9	1.0	10	0	90	71.8	116	0	0		
trans-1,2-Dichloroethene	8.52	1.0	10	0	85.2	70.3	120	0	0		
Trichloroethene	9.93	1.0	10	0	99.3	73	127	0	0		
Vinyl chloride	10.58	1.0	10	0	106	65.2	134	0	0		
Xylenes, Total	28.56	1.0	30	0	95.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.41	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.61	5.0	50	0	95.2	76.5	125	0	0		
Surr: Toluene-d8	50.92	5.0	50	0	102	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
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B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174194

CRI

SeqNo: **2677292** TestNo: **E200.7** RunNo: **174194**
Samp ID: **CRI-1** Units: **µg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.42	10.0	20	0	102	50	150	0	0		
Barium	ND	200	0	0	0	50	150	0	0		
Cadmium	10.32	5.00	10	0	103	50	150	0	0		
Chromium	16.84	10.0	20	0	84.2	50	150	0	0		
Copper	46.5	25.0	50	0	93	50	150	0	0		
Lead	5.655	3.00	6	0	94.2	50	150	0	0		
Selenium	8.938	5.00	10	0	89.4	50	150	0	0		
Silver	17.92	10.0	20	0	89.6	50	150	0	0		
Zinc	44.04	20.0	40	0	110	50	150	0	0		

CRA

SeqNo: **2677293** TestNo: **E200.7** RunNo: **174194**
Samp ID: **CRIA-1** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04756	0.00500	0	0	0	70	130	0	0		
Barium	0.04781	0.0100	0	0	0	70	130	0	0		
Cadmium	0.05365	0.00500	0	0	0	70	130	0	0		
Chromium	0.04509	0.00500	0	0	0	70	130	0	0		
Copper	0.04756	0.00500	0	0	0	70	130	0	0		
Lead	0.0511	0.00500	0	0	0	70	130	0	0		
Selenium	0.05492	0.00500	0	0	0	70	130	0	0		
Silver	0.00402	0.0100	0.0125	0	32.2	70	130	0	0		S
Zinc	0.05527	0.0100	0	0	0	70	130	0	0		

CRA

SeqNo: **2677324** TestNo: **E200.7** RunNo: **174194**
Samp ID: **CRIA-2** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0477	0.00500	0	0	0	70	130	0	0		
Barium	0.04679	0.0100	0	0	0	70	130	0	0		
Cadmium	0.0525	0.00500	0	0	0	70	130	0	0		
Chromium	0.04925	0.00500	0	0	0	70	130	0	0		
Copper	0.0489	0.00500	0	0	0	70	130	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174194

CRA

SeqNo: **2677324** TestNo: **E200.7** RunNo: **174194**
Samp ID: **CRIA-2** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.04911	0.00500	0	0	0	70	130	0	0		
Selenium	0.05474	0.00500	0	0	0	70	130	0	0		
Silver	0.009698	0.0100	0.0125	0	77.6	70	130	0	0		
Zinc	0.05354	0.0100	0	0	0	70	130	0	0		

ICB

SeqNo: **2677291** TestNo: **E200.7** RunNo: **174194**
Samp ID: **ICB-1** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00009367	0.00500	0	0	0	0	0	0	0		
Barium	0.0002169	0.0100	0	0	0	0	0	0	0		
Cadmium	0.0003288	0.00500	0	0	0	0	0	0	0		
Chromium	0.003202	0.00500	0	0	0	0	0	0	0		
Copper	0.001055	0.00500	0	0	0	0	0	0	0		
Lead	ND	0.00500	0	0	0	0	0	0	0		
Selenium	0.00005255	0.00500	0	0	0	0	0	0	0		
Silver	ND	0.0100	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICV

SeqNo: **2677290** TestNo: **E200.7** RunNo: **174194**
Samp ID: **ICV-1** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.983	0.00500	2	0	99.2	95	105	0	0		
Barium	2.003	0.0100	2	0	100	95	105	0	0		
Cadmium	2.106	0.00500	2	0	105	95	105	0	0		S
Chromium	2	0.00500	2	0	100	95	105	0	0		
Copper	2.019	0.00500	2	0	101	95	105	0	0		
Lead	2.127	0.00500	2	0	106	95	105	0	0		S
Selenium	2.014	0.00500	2	0	101	95	105	0	0		
Silver	0.5355	0.0100	0.5	0	107	95	105	0	0		S
Zinc	2.078	0.0100	2	0	104	95	105	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190808092
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174194

ICSA

SeqNo: **2677296** TestNo: **E200.7** RunNo: **174194**
Samp ID: **ICSA-1** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0		
Barium	0.0007751	0.0100	0	0	0	0	0	0	0		
Cadmium	ND	0.00500	0	0	0	0	0	0	0		
Chromium	ND	0.00500	0	0	0	0	0	0	0		
Copper	ND	0.00500	0	0	0	0	0	0	0		
Lead	ND	0.00500	0	0	0	0	0	0	0		
Selenium	ND	0.00500	0	0	0	0	0	0	0		
Silver	ND	0.0100	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICSAB

SeqNo: **2677297** TestNo: **E200.7** RunNo: **174194**
Samp ID: **ICSAB-1** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	80	120	0	0		
Barium	0.4865	0.0100	0.5	0	97.3	80	120	0	0		
Cadmium	0.931	0.00500	1	0	93.1	80	120	0	0		
Chromium	0.5902	0.00500	0.5	0	118	80	120	0	0		
Copper	0.5502	0.00500	0.5	0	110	80	120	0	0		
Lead	0.8191	0.00500	1	0	81.9	80	120	0	0		
Selenium	ND	0.00500	0	0	0	80	120	0	0		
Silver	1.135	0.0100	1	0	113	80	120	0	0		
Zinc	0.8687	0.0100	1	0	86.9	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.

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Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190808092

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080819-01-SW-D-B-1	8/8/19	0955	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
002	080819-02-SW-A-A-1	8/8/19	0825	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
003	080819-03-SW-U-A-1	8/8/19	0850	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/8/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/8/19 4:25 pm

Temperature: Ambient or (Chilled) Notes: 4°

AES Bottles: (Y) ☐ N

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190808092

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CHAIN OF CUSTODY RECORD

AES Work Order # 190808092

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080819-03-SW-U-A-1	8/8/19	0850	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	metals/hardness
				A				3	mercury
				A				1	TSS
004	080819-04-SW-B-A-1	8/8/19	0730	A	W		✓	1	metals (filtered)
	↓	↓	↓	A	↓		↓	2	PCBs
				A				2	VOCs
				A				1	metals/hardness
				A				3	mercury
				A				1	TSS
005	080819-05-SW-B-B-1	8/8/19	0920	A	W		✓	1	TSS
006	080819-03-SW-U-A-3	8/8/19	1030	A	W		✓	1	metals (filtered)
	↓	↓	↓	A	↓		↓	2	PCBs
				A				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/8/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/8/19 1625

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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CHAIN OF CUSTODY RECORD

AES Work Order # 1908S092

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	224608	Patt M

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	080819-03-SW-U-A-3	8/8/19	1030	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A	↓		↓	1	TSS
007	080819-TB01			A	TB				trip blank
008	080819-TB02			A	TB				trip blank
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/8/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/8/19 4:25PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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August 13, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190809101
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 8/9/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *13-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190809101	

Sample containers were supplied by Adirondack Environmental Services.

Analytical Comments for EPA Method 8260: Sample 080919-TB01 vial broke in autosampler and is not reported.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-01-SW-D-B-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 8:31:04 PM
Surr: Decachlorobiphenyl	**81.6**	57.1-135		%REC	1	8/9/2019 8:31:04 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**3.0**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 4:00:00 PM
Barium	**0.023**	0.010		mg/L	1	8/12/2019 4:00:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 4:00:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 4:00:00 PM
Copper	**0.006**	0.005		mg/L	1	8/12/2019 4:00:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 4:00:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 4:00:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 4:00:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 4:00:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:52:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/12/2019 5:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 5:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:52:00 PM
Copper, Dissolved	**0.005**	0.005		mg/L	1	8/12/2019 5:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:52:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-01-SW-D-B-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/12/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 5:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 5:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/9/2019 5:00:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 5:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 5:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 5:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 5:00:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 5:00:00 PM
Surr: 1,2-Dichloroethane-d4	**90.4**	80.9-122		%REC	1	8/9/2019 5:00:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	8/9/2019 5:00:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 5:00:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-01-SW-D-B-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/12/2019)						
TSS (Residue, Non-Filterable)	**7.6**	1.0		mg/L	1	8/12/2019

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-02-SW-A-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 8:44:23 PM
Surr: Decachlorobiphenyl	**67.0**	57.1-135		%REC	1	8/9/2019 8:44:23 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**3.5**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 4:10:00 PM
Barium	**0.026**	0.010		mg/L	1	8/12/2019 4:10:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 4:10:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 4:10:00 PM
Copper	**0.007**	0.005		mg/L	1	8/12/2019 4:10:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 4:10:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 4:10:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 4:10:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 4:10:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:56:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/12/2019 5:56:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 5:56:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:56:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:56:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:56:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-02-SW-A-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/12/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 5:56:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 5:56:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 5:56:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 5:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 5:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 5:22:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 5:22:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 5:22:00 PM
Surr: 1,2-Dichloroethane-d4	**93.7**	80.9-122		%REC	1	8/9/2019 5:22:00 PM
Surr: 4-Bromofluorobenzene	**97.6**	76.5-125		%REC	1	8/9/2019 5:22:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 5:22:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-02-SW-A-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/12/2019)						
TSS (Residue, Non-Filterable)	**15.5**	1.1		mg/L	1	8/12/2019

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-03-SW-U-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
PCB, Total	**ND**	0.065		µg/L	1	8/9/2019 8:57:44 PM
Surr: Decachlorobiphenyl	**80.2**	57.1-135		%REC	1	8/9/2019 8:57:44 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**2.3**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 4:20:00 PM
Barium	**0.024**	0.010		mg/L	1	8/12/2019 4:20:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 4:20:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 4:20:00 PM
Copper	**ND**	0.005		mg/L	1	8/12/2019 4:20:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 4:20:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 4:20:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 4:20:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 4:20:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:00:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/12/2019 6:00:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 6:00:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:00:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:00:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:00:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-03-SW-U-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/12/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:00:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 6:00:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 6:00:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/9/2019 5:43:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 5:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 5:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 5:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/9/2019 5:43:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 5:43:00 PM
Surr: 1,2-Dichloroethane-d4	**92.0**	80.9-122		%REC	1	8/9/2019 5:43:00 PM
Surr: 4-Bromofluorobenzene	**94.6**	76.5-125		%REC	1	8/9/2019 5:43:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/9/2019 5:43:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-03-SW-U-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/12/2019)						
TSS (Residue, Non-Filterable)	**11.5**	1.1		mg/L	1	8/12/2019

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-04-SW-B-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1242	**0.037**	0.065	J	µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/9/2019 9:24:31 PM
PCB, Total	**0.037**	0.065	J	µg/L	1	8/9/2019 9:24:31 PM
Surr: Decachlorobiphenyl	**106**	57.1-135		%REC	1	8/9/2019 9:24:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**5.5**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Total Hardness (As CaCO3)	**90**	5		mg/L CaCO3	1	8/12/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/12/2019 4:27:00 PM
Barium	**0.023**	0.010		mg/L	1	8/12/2019 4:27:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/12/2019 4:27:00 PM
Chromium	**ND**	0.005		mg/L	1	8/12/2019 4:27:00 PM
Copper	**0.006**	0.005		mg/L	1	8/12/2019 4:27:00 PM
Lead	**ND**	0.005		mg/L	1	8/12/2019 4:27:00 PM
Selenium	**ND**	0.005		mg/L	1	8/12/2019 4:27:00 PM
Silver	**ND**	0.010		mg/L	1	8/12/2019 4:27:00 PM
Zinc	**ND**	0.010		mg/L	1	8/12/2019 4:27:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/12/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:03:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/12/2019 6:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/12/2019 6:03:00 PM
Chromium, Dissolved	**0.008**	0.005		mg/L	1	8/12/2019 6:03:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/12/2019 6:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:03:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-04-SW-B-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/12/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/12/2019 6:03:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 6:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/12/2019 6:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/9/2019 6:04:00 PM
Acetone	**ND**	5.0		µg/L	1	8/9/2019 6:04:00 PM
Carbon disulfide	**ND**	1.0	N	µg/L	1	8/9/2019 6:04:00 PM
1,1-Dichloroethene	**ND**	1.0	N	µg/L	1	8/9/2019 6:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/9/2019 6:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Benzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/9/2019 6:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	SN	µg/L	1	8/9/2019 6:04:00 PM
Toluene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/9/2019 6:04:00 PM
Surr: 1,2-Dichloroethane-d4	**91.2**	80.9-122		%REC	1	8/9/2019 6:04:00 PM
Surr: 4-Bromofluorobenzene	**89.7**	76.5-125		%REC	1	8/9/2019 6:04:00 PM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	8/9/2019 6:04:00 PM

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-04-SW-B-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/12/2019)						
TSS (Residue, Non-Filterable)	**8.6**	1.1		mg/L	1	8/12/2019

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-05-SW-B-A-1
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/12/2019)						
TSS (Residue, Non-Filterable)	**8.0**	1.1		mg/L	1	8/12/2019

Adirondack Environmental Services, Inc

Date: *13-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	080919-TB02
Work Order:	**190809101**	**Collection Date:**	8/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190809101-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Methylene chloride	**1.7**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 10:58:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 10:58:00 AM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 10:58:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 10:58:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 10:58:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 10:58:00 AM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 10:58:00 AM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	8/13/2019 10:58:00 AM
Surr: 4-Bromofluorobenzene	**97.4**	76.5-125		%REC	1	8/13/2019 10:58:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/13/2019 10:58:00 AM

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74953

mblk

SeqNo: **2676411** **PrepDate:8/9/2019** TestNo: **SW8082A** RunNo: **174163**
Samp ID: **mb-74953** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0718	0.0100	0.1	0	71.8	57.1	135	0	0		

lcs

SeqNo: **2676426** **PrepDate:8/9/2019** TestNo: **SW8082A** RunNo: **174163**
Samp ID: **lcs-74953** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4056	0.0650	0.5	0	81.1	60	140	0	0		
Surr: Decachlorobiphenyl	0.075	0.0100	0.1	0	75	57.1	135	0	0		

ms

SeqNo: **2676423** **PrepDate:8/9/2019** TestNo: **SW8082A** RunNo: **174163**
Samp ID: **190809101-004c (080919-04-SW-B-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4406	0.0650	0.5	0.0366	80.8	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0822	0.0100	0.1	0	82.2	57.1	135	0	0		

msd

SeqNo: **2676425** **PrepDate:8/9/2019** TestNo: **SW8082A** RunNo: **174163**
Samp ID: **190809101-004c (080919-04-SW-B-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4222	0.0650	0.5	0.0366	77.1	46.7	130	0.4406	4.27	30	
Surr: Decachlorobiphenyl	0.0754	0.0100	0.1	0	75.4	57.1	135	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74958

LCS

SeqNo: **2677894** **PrepDate:8/12/2019** TestNo: **SM2540D** RunNo: **174213**
Samp ID: **LCS-74958** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	504	40.0	483	0	104	86.5	114	0	0		

DUP

SeqNo: **2677902** **PrepDate:8/12/2019** TestNo: **SM2540D** RunNo: **174213**
Samp ID: **190808031-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	147	10.0	0	0	0	0	0	156	5.94	10	

DUP

SeqNo: **2677915** **PrepDate:8/12/2019** TestNo: **SM2540D** RunNo: **174213**
Samp ID: **190809101-004F** **PrepRef:** Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	8	1.10	0	0	0	0	0	8.632	7.59	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74970

MS

SeqNo: **2677610** PrepDate:**8/12/2019** TestNo: **E200.7** RunNo: **174194**
Samp ID: **190809101-004 (080919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03835	0.00500	0.04	0	95.9	75	125	0	0		
Barium	2.074	0.0100	2	0.02307	103	75	119	0	0		
Cadmium	0.05114	0.00500	0.05	0	102	75	118	0	0		
Chromium	0.2168	0.00500	0.2	0	108	75	124	0	0		
Copper	0.2781	0.00500	0.25	0.005844	109	75	125	0	0		
Lead	0.01982	0.00500	0.02	0	99.1	75	125	0	0		
Selenium	0.009357	0.00500	0.01	0	93.6	75	125	0	0		
Silver	0.05001	0.0100	0.05	0	100	75	125	0	0		
Zinc	0.5218	0.0100	0.5	0	104	76.9	125	0	0		

DUP

SeqNo: **2677609** PrepDate:**8/12/2019** TestNo: **E200.7** RunNo: **174194**
Samp ID: **190809101-004** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0007506	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02231	0.0100	0	0	0	0	0	0.02307	3.36	20	
Cadmium	0.0001129	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.003004	0.00500	0	0	0	0	0	0	0	20	
Copper	0.003629	0.00500	0	0	0	0	0	0.005844	0	20	
Lead	0.0004995	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003918	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74971

MS

SeqNo: **2677622** PrepDate:**8/12/2019** TestNo: **E200.7F** RunNo: **174194**
Samp ID: **190809101-004 (080919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.03778	0.00500	0.04	0	94.5	75	123	0	0		
Barium, Dissolved	2.003	0.0100	2	0.02164	99.1	75	124	0	0		
Cadmium, Dissolved	0.04988	0.00500	0.05	0	99.8	75	125	0	0		
Chromium, Dissolved	0.2106	0.00500	0.2	0.00823	101	77.2	117	0	0		
Copper, Dissolved	0.268	0.00500	0.25	0.004955	105	75	125	0	0		
Lead, Dissolved	0.01908	0.00500	0.02	0	95.4	75	125	0	0		
Selenium, Dissolved	0.009909	0.00500	0.01	0	99.1	75	125	0	0		
Silver, Dissolved	0.05028	0.0100	0.05	0	101	75	125	0	0		
Zinc, Dissolved	0.5042	0.0100	0.5	0	101	75	121	0	0		

DUP

SeqNo: **2677621** PrepDate:**8/12/2019** TestNo: **E200.7F** RunNo: **174194**
Samp ID: **190809101-004** PrepRef: Units: **mg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02206	0.0100	0	0	0	0	0	0.02164	1.95	15.4	
Cadmium, Dissolved	0.0001242	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.003789	0.00500	0	0	0	0	0	0.00823	0	20	
Copper, Dissolved	0.003852	0.00500	0	0	0	0	0	0.004955	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002912	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75000

MBLK

SeqNo: **2678051** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **MB-R174224** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2678052** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **LCS-R174224** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.9	0.500	10	0	119	77	123	0	0		

MS

SeqNo: **2678057** PrepDate:8/12/2019 TestNo: **E1631** RunNo: **174224**
Samp ID: **190809101-004 (080919-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.3	0.500	20	5.48	84.1	71	125	0	0		

MS

SeqNo: **2678134** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **190809053-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	27.4	0.500	20	11.7	78.5	71	125	0	0		

MSD

SeqNo: **2678058** PrepDate:8/12/2019 TestNo: **E1631** RunNo: **174224**
Samp ID: **190809101-004 (080919-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.8	0.500	20	5.48	81.6	71	125	22.3	2.27	24	

MSD

SeqNo: **2678135** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **190809053-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	29.2	0.500	20	11.7	87.5	71	125	27.4	6.36	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

mblk

SeqNo: **2675871** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.24	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.24	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.38	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.28	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.4	5.0	50	0	94.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.28	5.0	50	0	92.6	76.5	125	0	0		
Surr: Toluene-d8	50.18	5.0	50	0	100	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174138

lcs

SeqNo: **2675861** TestNo: **SW8260C** RunNo: **174138**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.72	1.0	10	0	87.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	6.7	1.0	10	0	67	72.3	118	0	0		S
1,1,2-Trichloroethane	9.08	1.0	10	0	90.8	73.1	123	0	0		
1,1-Dichloroethane	8.57	1.0	10	0	85.7	73.2	127	0	0		
1,1-Dichloroethene	7.89	1.0	10	0	78.9	70.3	128	0	0		
1,2,3-Trichloropropane	4.11	1.0	5	0	82.2	68.4	115	0	0		
1,2-Dichlorobenzene	9.13	1.0	10	0	91.3	71	124	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	7.92	1.0	10	0	79.2	71.7	127	0	0		
2-Butanone	9.45	5.0	10	0	94.5	65.1	132	0	0		
4-Methyl-2-pentanone	7.61	5.0	10	0	76.1	68.7	118	0	0		
Acetone	5.74	5.0	10	0	57.4	69.2	133	0	0		S
Benzene	8.99	1.0	10	0	89.9	71.2	122	0	0		
Carbon disulfide	3.46	1.0	5	0	69.2	67.8	134	0	0		
Carbon tetrachloride	8.49	1.0	10	0	84.9	74.5	122	0	0		
Chlorobenzene	10.32	1.0	10	0	103	72.7	124	0	0		
Chloroethane	9.7	1.0	10	0	97	72.3	136	0	0		
Chloroform	7.93	1.0	10	0	79.3	71.6	133	0	0		
Dibromochloromethane	8.17	1.0	10	0	81.7	70.6	124	0	0		
Ethylbenzene	9.5	1.0	10	0	95	70.9	126	0	0		
Methylene chloride	10.15	1.0	10	0	102	66.3	130	0	0		
Tetrachloroethene	10.41	1.0	10	0	104	72.4	119	0	0		
Toluene	9	1.0	10	0	90	71.8	116	0	0		
trans-1,2-Dichloroethene	8.52	1.0	10	0	85.2	70.3	120	0	0		
Trichloroethene	9.93	1.0	10	0	99.3	73	127	0	0		
Vinyl chloride	10.58	1.0	10	0	106	65.2	134	0	0		
Xylenes, Total	28.56	1.0	30	0	95.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.41	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.61	5.0	50	0	95.2	76.5	125	0	0		
Surr: Toluene-d8	50.92	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

mblk

SeqNo: **2677989** TestNo: **SW8260C** RunNo: **174220**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.23	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.26	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.33	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.32	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.88	5.0	50	0	95.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.32	5.0	50	0	90.6	76.5	125	0	0		
Surr: Toluene-d8	51.2	5.0	50	0	102	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

lcs	SeqNo: **2677987**	TestNo: **SW8260C**	RunNo: **174220**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8	1.0	10	0	80	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	5.62	1.0	10	0	56.2	72.3	118	0	0		S
1,1,2-Trichloroethane	8.46	1.0	10	0	84.6	73.1	123	0	0		
1,1-Dichloroethane	7.86	1.0	10	0	78.6	73.2	127	0	0		
1,1-Dichloroethene	6.64	1.0	10	0	66.4	70.3	128	0	0		S
1,2,3-Trichloropropane	3.66	1.0	5	0	73.2	68.4	115	0	0		
1,2-Dichlorobenzene	7.85	1.0	10	0	78.5	71	124	0	0		
1,2-Dichloroethane	7.67	1.0	10	0	76.7	72.5	127	0	0		
1,3-Dichlorobenzene	7.7	1.0	10	0	77	72.2	121	0	0		
1,3-Dichloropropane	3.86	1.0	5	0	77.2	76	122	0	0		
1,4-Dichlorobenzene	7.62	1.0	10	0	76.2	71.7	127	0	0		
2-Butanone	7.92	5.0	10	0	79.2	65.1	132	0	0		
4-Methyl-2-pentanone	6.06	5.0	10	0	60.6	68.7	118	0	0		S
Acetone	4.5	5.0	10	0	45	69.2	133	0	0		JS
Benzene	8.14	1.0	10	0	81.4	71.2	122	0	0		
Carbon disulfide	3.05	1.0	5	0	61	67.8	134	0	0		S
Carbon tetrachloride	8.26	1.0	10	0	82.6	74.5	122	0	0		
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	124	0	0		
Chloroethane	7.97	1.0	10	0	79.7	72.3	136	0	0		
Chloroform	8.07	1.0	10	0	80.7	71.6	133	0	0		
Dibromochloromethane	7.23	1.0	10	0	72.3	70.6	124	0	0		
Ethylbenzene	9.1	1.0	10	0	91	70.9	126	0	0		
Methylene chloride	8.64	1.0	10	0	86.4	66.3	130	0	0		
Tetrachloroethene	9.57	1.0	10	0	95.7	72.4	119	0	0		
Toluene	8.04	1.0	10	0	80.4	71.8	116	0	0		
trans-1,2-Dichloroethene	7.94	1.0	10	0	79.4	70.3	120	0	0		
Trichloroethene	9.41	1.0	10	0	94.1	73	127	0	0		
Vinyl chloride	9.1	1.0	10	0	91	65.2	134	0	0		
Xylenes, Total	25.96	1.0	30	0	86.5	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	46.63	5.0	50	0	93.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.44	5.0	50	0	92.9	76.5	125	0	0		
Surr: Toluene-d8	50.7	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

ms	SeqNo: **2677991**	TestNo: **SW8260C**	RunNo: **174220**
	Samp ID: **190809101-004b (080919-04-SW-B-**	Units: **µg/L**	Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	6.78	1.0	10	0	67.8	71.6	126	0	0		S
1,1,2,2-Tetrachloroethane	5.31	1.0	10	0	53.1	70.1	123	0	0		S
1,1,2-Trichloroethane	6.81	1.0	10	0	68.1	72.1	119	0	0		S
1,1-Dichloroethane	6.99	1.0	10	0	69.9	70.4	126	0	0		S
1,1-Dichloroethene	5.72	1.0	10	0	57.2	70.2	125	0	0		S
1,2,3-Trichloropropane	3.11	1.0	5	0	62.2	53.7	101	0	0		
1,2-Dichlorobenzene	6.63	1.0	10	0	66.3	70.2	123	0	0		S
1,2-Dichloroethane	6.43	1.0	10	0	64.3	73.5	126	0	0		S
1,3-Dichlorobenzene	6.64	1.0	10	0	66.4	70.4	124	0	0		S
1,3-Dichloropropane	3.05	1.0	5	0	61	64	125	0	0		S
1,4-Dichlorobenzene	6.78	1.0	10	0	67.8	70.8	127	0	0		S
2-Butanone	6.35	5.0	10	0	63.5	60.5	123	0	0		
4-Methyl-2-pentanone	5.34	5.0	10	0	53.4	52.8	133	0	0		
Acetone	7.13	5.0	10	0	71.3	56.3	135	0	0		
Benzene	7.04	1.0	10	0	70.4	70.2	127	0	0		
Carbon disulfide	2.25	1.0	5	0	45	62.2	130	0	0		S
Carbon tetrachloride	6.79	1.0	10	0	67.9	56.4	137	0	0		
Chlorobenzene	8.14	1.0	10	0	81.4	72.7	128	0	0		
Chloroethane	8.85	1.0	10	0	88.5	71.3	135	0	0		
Chloroform	6.3	1.0	10	0	63	70.2	125	0	0		S
Dibromochloromethane	6.3	1.0	10	0	63	69.5	123	0	0		S
Ethylbenzene	8.22	1.0	10	0	82.2	71.9	129	0	0		
Methylene chloride	7.21	1.0	10	0.41	68	65.3	123	0	0		
Tetrachloroethene	8.21	1.0	10	0	82.1	74.5	121	0	0		
Toluene	7.16	1.0	10	0	71.6	73	122	0	0		S
trans-1,2-Dichloroethene	6.47	1.0	10	0	64.7	69.1	133	0	0		S
Trichloroethene	7.48	1.0	10	0	74.8	71.1	126	0	0		
Vinyl chloride	8.89	1.0	10	0	88.9	65	137	0	0		
Xylenes, Total	23.03	1.0	30	0	76.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.96	5.0	50	0	97.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.61	5.0	50	0	95.2	76.5	125	0	0		
Surr: Toluene-d8	51.42	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190809101
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

msd

SeqNo: **2677992** TestNo: **SW8260C** RunNo: **174220**
Samp ID: **190809101-004b (080919-04-SW-B-** Units: **µg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.96	1.0	10	0	79.6	71.6	126	6.78	16.0	20.4	
1,1,2,2-Tetrachloroethane	5.74	1.0	10	0	57.4	70.1	123	5.31	7.78	18.6	S
1,1,2-Trichloroethane	7.47	1.0	10	0	74.7	72.1	119	6.81	9.24	20	
1,1-Dichloroethane	7.57	1.0	10	0	75.7	70.4	126	6.99	7.97	19.2	
1,1-Dichloroethene	6.23	1.0	10	0	62.3	70.2	125	5.72	8.54	16.1	S
1,2,3-Trichloropropane	3.45	1.0	5	0	69	53.7	101	3.11	10.4	20	
1,2-Dichlorobenzene	8.47	1.0	10	0	84.7	70.2	123	6.63	24.4	17.9	Z
1,2-Dichloroethane	7.4	1.0	10	0	74	73.5	126	6.43	14.0	15.6	
1,3-Dichlorobenzene	8.16	1.0	10	0	81.6	70.4	124	6.64	20.5	14.3	Z
1,3-Dichloropropane	3.6	1.0	5	0	72	64	125	3.05	16.5	0	
1,4-Dichlorobenzene	7.92	1.0	10	0	79.2	70.8	127	6.78	15.5	14.4	Z
2-Butanone	7.17	5.0	10	0	71.7	60.5	123	6.35	12.1	15	
4-Methyl-2-pentanone	6.05	5.0	10	0	60.5	52.8	133	5.34	12.5	11.9	Z
Acetone	7.91	5.0	10	0	79.1	56.3	135	7.13	10.4	10.6	
Benzene	7.68	1.0	10	0	76.8	70.2	127	7.04	8.70	18.4	
Carbon disulfide	2.55	1.0	5	0	51	62.2	130	2.25	12.5	13.1	S
Carbon tetrachloride	8.03	1.0	10	0	80.3	56.4	137	6.79	16.7	20.3	
Chlorobenzene	9.04	1.0	10	0	90.4	72.7	128	8.14	10.5	19.6	
Chloroethane	8.38	1.0	10	0	83.8	71.3	135	8.85	5.46	27.8	
Chloroform	7.21	1.0	10	0	72.1	70.2	125	6.3	13.5	20.3	
Dibromochloromethane	7.07	1.0	10	0	70.7	69.5	123	6.3	11.5	18.8	
Ethylbenzene	8.44	1.0	10	0	84.4	71.9	129	8.22	2.64	16.3	
Methylene chloride	8.04	1.0	10	0.41	76.3	65.3	123	7.21	10.9	21.4	
Tetrachloroethene	8.95	1.0	10	0	89.5	74.5	121	8.21	8.62	20.9	
Toluene	8.03	1.0	10	0	80.3	73	122	7.16	11.5	19.4	
trans-1,2-Dichloroethene	7.25	1.0	10	0	72.5	69.1	133	6.47	11.4	16.1	
Trichloroethene	8.55	1.0	10	0	85.5	71.1	126	7.48	13.3	16.6	
Vinyl chloride	9.37	1.0	10	0	93.7	65	137	8.89	5.26	20.5	
Xylenes, Total	25.18	1.0	30	0	83.9	72	130	23.03	8.92	16.1	
Surr: 1,2-Dichloroethane-d4	48.01	5.0	50	0	96	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.37	5.0	50	0	92.7	76.5	125	0	0	0	
Surr: Toluene-d8	50.15	5.0	50	0	100	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190809101

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	080919-01-SW-D-B-1	8/9/19	0825	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	080919-02-SW-A-A-1	8/9/19	0850	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	080919-03-SW-U-A-1	8/9/19	0915	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/9/19 1605
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/9/19 4:39 PM

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 6°C	☒	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190809101

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 190809101

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.blasko@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	080919-03-SW-U-A-1	8/9/19	0915	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	080919-04-SW-B-A-1	8/9/19	0935	A	W		✓	3	metals (filtered)
				P				6	PCBs
				A				6	VOCs
				P				3	metals/hardness
				A				9	mercury
				P				3	TSS
005	080919-05-SW-B-A-1	8/9/19	0935	A	W		✓	1	TSS
				P					
006	080919-TB01	[redacted]		A	TB				trip blank
				P					
007	080919-TB02			A	TB				trip blank
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

080919-04-SW-B-A-1 is MS/MSD

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/9/19 1605
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/9/19 9:39PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190809101

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

TAT: **2**

DateDue: 8/13/2019

QClevel: STD+

☐ Hard Copy

8/9/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190809101-001	080919-01-SW-D-B-1	Water	8/9/2019	8/13/2019	E	C	B	D	D	A	F
190809101-002	080919-02-SW-A-A-1	Water	8/9/2019	8/13/2019	E	C	B	D	D	A	F
190809101-003	080919-03-SW-U-A-1	Water	8/9/2019	8/13/2019	E	C	B	D	D	A	F
190809101-004	080919-04-SW-B-A-1	Water	8/9/2019	8/13/2019	E	C	B	D	D	A	F
190809101-005	080919-05-SW-B-A-1	Water	8/9/2019	8/13/2019							A
190809101-006	080919-TB01	Trip Blank	8/9/2019	8/13/2019			A				
190809101-007	080919-TB02	Trip Blank	8/9/2019	8/13/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 14, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190812066
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/12/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*14-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190812066		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-01-SW-U-B-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/12/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
PCB, Total	**ND**	0.065		µg/L	1	8/12/2019 8:09:34 PM
Surr: Decachlorobiphenyl	**77.4**	57.1-135		%REC	1	8/12/2019 8:09:34 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**1.9**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Total Hardness (As CaCO3)	**95**	5		mg/L CaCO3	1	8/13/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/13/2019 2:23:00 PM
Barium	**0.024**	0.010		mg/L	1	8/13/2019 2:23:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/13/2019 2:23:00 PM
Chromium	**ND**	0.005		mg/L	1	8/13/2019 2:23:00 PM
Copper	**0.008**	0.005		mg/L	1	8/13/2019 2:23:00 PM
Lead	**ND**	0.005		mg/L	1	8/13/2019 2:23:00 PM
Selenium	**ND**	0.005		mg/L	1	8/13/2019 2:23:00 PM
Silver	**ND**	0.010		mg/L	1	8/13/2019 2:23:00 PM
Zinc	**ND**	0.010		mg/L	1	8/13/2019 2:23:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:35:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/13/2019 4:35:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/13/2019 4:35:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:35:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/13/2019 4:35:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:35:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-01-SW-U-B-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/13/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:35:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:35:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:35:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	8/13/2019 12:24:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 12:24:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 12:24:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 12:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 12:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 12:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 12:24:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/13/2019 12:24:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/13/2019 12:24:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/13/2019 12:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 12:24:00 PM
Surr: 1,2-Dichloroethane-d4	**88.6**	80.9-122		%REC	1	8/13/2019 12:24:00 PM
Surr: 4-Bromofluorobenzene	**98.3**	76.5-125		%REC	1	8/13/2019 12:24:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/13/2019 12:24:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-01-SW-U-B-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-002
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/12/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
PCB, Total	**ND**	0.065		µg/L	1	8/12/2019 8:22:56 PM
Surr: Decachlorobiphenyl	**77.4**	57.1-135		%REC	1	8/12/2019 8:22:56 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**1.8**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/13/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/13/2019 2:56:00 PM
Barium	**0.023**	0.010		mg/L	1	8/13/2019 2:56:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/13/2019 2:56:00 PM
Chromium	**ND**	0.005		mg/L	1	8/13/2019 2:56:00 PM
Copper	**ND**	0.005		mg/L	1	8/13/2019 2:56:00 PM
Lead	**ND**	0.005		mg/L	1	8/13/2019 2:56:00 PM
Selenium	**ND**	0.005		mg/L	1	8/13/2019 2:56:00 PM
Silver	**ND**	0.010		mg/L	1	8/13/2019 2:56:00 PM
Zinc	**ND**	0.010		mg/L	1	8/13/2019 2:56:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:38:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/13/2019 4:38:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/13/2019 4:38:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:38:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:38:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:38:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/13/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:38:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:38:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:38:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/13/2019 12:46:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 12:46:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 12:46:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 12:46:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 12:46:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 12:46:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 12:46:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 12:46:00 PM
Surr: 1,2-Dichloroethane-d4	**92.5**	80.9-122		%REC	1	8/13/2019 12:46:00 PM
Surr: 4-Bromofluorobenzene	**95.8**	76.5-125		%REC	1	8/13/2019 12:46:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/13/2019 12:46:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-03-SW-D-C-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-003
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/12/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1242	**0.064**	0.065	J	µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/12/2019 8:36:16 PM
PCB, Total	**0.064**	0.065	J	µg/L	1	8/12/2019 8:36:16 PM
Surr: Decachlorobiphenyl	**83.4**	57.1-135		%REC	1	8/12/2019 8:36:16 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**12.2**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	8/13/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/13/2019 3:01:00 PM
Barium	**0.025**	0.010		mg/L	1	8/13/2019 3:01:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/13/2019 3:01:00 PM
Chromium	**ND**	0.005		mg/L	1	8/13/2019 3:01:00 PM
Copper	**ND**	0.005		mg/L	1	8/13/2019 3:01:00 PM
Lead	**ND**	0.005		mg/L	1	8/13/2019 3:01:00 PM
Selenium	**ND**	0.005		mg/L	1	8/13/2019 3:01:00 PM
Silver	**ND**	0.010		mg/L	1	8/13/2019 3:01:00 PM
Zinc	**ND**	0.010		mg/L	1	8/13/2019 3:01:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:43:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/13/2019 4:43:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/13/2019 4:43:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:43:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:43:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:43:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-03-SW-D-C-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/13/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:43:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:43:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:43:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/13/2019 1:07:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 1:07:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 1:07:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 1:07:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 1:07:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 1:07:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 1:07:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 1:07:00 PM
Surr: 1,2-Dichloroethane-d4	**91.4**	80.9-122		%REC	1	8/13/2019 1:07:00 PM
Surr: 4-Bromofluorobenzene	**99.0**	76.5-125		%REC	1	8/13/2019 1:07:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	8/13/2019 1:07:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-03-SW-D-C-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**10.0**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-04-SW-B-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/12/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
PCB, Total	**ND**	0.065		µg/L	1	8/12/2019 8:49:36 PM
Surr: Decachlorobiphenyl	**79.8**	57.1-135		%REC	1	8/12/2019 8:49:36 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**3.4**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Total Hardness (As CaCO3)	**95**	5		mg/L CaCO3	1	8/13/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/13/2019 3:07:00 PM
Barium	**0.024**	0.010		mg/L	1	8/13/2019 3:07:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/13/2019 3:07:00 PM
Chromium	**ND**	0.005		mg/L	1	8/13/2019 3:07:00 PM
Copper	**0.006**	0.005		mg/L	1	8/13/2019 3:07:00 PM
Lead	**ND**	0.005		mg/L	1	8/13/2019 3:07:00 PM
Selenium	**ND**	0.005		mg/L	1	8/13/2019 3:07:00 PM
Silver	**ND**	0.010		mg/L	1	8/13/2019 3:07:00 PM
Zinc	**ND**	0.010		mg/L	1	8/13/2019 3:07:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:48:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/13/2019 4:48:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/13/2019 4:48:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:48:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	8/13/2019 4:48:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:48:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-04-SW-B-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-004
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/13/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:48:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:48:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:48:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/13/2019 1:29:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 1:29:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 1:29:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 1:29:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 1:29:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 1:29:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 1:29:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 1:29:00 PM
Surr: 1,2-Dichloroethane-d4	**93.2**	80.9-122		%REC	1	8/13/2019 1:29:00 PM
Surr: 4-Bromofluorobenzene	**98.6**	76.5-125		%REC	1	8/13/2019 1:29:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	8/13/2019 1:29:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-04-SW-B-A-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**6.8**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-05-SW-B-B-1
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**8.8**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-2
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/12/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
PCB, Total	**ND**	0.065		µg/L	1	8/12/2019 9:16:18 PM
Surr: Decachlorobiphenyl	**89.0**	57.1-135		%REC	1	8/12/2019 9:16:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **SM**
(Prep: 1631E - 8/12/2019)						
Mercury	**2.3**	0.5		ng/L	1	8/13/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	8/13/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/13/2019 3:15:00 PM
Barium	**0.024**	0.010		mg/L	1	8/13/2019 3:15:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/13/2019 3:15:00 PM
Chromium	**ND**	0.005		mg/L	1	8/13/2019 3:15:00 PM
Copper	**0.008**	0.005		mg/L	1	8/13/2019 3:15:00 PM
Lead	**ND**	0.005		mg/L	1	8/13/2019 3:15:00 PM
Selenium	**ND**	0.005		mg/L	1	8/13/2019 3:15:00 PM
Silver	**ND**	0.010		mg/L	1	8/13/2019 3:15:00 PM
Zinc	**ND**	0.010		mg/L	1	8/13/2019 3:15:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/13/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:52:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/13/2019 4:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/13/2019 4:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:52:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/13/2019 4:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:52:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-2
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/13/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/13/2019 4:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/13/2019 4:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 1:50:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 1:50:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 1:50:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 1:50:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 1:50:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 1:50:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 1:50:00 PM
Surr: 1,2-Dichloroethane-d4	**93.8**	80.9-122		%REC	1	8/13/2019 1:50:00 PM
Surr: 4-Bromofluorobenzene	**91.7**	76.5-125		%REC	1	8/13/2019 1:50:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/13/2019 1:50:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-02-SW-A-A-2
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/13/2019)						
TSS (Residue, Non-Filterable)	**6.6**	1.0		mg/L	1	8/13/2019

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-TB01
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Methylene chloride	**1.9**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 2:12:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 2:12:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 2:12:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 2:12:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 2:12:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 2:12:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 2:12:00 PM
Surr: 1,2-Dichloroethane-d4	**95.5**	80.9-122		%REC	1	8/13/2019 2:12:00 PM
Surr: 4-Bromofluorobenzene	**94.7**	76.5-125		%REC	1	8/13/2019 2:12:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/13/2019 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *14-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081219-TB02
Work Order:	**190812066**	**Collection Date:**	8/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190812066-008
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Methylene chloride	**2.6**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/13/2019 2:33:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	8/13/2019 2:33:00 PM
1,1-Dichloroethene	**ND**	1.0	S	µg/L	1	8/13/2019 2:33:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Chloroform	**0.4**	1.0	J	µg/L	1	8/13/2019 2:33:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/13/2019 2:33:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Benzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
4-Methyl-2-pentanone	**ND**	5.0	S	µg/L	1	8/13/2019 2:33:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	S	µg/L	1	8/13/2019 2:33:00 PM
Toluene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/13/2019 2:33:00 PM
Surr: 1,2-Dichloroethane-d4	**92.1**	80.9-122		%REC	1	8/13/2019 2:33:00 PM
Surr: 4-Bromofluorobenzene	**96.6**	76.5-125		%REC	1	8/13/2019 2:33:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/13/2019 2:33:00 PM

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74981

mblk

SeqNo: **2677673** PrepDate:**8/12/2019** TestNo: **SW8082A** RunNo: **174202**
Samp ID: **mb-74981** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0988	0.0100	0.1	0	98.8	57.1	135	0	0		

lcs

SeqNo: **2677675** PrepDate:**8/12/2019** TestNo: **SW8082A** RunNo: **174202**
Samp ID: **lcs-74981** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5694	0.0650	0.5	0	114	60	140	0	0		
PCB, Total	0.5694	0.0650	0.5	0	114	60	140	0	0		
Surr: Decachlorobiphenyl	0.0464	0.0100	0.1	0	46.4	57.1	135	0	0		S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74987

MS

SeqNo: **2678589** **PrepDate:8/13/2019** TestNo: **E200.7F** RunNo: **174244**
Samp ID: **190812066-006 (081219-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04139	0.00500	0.04	0	103	75	123	0	0		
Barium, Dissolved	2.045	0.0100	2	0.02222	101	75	124	0	0		
Cadmium, Dissolved	0.05109	0.00500	0.05	0	102	75	125	0	0		
Chromium, Dissolved	0.2119	0.00500	0.2	0	106	77.2	117	0	0		
Copper, Dissolved	0.2639	0.00500	0.25	0.004242	104	75	125	0	0		
Lead, Dissolved	0.01924	0.00500	0.02	0	96.2	75	125	0	0		
Selenium, Dissolved	0.009558	0.00500	0.01	0	95.6	75	125	0	0		
Silver, Dissolved	0.04631	0.0100	0.05	0	92.6	75	125	0	0		
Zinc, Dissolved	0.5238	0.0100	0.5	0	105	75	121	0	0		

DUP

SeqNo: **2678588** **PrepDate:8/13/2019** TestNo: **E200.7F** RunNo: **174244**
Samp ID: **190812066-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02178	0.0100	0	0	0	0	0	0.02222	2.01	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.004382	0.00500	0	0	0	0	0	0.004242	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.00007094	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.001219	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74988

MBLK

SeqNo: **2678472** PrepDate: TestNo: **E200.7** RunNo: **174244**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2678473** PrepDate: TestNo: **E200.7** RunNo: **174244**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.064	0.00500	2	0	103	89.1	111	0	0		
Barium	2.059	0.0100	2	0	103	85	115	0	0		
Cadmium	2.148	0.00500	2	0	107	85	115	0	0		
Chromium	2.072	0.00500	2	0	104	89.7	109	0	0		
Copper	2.069	0.00500	2	0	103	85	115	0	0		
Lead	2.178	0.00500	2	0	109	88.1	112	0	0		
Selenium	2.102	0.00500	2	0	105	87.5	112	0	0		
Silver	0.529	0.0100	0.5	0	106	85.2	115	0	0		
Zinc	2.12	0.0100	2	0	106	88.3	113	0	0		

MS

SeqNo: **2678482** PrepDate:**8/13/2019** TestNo: **E200.7** RunNo: **174244**
Samp ID: **190812066-006 (081219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04284	0.00500	0.04	0	107	75	125	0	0		
Barium	2.065	0.0100	2	0.02443	102	75	119	0	0		
Cadmium	0.05182	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.215	0.00500	0.2	0	108	75	124	0	0		
Copper	0.27	0.00500	0.25	0.008102	105	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74988

MS

SeqNo: **2678482** **PrepDate:8/13/2019** TestNo: **E200.7** RunNo: **174244**
Samp ID: **190812066-006 (081219-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02046	0.00500	0.02	0	102	75	125	0	0		
Selenium	0.01144	0.00500	0.01	0	114	75	125	0	0		
Silver	0.04963	0.0100	0.05	0	99.3	75	125	0	0		
Zinc	0.5293	0.0100	0.5	0	106	76.9	125	0	0		

DUP

SeqNo: **2678481** **PrepDate:8/13/2019** TestNo: **E200.7** RunNo: **174244**
Samp ID: **190812066-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0001996	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02402	0.0100	0	0	0	0	0	0.02443	1.68	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.008616	0.00500	0	0	0	0	0	0.008102	6.15	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.001804	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 74992

LCS

SeqNo: **2678917** **PrepDate:8/13/2019** TestNo: **SM2540D** RunNo: **174271**
Samp ID: **LCS-74992** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	516	40.0	483	0	107	86.5	114	0	0		

DUP

SeqNo: **2678921** **PrepDate:8/13/2019** TestNo: **SM2540D** RunNo: **174271**
Samp ID: **190808081-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	139	10.0	0	0	0	0	0	150	7.61	10	

DUP

SeqNo: **2678925** **PrepDate:8/13/2019** TestNo: **SM2540D** RunNo: **174271**
Samp ID: **190808082-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	176	10.0	0	0	0	0	0	190	7.65	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75000

MBLK

SeqNo: **2678051** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **MB-R174224** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2678052** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **LCS-R174224** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.9	0.500	10	0	119	77	123	0	0		

MS

SeqNo: **2678057** PrepDate:8/12/2019 TestNo: **E1631** RunNo: **174224**
Samp ID: **190809101-004** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	22.3	0.500	20	5.48	84.1	71	125	0	0		

MS

SeqNo: **2678134** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **190809053-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	27.4	0.500	20	11.7	78.5	71	125	0	0		

MSD

SeqNo: **2678058** PrepDate:8/12/2019 TestNo: **E1631** RunNo: **174224**
Samp ID: **190809101-004** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	21.8	0.500	20	5.48	81.6	71	125	22.3	2.27	24	

MSD

SeqNo: **2678135** PrepDate: TestNo: **E1631** RunNo: **174224**
Samp ID: **190809053-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	29.2	0.500	20	11.7	87.5	71	125	27.4	6.36	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

mblk

SeqNo: **2677989** TestNo: **SW8260C** RunNo: **174220**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.23	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.26	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.33	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.32	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.88	5.0	50	0	95.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.32	5.0	50	0	90.6	76.5	125	0	0		
Surr: Toluene-d8	51.2	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

lcs

SeqNo: **2677987** TestNo: **SW8260C** RunNo: **174220**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8	1.0	10	0	80	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	5.62	1.0	10	0	56.2	72.3	118	0	0		S
1,1,2-Trichloroethane	8.46	1.0	10	0	84.6	73.1	123	0	0		
1,1-Dichloroethane	7.86	1.0	10	0	78.6	73.2	127	0	0		
1,1-Dichloroethene	6.64	1.0	10	0	66.4	70.3	128	0	0		S
1,2,3-Trichloropropane	3.66	1.0	5	0	73.2	68.4	115	0	0		
1,2-Dichlorobenzene	7.85	1.0	10	0	78.5	71	124	0	0		
1,2-Dichloroethane	7.67	1.0	10	0	76.7	72.5	127	0	0		
1,3-Dichlorobenzene	7.7	1.0	10	0	77	72.2	121	0	0		
1,3-Dichloropropane	3.86	1.0	5	0	77.2	76	122	0	0		
1,4-Dichlorobenzene	7.62	1.0	10	0	76.2	71.7	127	0	0		
2-Butanone	7.92	5.0	10	0	79.2	65.1	132	0	0		
4-Methyl-2-pentanone	6.06	5.0	10	0	60.6	68.7	118	0	0		S
Acetone	4.5	5.0	10	0	45	69.2	133	0	0		JS
Benzene	8.14	1.0	10	0	81.4	71.2	122	0	0		
Carbon disulfide	3.05	1.0	5	0	61	67.8	134	0	0		S
Carbon tetrachloride	8.26	1.0	10	0	82.6	74.5	122	0	0		
Chlorobenzene	9.36	1.0	10	0	93.6	72.7	124	0	0		
Chloroethane	7.97	1.0	10	0	79.7	72.3	136	0	0		
Chloroform	8.07	1.0	10	0	80.7	71.6	133	0	0		
Dibromochloromethane	7.23	1.0	10	0	72.3	70.6	124	0	0		
Ethylbenzene	9.1	1.0	10	0	91	70.9	126	0	0		
Methylene chloride	8.64	1.0	10	0	86.4	66.3	130	0	0		
Tetrachloroethene	9.57	1.0	10	0	95.7	72.4	119	0	0		
Toluene	8.04	1.0	10	0	80.4	71.8	116	0	0		
trans-1,2-Dichloroethene	7.94	1.0	10	0	79.4	70.3	120	0	0		
Trichloroethene	9.41	1.0	10	0	94.1	73	127	0	0		
Vinyl chloride	9.1	1.0	10	0	91	65.2	134	0	0		
Xylenes, Total	25.96	1.0	30	0	86.5	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	46.63	5.0	50	0	93.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.44	5.0	50	0	92.9	76.5	125	0	0		
Surr: Toluene-d8	50.7	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

ms	SeqNo: **2677991**	TestNo: **SW8260C**	RunNo: **174220**
	Samp ID: **190809101-004b**	Units: **µg/L**	Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	6.78	1.0	10	0	67.8	71.6	126	0	0		S
1,1,2,2-Tetrachloroethane	5.31	1.0	10	0	53.1	70.1	123	0	0		S
1,1,2-Trichloroethane	6.81	1.0	10	0	68.1	72.1	119	0	0		S
1,1-Dichloroethane	6.99	1.0	10	0	69.9	70.4	126	0	0		S
1,1-Dichloroethene	5.72	1.0	10	0	57.2	70.2	125	0	0		S
1,2,3-Trichloropropane	3.11	1.0	5	0	62.2	53.7	101	0	0		
1,2-Dichlorobenzene	6.63	1.0	10	0	66.3	70.2	123	0	0		S
1,2-Dichloroethane	6.43	1.0	10	0	64.3	73.5	126	0	0		S
1,3-Dichlorobenzene	6.64	1.0	10	0	66.4	70.4	124	0	0		S
1,3-Dichloropropane	3.05	1.0	5	0	61	64	125	0	0		S
1,4-Dichlorobenzene	6.78	1.0	10	0	67.8	70.8	127	0	0		S
2-Butanone	6.35	5.0	10	0	63.5	60.5	123	0	0		
4-Methyl-2-pentanone	5.34	5.0	10	0	53.4	52.8	133	0	0		
Acetone	7.13	5.0	10	0	71.3	56.3	135	0	0		
Benzene	7.04	1.0	10	0	70.4	70.2	127	0	0		
Carbon disulfide	2.25	1.0	5	0	45	62.2	130	0	0		S
Carbon tetrachloride	6.79	1.0	10	0	67.9	56.4	137	0	0		
Chlorobenzene	8.14	1.0	10	0	81.4	72.7	128	0	0		
Chloroethane	8.85	1.0	10	0	88.5	71.3	135	0	0		
Chloroform	6.3	1.0	10	0	63	70.2	125	0	0		S
Dibromochloromethane	6.3	1.0	10	0	63	69.5	123	0	0		S
Ethylbenzene	8.22	1.0	10	0	82.2	71.9	129	0	0		
Methylene chloride	7.21	1.0	10	0.41	68	65.3	123	0	0		
Tetrachloroethene	8.21	1.0	10	0	82.1	74.5	121	0	0		
Toluene	7.16	1.0	10	0	71.6	73	122	0	0		S
trans-1,2-Dichloroethene	6.47	1.0	10	0	64.7	69.1	133	0	0		S
Trichloroethene	7.48	1.0	10	0	74.8	71.1	126	0	0		
Vinyl chloride	8.89	1.0	10	0	88.9	65	137	0	0		
Xylenes, Total	23.03	1.0	30	0	76.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.96	5.0	50	0	97.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.61	5.0	50	0	95.2	76.5	125	0	0		
Surr: Toluene-d8	51.42	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190812066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174220

msd	SeqNo: **2677992**	TestNo: **SW8260C**	RunNo: **174220**
	Samp ID: **190809101-004b**	Units: **µg/L**	Analysis Date: **8/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.96	1.0	10	0	79.6	71.6	126	6.78	16.0	20.4	
1,1,2,2-Tetrachloroethane	5.74	1.0	10	0	57.4	70.1	123	5.31	7.78	18.6	S
1,1,2-Trichloroethane	7.47	1.0	10	0	74.7	72.1	119	6.81	9.24	20	
1,1-Dichloroethane	7.57	1.0	10	0	75.7	70.4	126	6.99	7.97	19.2	
1,1-Dichloroethene	6.23	1.0	10	0	62.3	70.2	125	5.72	8.54	16.1	S
1,2,3-Trichloropropane	3.45	1.0	5	0	69	53.7	101	3.11	10.4	20	
1,2-Dichlorobenzene	8.47	1.0	10	0	84.7	70.2	123	6.63	24.4	17.9	Z
1,2-Dichloroethane	7.4	1.0	10	0	74	73.5	126	6.43	14.0	15.6	
1,3-Dichlorobenzene	8.16	1.0	10	0	81.6	70.4	124	6.64	20.5	14.3	Z
1,3-Dichloropropane	3.6	1.0	5	0	72	64	125	3.05	16.5	0	
1,4-Dichlorobenzene	7.92	1.0	10	0	79.2	70.8	127	6.78	15.5	14.4	Z
2-Butanone	7.17	5.0	10	0	71.7	60.5	123	6.35	12.1	15	
4-Methyl-2-pentanone	6.05	5.0	10	0	60.5	52.8	133	5.34	12.5	11.9	Z
Acetone	7.91	5.0	10	0	79.1	56.3	135	7.13	10.4	10.6	
Benzene	7.68	1.0	10	0	76.8	70.2	127	7.04	8.70	18.4	
Carbon disulfide	2.55	1.0	5	0	51	62.2	130	2.25	12.5	13.1	S
Carbon tetrachloride	8.03	1.0	10	0	80.3	56.4	137	6.79	16.7	20.3	
Chlorobenzene	9.04	1.0	10	0	90.4	72.7	128	8.14	10.5	19.6	
Chloroethane	8.38	1.0	10	0	83.8	71.3	135	8.85	5.46	27.8	
Chloroform	7.21	1.0	10	0	72.1	70.2	125	6.3	13.5	20.3	
Dibromochloromethane	7.07	1.0	10	0	70.7	69.5	123	6.3	11.5	18.8	
Ethylbenzene	8.44	1.0	10	0	84.4	71.9	129	8.22	2.64	16.3	
Methylene chloride	8.04	1.0	10	0.41	76.3	65.3	123	7.21	10.9	21.4	
Tetrachloroethene	8.95	1.0	10	0	89.5	74.5	121	8.21	8.62	20.9	
Toluene	8.03	1.0	10	0	80.3	73	122	7.16	11.5	19.4	
trans-1,2-Dichloroethene	7.25	1.0	10	0	72.5	69.1	133	6.47	11.4	16.1	
Trichloroethene	8.55	1.0	10	0	85.5	71.1	126	7.48	13.3	16.6	
Vinyl chloride	9.37	1.0	10	0	93.7	65	137	8.89	5.26	20.5	
Xylenes, Total	25.18	1.0	30	0	83.9	72	130	23.03	8.92	16.1	
Surr: 1,2-Dichloroethane-d4	48.01	5.0	50	0	96	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.37	5.0	50	0	92.7	76.5	125	0	0	0	
Surr: Toluene-d8	50.15	5.0	50	0	100	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190812066

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081219-01-SW-U-B-1	8/12/19	0855	A	W		✓	1	metals (filtered)
				P				2	VOCs
				A				2	PCBs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	081219-02-SW-A-A-1	8/12/19	0920	P	W		✓	1	metals (filtered)
				A				2	PCBs
				P				2	VOCs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	081219-03-SW-D-C-1	8/12/19	1020	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/12/19 405 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/12/19 4:39 pm

Temperature: Ambient or (Chilled) 4°C
Notes:_____

AES Bottles: (Y) ☒ (N) ☐

Properly Preserved: (Y) (N)
Notes:_____

Received Within Holding Times: (Y) (N)

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190812066

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Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19081206

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081219-03-SW-D-C-1	8/12/19	1020	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	081219-04-SW-B-A-1	8/12/19	0830	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	081219-05-SW-B-B-1	8/12/19	1030	A	W		✓	1	TSS
006	081219-02-SW-A-A-2	8/12/19	0940	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/12/19 405pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/12/19 4:39

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 1908120 66

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gelon	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
~~007~~ 005 (not 5/12/19)	081219-02-SW-A-A-2	8/12/19	0940	A P	W		✓	1	metals/hardness
006				A P				3	mercury
007				A P				1	TSS
~~008~~ 008	081219-TB01			A P	TB			1	trip blank
~~009~~ 009 (not 5/12/19)	081219-TB02			A P	TB			1	trip blank
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/12/19 4:39 pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
		8/12/19 4:39 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190812066

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

190812066

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/14/2019

8/12/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190812066-001	081219-01-SW-U-B-1	Water	8/12/2019	8/14/2019	E	C	B	D	D	A	F
190812066-002	081219-02-SW-A-A-1	Water	8/12/2019	8/14/2019	E	C	B	D	D	A	F
190812066-003	081219-03-SW-D-C-1	Water	8/12/2019	8/14/2019	E	C	B	D	D	A	F
190812066-004	081219-04-SW-B-A-1	Water	8/12/2019	8/14/2019	E	C	B	D	D	A	F
190812066-005	081219-05-SW-B-B-1	Water	8/12/2019	8/14/2019							A
190812066-006	081219-02-SW-A-A-2	Water	8/12/2019	8/14/2019	E	C	B	D	D	A	F
190812066-007	081219-TB01	Trip Blank	8/12/2019	8/14/2019			A				
190812066-008	081219-TB02	Trip Blank	8/12/2019	8/14/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/13/19 – 8/19/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 8/13/19 through 8/19/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one low level exceedance of the water quality criteria (PCB Aroclor 1242). This exceedance (0.439 µg/l vs threshold of 0.2 µg/l) was at the up-current background (Buoy 4) location. The sample was collected about one hour and 15 minutes after low tide and they were dredging a Non-TSCA grid cell at the time. The data received for the next day's sample set (8/16/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU, however there were a four readings between 18 and 22 NTU over the reporting period. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU, with isolated observations to 20-30 NTU). The lab TSS values collected at the same time were never higher than 11 mg/L. Overall, the turbidity readings continued to be in the near-bottom horizon.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis (first month completed on 8/13/19). The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations while the summary memorandum is prepared.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
081319-01-SW-U-B-1	09:15	AROCLOR-1242	T	ug/l	0.2	0.043	J		U	8.5	1.37	-0.65	Outgoing (Ebb)	5.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-01-SW-U-B-1	09:15	ARSENIC	D	mg/l	0.15	0.003	J		U	8.5	1.37	-0.65	Outgoing (Ebb)	5.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-01-SW-U-B-1	09:15	COPPER	D	mg/l	0.01	0.005			U	8.5	1.37	-0.65	Outgoing (Ebb)	5.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-01-SW-U-B-1	09:15	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	8.5	1.37	-0.65	Outgoing (Ebb)	5.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-02-SW-A-A-1	09:40	AROCLOR-1242	T	ug/l	0.2	0.043	J		A	20	1.14	-0.91	Outgoing (Ebb)	5.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-03-SW-D-A-1	10:15	AROCLOR-1242	T	ug/l	0.2	0.092			D	30	3.45	-0.94	Low	10.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-04-SW-B-A-1	08:45	AROCLOR-1242	T	ug/l	0.2	0.039	J		B	14	1.81	-0.29	Outgoing (Ebb)	6.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-04-SW-B-A-1	08:45	ARSENIC	D	mg/l	0.15	0.003	J		B	14	1.81	-0.29	Outgoing (Ebb)	6.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081319-04-SW-B-A-1	08:45	COPPER	D	mg/l	0.01	0.004	J		B	14	1.81	-0.29	Outgoing (Ebb)	6.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081419-01-SW-U-A-1	08:40	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.3			U	15	2.15	0.29	Outgoing (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081419-03-SW-D-A-1	09:25	AROCLOR-1242	T	ug/l	0.2	0.049	J		D	31	3.07	-0.33	Outgoing (Ebb)	10.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081419-03-SW-D-A-1	09:25	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.6			D	31	3.07	-0.33	Outgoing (Ebb)	10.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081419-04-SW-B-A-1	08:15	AROCLOR-1242	T	ug/l	0.2	0.038	J		B	15	2.24	0.71	Outgoing (Ebb)	5.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081419-04-SW-B-A-1	08:15	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.5			B	15	2.24	0.71	Outgoing (Ebb)	5.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
081519-01-SW-D-B-1	14:00	AROCLOR-1242	T	ug/l	0.2	0.157	Z		D	9	6.84	2.93	Incoming (Flood)	21.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-01-SW-D-B-1	14:00	ARSENIC	D	mg/l	0.15	0.003	J		D	9	6.84	2.93	Incoming (Flood)	21.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-02-SW-A-A-1	14:25	AROCLOR-1242	T	ug/l	0.2	0.048	J		A	23	3.78	2.2	Incoming (Flood)	9.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-03-SW-U-A-1	14:45	AROCLOR-1242	T	ug/l	0.2	0.032	J		U	32	2.96	2.2	Incoming (Flood)	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-03-SW-U-A-1	14:45	COPPER	D	mg/l	0.01	0.006			U	32	2.96	2.2	Incoming (Flood)	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-04-SW-B-B-1	13:35	AROCLOR-1242	T	ug/l	0.2	0.439	Z	X	B	8	8.34	1.7	Incoming (Flood)	15.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-05-SW-B-A-2	15:20	AROCLOR-1242	T	ug/l	0.2	0.038	J		B	32	3.48	3.96	Incoming (Flood)	13.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081519-05-SW-B-A-2	15:20	ARSENIC	D	mg/l	0.15	0.003	J		B	32	3.48	3.96	Incoming (Flood)	13.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
081619-02-SW-A-A-1	13:35	AROCLOR-1242	T	ug/l	0.2	0.058	J		A	20	3.96	1.32	Low	7.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
081619-02-SW-A-A-1	13:35	ARSENIC	D	mg/l	0.15	0.003	J		A	20	3.96	1.32	Low	7.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
081619-03-SW-D-A-1	13:55	AROCLOR-1242	T	ug/l	0.2	0.04	J		D	30	8.72	1.77	Low	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
081619-03-SW-D-A-1	13:55	ARSENIC	D	mg/l	0.15	0.003	J		D	30	8.72	1.77	Low	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
081919-01-SW-U-A-1	08:45	ARSENIC	D	mg/l	0.15	0.004	J		U	18	18.33	3.37	High	35.6	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
081919-01-SW-U-A-1	08:45	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	18	18.33	3.37	High	35.6	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
081919-02-SW-A-A-1	09:10	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			A	25	19.35	2.9	High	29.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
081919-03-SW-D-A-1	09:40	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			D	33	21.72	2.49	Outgoing (Ebb)	25.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00

J: Analyte detected below quantitation limit
Z: Duplication outside acceptable limits

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 15, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190813071
PO#: 115954
Project# : 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/13/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *15-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190813071	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1242	**0.043**	0.065	J	µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 1:48:34 PM
PCB, Total	**0.043**	0.065	J	µg/L	1	8/14/2019 1:48:34 PM
Surr: Decachlorobiphenyl	**96.4**	57.1-135		%REC	1	8/14/2019 1:48:34 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/13/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/14/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Total Hardness (As CaCO3)	**95**	5		mg/L CaCO3	1	8/14/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic	**0.004**	0.005	J	mg/L	1	8/14/2019 2:47:00 PM
Barium	**0.024**	0.010		mg/L	1	8/14/2019 2:47:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/14/2019 2:47:00 PM
Chromium	**ND**	0.005		mg/L	1	8/14/2019 2:47:00 PM
Copper	**ND**	0.005		mg/L	1	8/14/2019 2:47:00 PM
Lead	**ND**	0.005		mg/L	1	8/14/2019 2:47:00 PM
Selenium	**ND**	0.005		mg/L	1	8/14/2019 2:47:00 PM
Silver	**ND**	0.010		mg/L	1	8/14/2019 2:47:00 PM
Zinc	**ND**	0.010		mg/L	1	8/14/2019 2:47:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/14/2019 4:51:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/14/2019 4:51:00 PM
Cadmium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 4:51:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 4:51:00 PM
Copper, Dissolved	**0.005**	0.005		mg/L	1	8/14/2019 4:51:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 4:51:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/14/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 4:51:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 4:51:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 4:51:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 10:49:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 10:49:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 10:49:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/15/2019 10:49:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/15/2019 10:49:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 10:49:00 AM
Surr: 1,2-Dichloroethane-d4	**94.7**	80.9-122		%REC	1	8/15/2019 10:49:00 AM
Surr: 4-Bromofluorobenzene	**94.2**	76.5-125		%REC	1	8/15/2019 10:49:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/15/2019 10:49:00 AM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-001
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**5.3**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-02-SW-A-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1242	**0.043**	0.065	J	µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 2:01:56 PM
PCB, Total	**0.043**	0.065	J	µg/L	1	8/14/2019 2:01:56 PM
Surr: Decachlorobiphenyl	**101**	57.1-135		%REC	1	8/14/2019 2:01:56 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/13/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/14/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	8/14/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/14/2019 3:53:00 PM
Barium	**0.024**	0.010		mg/L	1	8/14/2019 3:53:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/14/2019 3:53:00 PM
Chromium	**ND**	0.005		mg/L	1	8/14/2019 3:53:00 PM
Copper	**ND**	0.005		mg/L	1	8/14/2019 3:53:00 PM
Lead	**ND**	0.005		mg/L	1	8/14/2019 3:53:00 PM
Selenium	**ND**	0.005		mg/L	1	8/14/2019 3:53:00 PM
Silver	**ND**	0.010		mg/L	1	8/14/2019 3:53:00 PM
Zinc	**ND**	0.010		mg/L	1	8/14/2019 3:53:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:33:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/14/2019 5:33:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/14/2019 5:33:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:33:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:33:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:33:00 PM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-02-SW-A-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/14/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:33:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:33:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:33:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/15/2019 11:11:00 AM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 11:11:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/15/2019 11:11:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 11:11:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 11:11:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 11:11:00 AM
Surr: 1,2-Dichloroethane-d4	**93.8**	80.9-122		%REC	1	8/15/2019 11:11:00 AM
Surr: 4-Bromofluorobenzene	**94.6**	76.5-125		%REC	1	8/15/2019 11:11:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/15/2019 11:11:00 AM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-02-SW-A-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-002
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**5.7**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-03-SW-D-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1242	**0.092**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 2:15:16 PM
PCB, Total	**0.092**	0.065		µg/L	1	8/14/2019 2:15:16 PM
Surr: Decachlorobiphenyl	**95.2**	57.1-135		%REC	1	8/14/2019 2:15:16 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/13/2019)						
Mercury	**7.7**	0.5		ng/L	1	8/14/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	8/14/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/14/2019 3:59:00 PM
Barium	**0.025**	0.010		mg/L	1	8/14/2019 3:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/14/2019 3:59:00 PM
Chromium	**ND**	0.005		mg/L	1	8/14/2019 3:59:00 PM
Copper	**0.005**	0.005		mg/L	1	8/14/2019 3:59:00 PM
Lead	**0.002**	0.005	J	mg/L	1	8/14/2019 3:59:00 PM
Selenium	**ND**	0.005		mg/L	1	8/14/2019 3:59:00 PM
Silver	**ND**	0.010		mg/L	1	8/14/2019 3:59:00 PM
Zinc	**ND**	0.010		mg/L	1	8/14/2019 3:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:40:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/14/2019 5:40:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/14/2019 5:40:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:40:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:40:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:40:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-03-SW-D-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/14/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:40:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:40:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:40:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 11:32:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/15/2019 11:32:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 11:32:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 11:32:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 11:32:00 AM
Surr: 1,2-Dichloroethane-d4	**92.6**	80.9-122		%REC	1	8/15/2019 11:32:00 AM
Surr: 4-Bromofluorobenzene	**96.1**	76.5-125		%REC	1	8/15/2019 11:32:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/15/2019 11:32:00 AM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-03-SW-D-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-003
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**10.2**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-04-SW-B-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1242	**0.039**	0.065	J	µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 2:28:36 PM
PCB, Total	**0.039**	0.065	J	µg/L	1	8/14/2019 2:28:36 PM
Surr: Decachlorobiphenyl	**93.6**	57.1-135		%REC	1	8/14/2019 2:28:36 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/13/2019)						
Mercury	**2.3**	0.5		ng/L	1	8/14/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/14/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/14/2019 4:06:00 PM
Barium	**0.024**	0.010		mg/L	1	8/14/2019 4:06:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/14/2019 4:06:00 PM
Chromium	**ND**	0.005		mg/L	1	8/14/2019 4:06:00 PM
Copper	**0.006**	0.005		mg/L	1	8/14/2019 4:06:00 PM
Lead	**ND**	0.005		mg/L	1	8/14/2019 4:06:00 PM
Selenium	**ND**	0.005		mg/L	1	8/14/2019 4:06:00 PM
Silver	**ND**	0.010		mg/L	1	8/14/2019 4:06:00 PM
Zinc	**ND**	0.010		mg/L	1	8/14/2019 4:06:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/14/2019 5:43:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/14/2019 5:43:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/14/2019 5:43:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:43:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/14/2019 5:43:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:43:00 PM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-04-SW-B-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/14/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:43:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:43:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:43:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/15/2019 11:54:00 AM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 11:54:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 11:54:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 11:54:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 11:54:00 AM
Surr: 1,2-Dichloroethane-d4	**96.3**	80.9-122		%REC	1	8/15/2019 11:54:00 AM
Surr: 4-Bromofluorobenzene	**99.5**	76.5-125		%REC	1	8/15/2019 11:54:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/15/2019 11:54:00 AM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-04-SW-B-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-004
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**6.6**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-05-SW-B-A-1
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-005
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**7.9**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-3
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-006
PO#:	115954	**Matrix:**	WATER

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1242	**0.035**	0.065	J	µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 2:41:56 PM
PCB, Total	**0.035**	0.065	J	µg/L	1	8/14/2019 2:41:56 PM
Surr: Decachlorobiphenyl	**57.4**	57.1-135		%REC	1	8/14/2019 2:41:56 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/13/2019)						
Mercury	**0.2**	0.5	J	ng/L	1	8/14/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/14/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/14/2019 4:11:00 PM
Barium	**ND**	0.010		mg/L	1	8/14/2019 4:11:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/14/2019 4:11:00 PM
Chromium	**ND**	0.005		mg/L	1	8/14/2019 4:11:00 PM
Copper	**ND**	0.005		mg/L	1	8/14/2019 4:11:00 PM
Lead	**ND**	0.005		mg/L	1	8/14/2019 4:11:00 PM
Selenium	**ND**	0.005		mg/L	1	8/14/2019 4:11:00 PM
Silver	**ND**	0.010		mg/L	1	8/14/2019 4:11:00 PM
Zinc	**ND**	0.010		mg/L	1	8/14/2019 4:11:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/14/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:48:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:48:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/14/2019 5:48:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:48:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:48:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:48:00 PM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-3
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/14/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/14/2019 5:48:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:48:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/14/2019 5:48:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	8/15/2019 12:15:00 PM
Acetone	**23**	5.0		µg/L	1	8/15/2019 12:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Chloroform	**0.4**	1.0	J	µg/L	1	8/15/2019 12:15:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 12:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 12:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 12:15:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	8/15/2019 12:15:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	8/15/2019 12:15:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/15/2019 12:15:00 PM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-01-SW-U-B-3
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-006
PO#:	115954	**Matrix:**	WATER
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/14/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/14/2019

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-TB01
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-007
PO#:	115954	**Matrix:**	TRIP BLANK

Project# : 60323713

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Methylene chloride	**2.7**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Acetone	**3.0**	5.0	J	µg/L	1	8/15/2019 12:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 12:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 12:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 12:37:00 PM
Surr: 1,2-Dichloroethane-d4	**95.0**	80.9-122		%REC	1	8/15/2019 12:37:00 PM
Surr: 4-Bromofluorobenzene	**96.7**	76.5-125		%REC	1	8/15/2019 12:37:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/15/2019 12:37:00 PM

Adirondack Environmental Services, Inc

Date: *15-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081319-TB02
Work Order:	**190813071**	**Collection Date:**	8/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190813071-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# : 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Methylene chloride	**1.1**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 12:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 12:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 12:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 12:58:00 PM
Surr: 1,2-Dichloroethane-d4	**92.0**	80.9-122		%REC	1	8/15/2019 12:58:00 PM
Surr: 4-Bromofluorobenzene	**94.9**	76.5-125		%REC	1	8/15/2019 12:58:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/15/2019 12:58:00 PM

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75011

LCS

SeqNo: **2679187** **PrepDate:8/14/2019** TestNo: **SM2540D** RunNo: **174287**
Samp ID: **LCS-75011** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	483	0	97.7	86.5	114	0	0		

LCS

SeqNo: **2679632** **PrepDate:8/14/2019** TestNo: **SM2540D** RunNo: **174313**
Samp ID: **LCS-75011** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	483	0	97.7	86.5	114	0	0		

DUP

SeqNo: **2679638** **PrepDate:8/14/2019** TestNo: **SM2540D** RunNo: **174313**
Samp ID: **190808091-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	292	20.0	0	0	0	0	0	314	7.26	10	

DUP

SeqNo: **2679644** **PrepDate:8/14/2019** TestNo: **SM2540D** RunNo: **174313**
Samp ID: **190809023-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	464	40.0	0	0	0	0	0	484	4.22	10	

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75014

MBLK

SeqNo: **2679722** PrepDate: TestNo: **E200.7F** RunNo: **174286**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2679723** PrepDate: TestNo: **E200.7F** RunNo: **174286**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.031	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.052	0.0100	2	0	103	89	112	0	0		
Cadmium, Dissolved	2.011	0.00500	2	0	101	85.3	112	0	0		
Chromium, Dissolved	1.99	0.00500	2	0	99.5	89.1	109	0	0		
Copper, Dissolved	2.144	0.00500	2	0	107	86.8	115	0	0		
Lead, Dissolved	2.086	0.00500	2	0	104	86.8	114	0	0		
Selenium, Dissolved	2.034	0.00500	2	0	102	85	115	0	0		
Silver, Dissolved	0.5193	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	1.974	0.0100	2	0	98.7	85	115	0	0		

MS

SeqNo: **2679728** PrepDate:**8/14/2019** TestNo: **E200.7F** RunNo: **174286**
Samp ID: **190813071-001 (081319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0449	0.00500	0.04	0.003384	104	75	123	0	0		
Barium, Dissolved	2.199	0.0100	2	0.02208	109	75	124	0	0		
Cadmium, Dissolved	0.05288	0.00500	0.05	0	106	75	125	0	0		
Chromium, Dissolved	0.22	0.00500	0.2	0	110	77.2	117	0	0		
Copper, Dissolved	0.2462	0.00500	0.25	0.005084	96.5	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75014

MS

SeqNo: **2679728** PrepDate:**8/14/2019** TestNo: **E200.7F** RunNo: **174286**
Samp ID: **190813071-001 (081319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02222	0.00500	0.02	0	111	75	125	0	0		
Selenium, Dissolved	0.009558	0.00500	0.01	0	95.6	75	125	0	0		
Silver, Dissolved	0.05159	0.0100	0.05	0	103	75	125	0	0		
Zinc, Dissolved	0.543	0.0100	0.5	0	109	75	121	0	0		

DUP

SeqNo: **2679727** PrepDate:**8/14/2019** TestNo: **E200.7F** RunNo: **174286**
Samp ID: **190813071-001** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.002626	0.00500	0	0	0	0	0	0.003384	0	17.3	
Barium, Dissolved	0.0221	0.0100	0	0	0	0	0	0.02208	0.0770	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.0004816	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.005425	0.00500	0	0	0	0	0	0.005084	6.50	20.1	
Lead, Dissolved	0.001453	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.005365	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002094	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75015

MBLK

SeqNo: **2679180** PrepDate: TestNo: **E200.7** RunNo: **174286**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2679181** PrepDate: TestNo: **E200.7** RunNo: **174286**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.072	0.00500	2	0	104	89.1	111	0	0		
Barium	2.046	0.0100	2	0	102	85	115	0	0		
Cadmium	2.05	0.00500	2	0	103	85	115	0	0		
Chromium	1.995	0.00500	2	0	99.7	89.7	109	0	0		
Copper	2.148	0.00500	2	0	107	85	115	0	0		
Lead	2.149	0.00500	2	0	107	88.1	112	0	0		
Selenium	2.074	0.00500	2	0	104	87.5	112	0	0		
Silver	0.5253	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.015	0.0100	2	0	101	88.3	113	0	0		

MS

SeqNo: **2679715** PrepDate:**8/14/2019** TestNo: **E200.7** RunNo: **174286**
Samp ID: **190813071-001 (081319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04747	0.00500	0.04	0.003838	109	75	125	0	0		
Barium	2.208	0.0100	2	0.02351	109	75	119	0	0		
Cadmium	0.05326	0.00500	0.05	0	107	75	118	0	0		
Chromium	0.1863	0.00500	0.2	0	93.2	75	124	0	0		
Copper	0.2459	0.00500	0.25	0	98.4	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75015

MS

SeqNo: **2679715** PrepDate:**8/14/2019** TestNo: **E200.7** RunNo: **174286**
Samp ID: **190813071-001 (081319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02236	0.00500	0.02	0	112	75	125	0	0		
Selenium	0.008441	0.00500	0.01	0	84.4	75	125	0	0		
Silver	0.04972	0.0100	0.05	0	99.4	75	125	0	0		
Zinc	0.5542	0.0100	0.5	0	111	76.9	125	0	0		

DUP

SeqNo: **2679709** PrepDate:**8/14/2019** TestNo: **E200.7** RunNo: **174286**
Samp ID: **190813071-001** PrepRef: Units: **mg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.002626	0.00500	0	0	0	0	0	0.003838	0	20	
Barium	0.02364	0.0100	0	0	0	0	0	0.02351	0.552	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.001994	0.00500	0	0	0	0	0	0	0	20	
Copper	0.001463	0.00500	0	0	0	0	0	0	0	20	
Lead	0.001748	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.00003183	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003382	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75025

mblk

SeqNo: **2679351** PrepDate:**8/14/2019** TestNo: **SW8082A** RunNo: **174296**
Samp ID: **mb-75025** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.0192	0.0650									J
Surr: Decachlorobiphenyl	0.0764	0.0100	0.1	0	76.4	57.1	135	0	0		

lcs

SeqNo: **2679352** PrepDate:**8/14/2019** TestNo: **SW8082A** RunNo: **174296**
Samp ID: **lcs-75025** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.2522	0.0650	0.2	0	126	60	140	0	0		
PCB, Total	0.2522	0.0650	0.2	0	126	60	140	0	0		
Surr: Decachlorobiphenyl	0.1066	0.0100	0.1	0	107	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75026

MBLK

SeqNo: **2678981** **PrepDate:8/13/2019** TestNo: **E1631** RunNo: **174276**
Samp ID: **MB-75026** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2679032** **PrepDate:8/13/2019** TestNo: **E1631** RunNo: **174276**
Samp ID: **MB-75026** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2678982** **PrepDate:8/13/2019** TestNo: **E1631** RunNo: **174276**
Samp ID: **LCS-75026** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.2	0.500	10	0	102	77	123	0	0		

LCS

SeqNo: **2679033** **PrepDate:8/13/2019** TestNo: **E1631** RunNo: **174276**
Samp ID: **LCS-75026** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.5	0.500	10	0	105	77	123	0	0		

MS

SeqNo: **2679021** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190813070-002** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.8	0.500	12.5	2.24	84.5	71	125	0	0		

MS

SeqNo: **2679030** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190813071-006 (081319-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	0.229	88.6	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75026

MS

SeqNo: **2679037** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190809075-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.1	0.500	12.5	0.557	84.3	71	125	0	0		

MSD

SeqNo: **2679022** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190813070-002** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.1	0.500	12.5	2.24	86.9	71	125	12.8	2.32	24	

MSD

SeqNo: **2679031** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190813071-006 (081319-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.93	0.500	12.5	0.229	77.6	71	125	11.3	12.9	24	

MSD

SeqNo: **2679038** **PrepDate:** TestNo: **E1631** RunNo: **174276**
Samp ID: **190809075-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11	0.500	12.5	0.557	83.5	71	125	11.1	0.905	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75035

dup	SeqNo: **2679406**	**PrepDate:8/14/2019**	TestNo: **SW8082A**	RunNo: **174296**
	Samp ID: **190813071-003**	**PrepRef:**	Units: **µg/L**	Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1242	0.1058	0.0720	0	0	0	0	0	0.0918	14.1	25	
Aroclor 1248	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0720	0	0	0	0	0	0	0	25	
PCB, Total	0.1058	0.0720	0	0	0	0	0	0.0918	14.1	25	
Surr: Decachlorobiphenyl	0.1069	0.0110	0.1111	0	96.2	0	0	0	0	0	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174332

mblk

SeqNo: **2680000** TestNo: **SW8260C** RunNo: **174332**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.34	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.28	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.46	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.75	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.91	5.0	50	0	97.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.35	5.0	50	0	94.7	76.5	125	0	0		
Surr: Toluene-d8	51.42	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190813071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174332

lcs

SeqNo: **2679998** TestNo: **SW8260C** RunNo: **174332**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.93	1.0	10	0	99.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.84	1.0	10	0	88.4	72.3	118	0	0		
1,1,2-Trichloroethane	9.9	1.0	10	0	99	73.1	123	0	0		
1,1-Dichloroethane	9.96	1.0	10	0	99.6	73.2	127	0	0		
1,1-Dichloroethene	8.56	1.0	10	0	85.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.79	1.0	5	0	95.8	68.4	115	0	0		
1,2-Dichlorobenzene	10.72	1.0	10	0	107	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	10.82	1.0	10	0	108	72.2	121	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	76	122	0	0		
1,4-Dichlorobenzene	9.78	1.0	10	0	97.8	71.7	127	0	0		
2-Butanone	9.07	5.0	10	0	90.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.29	5.0	10	0	92.9	68.7	118	0	0		
Acetone	7.65	5.0	10	0	76.5	69.2	133	0	0		
Benzene	9.7	1.0	10	0	97	71.2	122	0	0		
Carbon disulfide	4.5	1.0	5	0	90	67.8	134	0	0		
Carbon tetrachloride	9.74	1.0	10	0	97.4	74.5	122	0	0		
Chlorobenzene	11.68	1.0	10	0	117	72.7	124	0	0		
Chloroethane	8.57	1.0	10	0	85.7	72.3	136	0	0		
Chloroform	8.99	1.0	10	0	89.9	71.6	133	0	0		
Dibromochloromethane	9.22	1.0	10	0	92.2	70.6	124	0	0		
Ethylbenzene	11.37	1.0	10	0	114	70.9	126	0	0		
Methylene chloride	11.22	1.0	10	0	112	66.3	130	0	0		
Tetrachloroethene	10.91	1.0	10	0	109	72.4	119	0	0		
Toluene	10.12	1.0	10	0	101	71.8	116	0	0		
trans-1,2-Dichloroethene	9.72	1.0	10	0	97.2	70.3	120	0	0		
Trichloroethene	10.71	1.0	10	0	107	73	127	0	0		
Vinyl chloride	8.98	1.0	10	0	89.8	65.2	134	0	0		
Xylenes, Total	33.14	1.0	30	0	110	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.7	5.0	50	0	95.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.48	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	51.27	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190813071

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081319-01-SW-U-B-1	8/13/19	0915	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	081319-02-SW-A-A-1	8/13/19	0940	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
003	081319-03-SW-D-A-1	8/13/19	1015	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/13/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/13/19 7:54pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Ser

190813071

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # L9081307J

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081319-03-SW-D-A-1	8/13/19	1015	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	081319-04-SW-B-A-1	8/13/19	0845	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
005	081319-05-SW-B-A-1	8/13/19	1035	P	W		✓	1	TSS
006	081319-01-SW-U-B-3	8/13/19	1245	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/13/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/13/19 4:54PM

Temperature
Ambient or (Chilled)
Notes: 8°C

AES Bottles
Y ☒ N ☐

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19081307

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	081319-01-SW-U-B-3	8/13/19	1245	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A P	↓		↓	1	TSS
007	081319-TB01			A P	TB				trip blank
008	081319-TB02			A P	TB				trip blank
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/13/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/13/19 4:54 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 8°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190813071

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

8/13/2019



TAT: **2**

DateDue: 8/15/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190813071-001	081319-01-SW-U-B-1	Water	8/13/2019	8/15/2019	E	C	B	D	D	A	F
190813071-002	081319-02-SW-A-A-1	Water	8/13/2019	8/15/2019	E	C	B	D	D	A	F
190813071-003	081319-03-SW-D-A-1	Water	8/13/2019	8/15/2019	E	C	B	D	D	A	F
190813071-004	081319-04-SW-B-A-1	Water	8/13/2019	8/15/2019	E	C	B	D	D	A	F
190813071-005	081319-05-SW-B-A-1	Water	8/13/2019	8/15/2019							A
190813071-006	081319-01-SW-U-B-3	Water	8/13/2019	8/15/2019	E	C	B	D	D	A	F
190813071-007	081319-TB01	Trip Blank	8/13/2019	8/15/2019			A				
190813071-008	081319-TB02	Trip Blank	8/13/2019	8/15/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 16, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190814072
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/14/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *16-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190814072	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-01-SW-U-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-001
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 7:36:33 PM
PCB, Total	**0.027**	0.065	J	µg/L	1	8/14/2019 7:36:33 PM
Surr: Decachlorobiphenyl	**88.0**	57.1-135		%REC	1	8/14/2019 7:36:33 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	8/15/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/15/2019 1:36:00 PM
Barium	**0.024**	0.010		mg/L	1	8/15/2019 1:36:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/15/2019 1:36:00 PM
Chromium	**ND**	0.005		mg/L	1	8/15/2019 1:36:00 PM
Copper	**ND**	0.005		mg/L	1	8/15/2019 1:36:00 PM
Lead	**ND**	0.005		mg/L	1	8/15/2019 1:36:00 PM
Selenium	**ND**	0.005		mg/L	1	8/15/2019 1:36:00 PM
Silver	**ND**	0.010		mg/L	1	8/15/2019 1:36:00 PM
Zinc	**ND**	0.010		mg/L	1	8/15/2019 1:36:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:05:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/15/2019 3:05:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/15/2019 3:05:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:05:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:05:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:05:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-01-SW-U-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/15/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:05:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:05:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:05:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 5:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 5:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 5:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/15/2019 5:42:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 5:42:00 PM
Surr: 1,2-Dichloroethane-d4	**98.2**	80.9-122		%REC	1	8/15/2019 5:42:00 PM
Surr: 4-Bromofluorobenzene	**90.9**	76.5-125		%REC	1	8/15/2019 5:42:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	8/15/2019 5:42:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-01-SW-U-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/15/2019)						
TSS (Residue, Non-Filterable)	**6.0**	1.0		mg/L	1	8/15/2019

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-02-SW-A-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 7:49:55 PM
PCB, Total	**0.023**	0.065	J	µg/L	1	8/14/2019 7:49:55 PM
Surr: Decachlorobiphenyl	**113**	57.1-135		%REC	1	8/14/2019 7:49:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**1.4**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	8/15/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/15/2019 1:43:00 PM
Barium	**0.023**	0.010		mg/L	1	8/15/2019 1:43:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/15/2019 1:43:00 PM
Chromium	**ND**	0.005		mg/L	1	8/15/2019 1:43:00 PM
Copper	**ND**	0.005		mg/L	1	8/15/2019 1:43:00 PM
Lead	**ND**	0.005		mg/L	1	8/15/2019 1:43:00 PM
Selenium	**ND**	0.005		mg/L	1	8/15/2019 1:43:00 PM
Silver	**ND**	0.010		mg/L	1	8/15/2019 1:43:00 PM
Zinc	**ND**	0.010		mg/L	1	8/15/2019 1:43:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:13:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/15/2019 3:13:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/15/2019 3:13:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:13:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:13:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:13:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-02-SW-A-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/15/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:13:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:13:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:13:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/15/2019 6:03:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 6:03:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/15/2019 6:03:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 6:03:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 6:03:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 6:03:00 PM
Surr: 1,2-Dichloroethane-d4	**94.1**	80.9-122		%REC	1	8/15/2019 6:03:00 PM
Surr: 4-Bromofluorobenzene	**92.4**	76.5-125		%REC	1	8/15/2019 6:03:00 PM
Surr: Toluene-d8	**107**	80.4-121		%REC	1	8/15/2019 6:03:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-02-SW-A-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/15/2019)						
TSS (Residue, Non-Filterable)	**5.4**	1.0		mg/L	1	8/15/2019

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-03-SW-D-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-003
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1242	**0.049**	0.065	J	µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 8:03:16 PM
PCB, Total	**0.049**	0.065	J	µg/L	1	8/14/2019 8:03:16 PM
Surr: Decachlorobiphenyl	**104**	57.1-135		%REC	1	8/14/2019 8:03:16 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**3.7**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	8/15/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/15/2019 1:49:00 PM
Barium	**0.025**	0.010		mg/L	1	8/15/2019 1:49:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/15/2019 1:49:00 PM
Chromium	**0.004**	0.005	J	mg/L	1	8/15/2019 1:49:00 PM
Copper	**ND**	0.005		mg/L	1	8/15/2019 1:49:00 PM
Lead	**ND**	0.005		mg/L	1	8/15/2019 1:49:00 PM
Selenium	**ND**	0.005		mg/L	1	8/15/2019 1:49:00 PM
Silver	**ND**	0.010		mg/L	1	8/15/2019 1:49:00 PM
Zinc	**ND**	0.010		mg/L	1	8/15/2019 1:49:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:25:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/15/2019 3:25:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/15/2019 3:25:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:25:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:25:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:25:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-03-SW-D-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/15/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:25:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:25:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:25:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Methylene chloride	**0.3**	1.0	J	µg/L	1	8/15/2019 4:37:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 4:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/15/2019 4:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 4:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 4:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
1,2-Dichlorobenzene	**0.6**	1.0	J	µg/L	1	8/15/2019 4:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 4:37:00 PM
Surr: 1,2-Dichloroethane-d4	**97.4**	80.9-122		%REC	1	8/15/2019 4:37:00 PM
Surr: 4-Bromofluorobenzene	**89.2**	76.5-125		%REC	1	8/15/2019 4:37:00 PM
Surr: Toluene-d8	**96.6**	80.4-121		%REC	1	8/15/2019 4:37:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-03-SW-D-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/15/2019)						
TSS (Residue, Non-Filterable)	**10.8**	1.1		mg/L	1	8/15/2019

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-04-SW-B-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-004
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/14/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1242	**0.038**	0.065	J	µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/14/2019 8:16:38 PM
PCB, Total	**0.038**	0.065	J	µg/L	1	8/14/2019 8:16:38 PM
Surr: Decachlorobiphenyl	**92.4**	57.1-135		%REC	1	8/14/2019 8:16:38 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**1.5**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/15/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/15/2019 2:08:00 PM
Barium	**0.024**	0.010		mg/L	1	8/15/2019 2:08:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/15/2019 2:08:00 PM
Chromium	**0.004**	0.005	J	mg/L	1	8/15/2019 2:08:00 PM
Copper	**0.005**	0.005		mg/L	1	8/15/2019 2:08:00 PM
Lead	**ND**	0.005		mg/L	1	8/15/2019 2:08:00 PM
Selenium	**ND**	0.005		mg/L	1	8/15/2019 2:08:00 PM
Silver	**ND**	0.010		mg/L	1	8/15/2019 2:08:00 PM
Zinc	**ND**	0.010		mg/L	1	8/15/2019 2:08:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/15/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:30:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/15/2019 3:30:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/15/2019 3:30:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:30:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:30:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:30:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-04-SW-B-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/15/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/15/2019 3:30:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:30:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/15/2019 3:30:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 4:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 4:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 4:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
1,2-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	8/15/2019 4:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 4:58:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	8/15/2019 4:58:00 PM
Surr: 4-Bromofluorobenzene	**95.8**	76.5-125		%REC	1	8/15/2019 4:58:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	8/15/2019 4:58:00 PM

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-04-SW-B-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/15/2019)						
TSS (Residue, Non-Filterable)	**5.9**	1.0		mg/L	1	8/15/2019

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-05-SW-B-A-1
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-005
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/15/2019)						
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	8/15/2019

Adirondack Environmental Services, Inc

Date: *16-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081419-TB01
Work Order:	**190814072**	**Collection Date:**	8/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190814072-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Methylene chloride	**0.9**	1.0	J	µg/L	1	8/15/2019 5:20:00 PM
Acetone	**ND**	5.0		µg/L	1	8/15/2019 5:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/15/2019 5:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Benzene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/15/2019 5:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Toluene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/15/2019 5:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/15/2019 5:20:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	8/15/2019 5:20:00 PM
Surr: 4-Bromofluorobenzene	**95.8**	76.5-125		%REC	1	8/15/2019 5:20:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/15/2019 5:20:00 PM

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75025

mblk

SeqNo: **2679351** PrepDate:**8/14/2019** TestNo: **SW8082A** RunNo: **174296**
Samp ID: **mb-75025** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.0192	0.0650									J
Surr: Decachlorobiphenyl	0.0764	0.0100	0.1	0	76.4	57.1	135	0	0		

lcs

SeqNo: **2679352** PrepDate:**8/14/2019** TestNo: **SW8082A** RunNo: **174296**
Samp ID: **lcs-75025** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.2522	0.0650	0.2	0	126	60	140	0	0		
PCB, Total	0.2522	0.0650	0.2	0	126	60	140	0	0		
Surr: Decachlorobiphenyl	0.1066	0.0100	0.1	0	107	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75038

MBLK

SeqNo: **2680474** PrepDate:**8/15/2019** TestNo: **E200.7F** RunNo: **174353**
Samp ID: **MB-75038** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2680475** PrepDate:**8/15/2019** TestNo: **E200.7F** RunNo: **174353**
Samp ID: **LCS-75038** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.041	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.068	0.0100	2	0	103	89	112	0	0		
Cadmium, Dissolved	1.987	0.00500	2	0	99.4	85.3	112	0	0		
Chromium, Dissolved	2.029	0.00500	2	0	101	89.1	109	0	0		
Copper, Dissolved	2.177	0.00500	2	0	109	86.8	115	0	0		
Lead, Dissolved	2.057	0.00500	2	0	103	86.8	114	0	0		
Selenium, Dissolved	1.824	0.00500	2	0	91.2	85	115	0	0		
Silver, Dissolved	0.5426	0.0100	0.5	0	109	85	115	0	0		
Zinc, Dissolved	1.957	0.0100	2	0	97.9	85	115	0	0		

MS

SeqNo: **2680481** PrepDate:**8/15/2019** TestNo: **E200.7F** RunNo: **174353**
Samp ID: **190814072-004A (081419-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04315	0.00500	0.04	0	108	75	123	0	0		
Barium, Dissolved	2.254	0.0100	2	0.02292	112	75	124	0	0		
Cadmium, Dissolved	0.05321	0.00500	0.05	0	106	75	125	0	0		
Chromium, Dissolved	0.2212	0.00500	0.2	0	111	77.2	117	0	0		
Copper, Dissolved	0.2878	0.00500	0.25	0	115	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75038

MS

SeqNo: **2680481** **PrepDate:8/15/2019** TestNo: **E200.7F** RunNo: **174353**
Samp ID: **190814072-004A (081419-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.0215	0.00500	0.02	0	107	75	125	0	0		
Selenium, Dissolved	0.01205	0.00500	0.01	0	120	75	125	0	0		
Silver, Dissolved	0.05619	0.0100	0.05	0	112	75	125	0	0		
Zinc, Dissolved	0.5465	0.0100	0.5	0	109	75	121	0	0		

DUP

SeqNo: **2680480** **PrepDate:8/15/2019** TestNo: **E200.7F** RunNo: **174353**
Samp ID: **190814072-004A** **PrepRef:** Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02224	0.0100	0	0	0	0	0	0.02292	3.02	15.4	
Cadmium, Dissolved	0.00006443	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.0002296	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.0007046	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75039

MBLK

SeqNo: **2680462** PrepDate:**8/15/2019** TestNo: **E200.7** RunNo: **174353**
Samp ID: **MB-75039** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2680463** PrepDate:**8/15/2019** TestNo: **E200.7** RunNo: **174353**
Samp ID: **LCS-75039** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.051	0.00500	2	0	103	89.1	111	0	0		
Barium	2.056	0.0100	2	0	103	85	115	0	0		
Cadmium	2.004	0.00500	2	0	100	85	115	0	0		
Chromium	1.993	0.00500	2	0	99.6	89.7	109	0	0		
Copper	2.148	0.00500	2	0	107	85	115	0	0		
Lead	2.069	0.00500	2	0	103	88.1	112	0	0		
Selenium	2.049	0.00500	2	0	102	87.5	112	0	0		
Silver	0.5297	0.0100	0.5	0	106	85.2	115	0	0		
Zinc	1.968	0.0100	2	0	98.4	88.3	113	0	0		

MS

SeqNo: **2680469** PrepDate:**8/15/2019** TestNo: **E200.7** RunNo: **174353**
Samp ID: **190814072-004 (081419-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0432	0.00500	0.04	0	108	75	125	0	0		
Barium	2.251	0.0100	2	0.02387	111	75	119	0	0		
Cadmium	0.05318	0.00500	0.05	0	106	75	118	0	0		
Chromium	0.2232	0.00500	0.2	0.004021	110	75	124	0	0		
Copper	0.294	0.00500	0.25	0.005001	116	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75039

MS

SeqNo: **2680469** **PrepDate:8/15/2019** TestNo: **E200.7** RunNo: **174353**
Samp ID: **190814072-004 (081419-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02165	0.00500	0.02	0	108	75	125	0	0		
Selenium	0.0131	0.00500	0.01	0	131	75	125	0	0		S
Silver	0.05126	0.0100	0.05	0	103	75	125	0	0		
Zinc	0.5495	0.0100	0.5	0	110	76.9	125	0	0		

DUP

SeqNo: **2680468** **PrepDate:8/15/2019** TestNo: **E200.7** RunNo: **174353**
Samp ID: **190814072-004** **PrepRef:** Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0004716	0.00500	0	0	0	0	0	0	0	20	
Barium	0.0237	0.0100	0	0	0	0	0	0.02387	0.715	20	
Cadmium	0.00005298	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.005352	0.00500	0	0	0	0	0	0.004021	28.4	20	Z
Copper	0.003551	0.00500	0	0	0	0	0	0.005001	0	20	
Lead	0.0001244	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	0.00000002	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002127	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75050

LCS

SeqNo: **2680931** PrepDate:**8/15/2019** TestNo: **SM2540D** RunNo: **174378**
Samp ID: **LCS-75050** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	483	0	103	86.5	114	0	0		

DUP

SeqNo: **2680935** PrepDate:**8/15/2019** TestNo: **SM2540D** RunNo: **174378**
Samp ID: **190809052-001A** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	182	20.0	0	0	0	0	0	198	8.42	10	

DUP

SeqNo: **2680939** PrepDate:**8/15/2019** TestNo: **SM2540D** RunNo: **174378**
Samp ID: **190809074-002A** PrepRef: Units: **mg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	76	6.70	0	0	0	0	0	73.33	3.57	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75087

MBLK

SeqNo: **2680865** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **MB-75087** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2680866** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **LCS-75087** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.58	0.500	10	0	95.8	77	123	0	0		

MS

SeqNo: **2680868** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **190814072-001E (081419-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	1.47	96.2	71	125	0	0		

MSD

SeqNo: **2680869** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **190814072-001E (081419-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.4	0.500	12.5	1.47	87.4	71	125	13.5	8.49	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174332

mblk

SeqNo: **2680000** TestNo: **SW8260C** RunNo: **174332**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.34	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.28	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.46	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.75	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.91	5.0	50	0	97.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.35	5.0	50	0	94.7	76.5	125	0	0		
Surr: Toluene-d8	51.42	5.0	50	0	103	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190814072
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174332

lcs

SeqNo: **2679998** TestNo: **SW8260C** RunNo: **174332**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.93	1.0	10	0	99.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.84	1.0	10	0	88.4	72.3	118	0	0		
1,1,2-Trichloroethane	9.9	1.0	10	0	99	73.1	123	0	0		
1,1-Dichloroethane	9.96	1.0	10	0	99.6	73.2	127	0	0		
1,1-Dichloroethene	8.56	1.0	10	0	85.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.79	1.0	5	0	95.8	68.4	115	0	0		
1,2-Dichlorobenzene	10.72	1.0	10	0	107	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	10.82	1.0	10	0	108	72.2	121	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	76	122	0	0		
1,4-Dichlorobenzene	9.78	1.0	10	0	97.8	71.7	127	0	0		
2-Butanone	9.07	5.0	10	0	90.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.29	5.0	10	0	92.9	68.7	118	0	0		
Acetone	7.65	5.0	10	0	76.5	69.2	133	0	0		
Benzene	9.7	1.0	10	0	97	71.2	122	0	0		
Carbon disulfide	4.5	1.0	5	0	90	67.8	134	0	0		
Carbon tetrachloride	9.74	1.0	10	0	97.4	74.5	122	0	0		
Chlorobenzene	11.68	1.0	10	0	117	72.7	124	0	0		
Chloroethane	8.57	1.0	10	0	85.7	72.3	136	0	0		
Chloroform	8.99	1.0	10	0	89.9	71.6	133	0	0		
Dibromochloromethane	9.22	1.0	10	0	92.2	70.6	124	0	0		
Ethylbenzene	11.37	1.0	10	0	114	70.9	126	0	0		
Methylene chloride	11.22	1.0	10	0	112	66.3	130	0	0		
Tetrachloroethene	10.91	1.0	10	0	109	72.4	119	0	0		
Toluene	10.12	1.0	10	0	101	71.8	116	0	0		
trans-1,2-Dichloroethene	9.72	1.0	10	0	97.2	70.3	120	0	0		
Trichloroethene	10.71	1.0	10	0	107	73	127	0	0		
Vinyl chloride	8.98	1.0	10	0	89.8	65.2	134	0	0		
Xylenes, Total	33.14	1.0	30	0	110	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.7	5.0	50	0	95.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.48	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	51.27	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

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CHAIN OF CUSTODY RECORD

AES Work Order # 190814072

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleier@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081419-01-SW-U-A-1	8/14/19	0840	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	081419-02-SW-A-A-1	8/14/19	0900	P	W		✓	1	metals (filtered)
				A				2	PCBs
				P				2	VOCs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	081419-03-SW-D-A-1	8/14/19	0925	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/14/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/14/19 Sig

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or ~~Chilled~~	Y N	Y N	Y N
Notes: 10°C	☒ ☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental S



Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19081402

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081419-03-SW-D-A-1	8/14/19	0925	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	081419-04-SW-B-A-1	8/14/19	0815	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	081419-05-SW-B-A-1	8/14/19	0950	A	W		✓	1	TSS
006	081419-TB01			A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/14/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/14/19 5:07pm

TEMPERATURE

Ambient or (Chilled)

Notes: 10°C

AES Bottles

Y (☒) N (☐)

PROPERLY PRESERVED

(Y) N

Notes:

RECEIVED WITHIN HOLDING TIMES

(Y) N

Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190814072

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# :
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/16/2019

8/14/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190814072-001	081419-01-SW-U-A-1	Water	8/14/2019	8/16/2019	E	C	B	D	D	A	F
190814072-002	081419-02-SW-A-A-1	Water	8/14/2019	8/16/2019	E	C	B	D	D	A	F
190814072-003	081419-03-SW-D-A-1	Water	8/14/2019	8/16/2019	E	C	B	D	D	A	F
190814072-004	081419-04-SW-B-A-1	Water	8/14/2019	8/16/2019	E	C	B	D	D	A	F
190814072-005	081419-05-SW-B-A-1	Water	8/14/2019	8/16/2019							A
190814072-006	081419-TB01	Trip Blank	8/14/2019	8/16/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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August 19, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190815066
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 9 samples on 8/15/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*19-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190815066		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-01-SW-D-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1242	**0.157**	0.065	Z	µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 2:21:10 PM
PCB, Total	**0.157**	0.065		µg/L	1	8/16/2019 2:21:10 PM
Surr: Decachlorobiphenyl	**59.0**	57.1-135		%REC	1	8/16/2019 2:21:10 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**8.8**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 11:45:00 AM
Barium	**0.026**	0.010		mg/L	1	8/16/2019 11:45:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 11:45:00 AM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 11:45:00 AM
Copper	**ND**	0.005		mg/L	1	8/16/2019 11:45:00 AM
Lead	**ND**	0.005		mg/L	1	8/16/2019 11:45:00 AM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 11:45:00 AM
Silver	**ND**	0.010		mg/L	1	8/16/2019 11:45:00 AM
Zinc	**ND**	0.010		mg/L	1	8/16/2019 11:45:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/16/2019 1:52:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/16/2019 1:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 1:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 1:52:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 1:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 1:52:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-01-SW-D-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 1:52:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	8/16/2019 1:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 1:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Acetone	**ND**	5.0		µg/L	1	8/19/2019 11:49:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 11:49:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 11:49:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 11:49:00 AM
Surr: 1,2-Dichloroethane-d4	**120**	80.9-122		%REC	1	8/19/2019 11:49:00 AM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	8/19/2019 11:49:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/19/2019 11:49:00 AM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-01-SW-D-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**21.7**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-02-SW-A-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-002
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1242	**0.048**	0.065	J	µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 2:34:31 PM
PCB, Total	**0.048**	0.065	J	µg/L	1	8/16/2019 2:34:31 PM
Surr: Decachlorobiphenyl	**63.8**	57.1-135		%REC	1	8/16/2019 2:34:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**2.6**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 11:53:00 AM
Barium	**0.024**	0.010		mg/L	1	8/16/2019 11:53:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 11:53:00 AM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 11:53:00 AM
Copper	**ND**	0.005		mg/L	1	8/16/2019 11:53:00 AM
Lead	**ND**	0.005		mg/L	1	8/16/2019 11:53:00 AM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 11:53:00 AM
Silver	**ND**	0.010		mg/L	1	8/16/2019 11:53:00 AM
Zinc	**ND**	0.010		mg/L	1	8/16/2019 11:53:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:00:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/16/2019 2:00:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 2:00:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:00:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:00:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:00:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-02-SW-A-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:00:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:00:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:00:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Acetone	**ND**	5.0		µg/L	1	8/19/2019 12:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 12:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 12:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 12:10:00 PM
Surr: 1,2-Dichloroethane-d4	**122**	80.9-122		%REC	1	8/19/2019 12:10:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	8/19/2019 12:10:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/19/2019 12:10:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-02-SW-A-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**9.3**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-03-SW-U-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1242	**0.032**	0.065	J	µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 3:02:18 PM
PCB, Total	**0.032**	0.065	J	µg/L	1	8/16/2019 3:02:18 PM
Surr: Decachlorobiphenyl	**57.3**	57.1-135		%REC	1	8/16/2019 3:02:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**1.9**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 12:09:00 PM
Barium	**0.024**	0.010		mg/L	1	8/16/2019 12:09:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 12:09:00 PM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 12:09:00 PM
Copper	**ND**	0.005		mg/L	1	8/16/2019 12:09:00 PM
Lead	**ND**	0.005		mg/L	1	8/16/2019 12:09:00 PM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 12:09:00 PM
Silver	**0.006**	0.010	J	mg/L	1	8/16/2019 12:09:00 PM
Zinc	**ND**	0.010		mg/L	1	8/16/2019 12:09:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:10:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/16/2019 2:10:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 2:10:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:10:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	8/16/2019 2:10:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:10:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-03-SW-U-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-003
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:10:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:10:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:10:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Acetone	**ND**	5.0		µg/L	1	8/19/2019 12:31:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 12:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 12:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:31:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	8/19/2019 12:31:00 PM
Surr: 1,2-Dichloroethane-d4	**121**	80.9-122		%REC	1	8/19/2019 12:31:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	8/19/2019 12:31:00 PM
Surr: Toluene-d8	**111**	80.4-121		%REC	1	8/19/2019 12:31:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-03-SW-U-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**8.2**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-004
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1242	**0.439**	0.065	Z	µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 3:15:39 PM
PCB, Total	**0.439**	0.065		µg/L	1	8/16/2019 3:15:39 PM
Surr: Decachlorobiphenyl	**50.9**	57.1-135	S	%REC	1	8/16/2019 3:15:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**39.3**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 12:18:00 PM
Barium	**0.024**	0.010		mg/L	1	8/16/2019 12:18:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 12:18:00 PM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 12:18:00 PM
Copper	**ND**	0.005		mg/L	1	8/16/2019 12:18:00 PM
Lead	**0.002**	0.005	J	mg/L	1	8/16/2019 12:18:00 PM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 12:18:00 PM
Silver	**ND**	0.010		mg/L	1	8/16/2019 12:18:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/16/2019 12:18:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:16:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/16/2019 2:16:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 2:16:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:16:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:16:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:16:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:16:00 PM
Silver, Dissolved	**0.007**	0.010	J	mg/L	1	8/16/2019 2:16:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:16:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Acetone	**2.6**	5.0	JBS+	µg/L	1	8/19/2019 12:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 12:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 12:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 12:52:00 PM
Surr: 1,2-Dichloroethane-d4	**123**	80.9-122	S	%REC	1	8/19/2019 12:52:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	8/19/2019 12:52:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/19/2019 12:52:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**15.3**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-05-SW-B-A-1
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-005
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**8.1**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-05-SW-B-A-2
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1242	**0.038**	0.065	J	µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 3:28:58 PM
PCB, Total	**0.038**	0.065	J	µg/L	1	8/16/2019 3:28:58 PM
Surr: Decachlorobiphenyl	**58.9**	57.1-135		%REC	1	8/16/2019 3:28:58 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**2.9**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 12:31:00 PM
Barium	**0.025**	0.010		mg/L	1	8/16/2019 12:31:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 12:31:00 PM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 12:31:00 PM
Copper	**ND**	0.005		mg/L	1	8/16/2019 12:31:00 PM
Lead	**ND**	0.005		mg/L	1	8/16/2019 12:31:00 PM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 12:31:00 PM
Silver	**ND**	0.010		mg/L	1	8/16/2019 12:31:00 PM
Zinc	**ND**	0.010		mg/L	1	8/16/2019 12:31:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/16/2019 2:29:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/16/2019 2:29:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 2:29:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:29:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:29:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:29:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-05-SW-B-A-2
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 2:29:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	8/16/2019 2:29:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 2:29:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Acetone	**ND**	5.0		µg/L	1	8/19/2019 1:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 1:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 1:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 1:13:00 PM
Surr: 1,2-Dichloroethane-d4	**127**	80.9-122	S	%REC	1	8/19/2019 1:13:00 PM
Surr: 4-Bromofluorobenzene	**93.8**	76.5-125		%REC	1	8/19/2019 1:13:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/19/2019 1:13:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-05-SW-B-A-2
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**13.4**	1.0		mg/L	1	8/16/2019

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-TB01
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Methylene chloride	**2.6**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Acetone	**9.4**	5.0	BS+	µg/L	1	8/19/2019 1:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 1:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 1:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 1:34:00 PM
Surr: 1,2-Dichloroethane-d4	**122**	80.9-122	S	%REC	1	8/19/2019 1:34:00 PM
Surr: 4-Bromofluorobenzene	**99.4**	76.5-125		%REC	1	8/19/2019 1:34:00 PM
Surr: Toluene-d8	**107**	80.4-121		%REC	1	8/19/2019 1:34:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-TB02
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Methylene chloride	**1.0**	1.0	J	µg/L	1	8/19/2019 1:55:00 PM
Acetone	**8.2**	5.0	BS+	µg/L	1	8/19/2019 1:55:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 1:55:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 1:55:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 1:55:00 PM
Surr: 1,2-Dichloroethane-d4	**117**	80.9-122		%REC	1	8/19/2019 1:55:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	8/19/2019 1:55:00 PM
Surr: Toluene-d8	**106**	80.4-121		%REC	1	8/19/2019 1:55:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-3
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-009
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
PCB, Total	**ND**	0.065		µg/L	1	8/16/2019 3:42:19 PM
Surr: Decachlorobiphenyl	**42.5**	57.1-135	S	%REC	1	8/16/2019 3:42:19 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/15/2019)						
Mercury	**ND**	0.5		ng/L	1	8/16/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/16/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/16/2019 12:38:00 PM
Barium	**ND**	0.010		mg/L	1	8/16/2019 12:38:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/16/2019 12:38:00 PM
Chromium	**ND**	0.005		mg/L	1	8/16/2019 12:38:00 PM
Copper	**ND**	0.005		mg/L	1	8/16/2019 12:38:00 PM
Lead	**ND**	0.005		mg/L	1	8/16/2019 12:38:00 PM
Selenium	**ND**	0.005		mg/L	1	8/16/2019 12:38:00 PM
Silver	**ND**	0.010		mg/L	1	8/16/2019 12:38:00 PM
Zinc	**ND**	0.010		mg/L	1	8/16/2019 12:38:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/16/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 3:03:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 3:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/16/2019 3:03:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 3:03:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 3:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 3:03:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-3
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-009
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/16/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/16/2019 3:03:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 3:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/16/2019 3:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 2:16:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 2:16:00 PM
Acetone	**ND**	5.0		µg/L	1	8/19/2019 2:16:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 2:16:00 PM
Surr: 1,2-Dichloroethane-d4	**123**	80.9-122	S	%REC	1	8/19/2019 2:16:00 PM
Surr: 4-Bromofluorobenzene	**98.0**	76.5-125		%REC	1	8/19/2019 2:16:00 PM
Surr: Toluene-d8	**106**	80.4-121		%REC	1	8/19/2019 2:16:00 PM

Adirondack Environmental Services, Inc

Date: *19-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081519-04-SW-B-B-3
Work Order:	**190815066**	**Collection Date:**	8/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190815066-009
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/16/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/16/2019

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75066

MBLK SeqNo: **2681042** PrepDate: TestNo: **E200.7F** RunNo: **174377**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

MBLK SeqNo: **2681235** PrepDate:**8/16/2019** TestNo: **E200.7F** RunNo: **174398**
Samp ID: **MB-75066** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	0.004182	0.0100									J
Zinc, Dissolved	ND	0.0100									

LCS SeqNo: **2681043** PrepDate: TestNo: **E200.7F** RunNo: **174377**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.964	0.00500	2	0	98.2	85	115	0	0		
Barium, Dissolved	1.922	0.0100	2	0	96.1	89	112	0	0		
Cadmium, Dissolved	1.911	0.00500	2	0	95.5	85.3	112	0	0		
Chromium, Dissolved	1.912	0.00500	2	0	95.6	89.1	109	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75066

LCS

SeqNo: **2681043** PrepDate: TestNo: **E200.7F** RunNo: **174377**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper, Dissolved	1.967	0.00500	2	0	98.3	86.8	115	0	0		
Lead, Dissolved	1.989	0.00500	2	0	99.5	86.8	114	0	0		
Selenium, Dissolved	1.957	0.00500	2	0	97.9	85	115	0	0		
Silver, Dissolved	0.4805	0.0100	0.5	0	96.1	85	115	0	0		
Zinc, Dissolved	2.016	0.0100	2	0	101	85	115	0	0		

LCS

SeqNo: **2681236** PrepDate:**8/16/2019** TestNo: **E200.7F** RunNo: **174398**
Samp ID: **LCS-75066** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.015	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	2.059	0.0100	2	0	103	89	112	0	0		
Cadmium, Dissolved	1.976	0.00500	2	0	98.8	85.3	112	0	0		
Chromium, Dissolved	2.01	0.00500	2	0	101	89.1	109	0	0		
Copper, Dissolved	2.162	0.00500	2	0	108	86.8	115	0	0		
Lead, Dissolved	2.054	0.00500	2	0	103	86.8	114	0	0		
Selenium, Dissolved	1.871	0.00500	2	0	93.6	85	115	0	0		
Silver, Dissolved	0.4823	0.0100	0.5	0	96.5	85	115	0	0		
Zinc, Dissolved	1.961	0.0100	2	0	98	85	115	0	0		

MS

SeqNo: **2681250** PrepDate:**8/16/2019** TestNo: **E200.7F** RunNo: **174398**
Samp ID: **190815066-009 (081519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04455	0.00500	0.04	0	111	75	123	0	0		
Barium, Dissolved	2.207	0.0100	2	0	110	75	124	0	0		
Cadmium, Dissolved	0.05351	0.00500	0.05	0	107	75	125	0	0		
Chromium, Dissolved	0.2015	0.00500	0.2	0	101	77.2	117	0	0		
Copper, Dissolved	0.2813	0.00500	0.25	0	113	75	125	0	0		
Lead, Dissolved	0.02262	0.00500	0.02	0	113	75	125	0	0		
Selenium, Dissolved	0.013	0.00500	0.01	0	130	75	125	0	0		S
Silver, Dissolved	0.05007	0.0100	0.05	0	100	75	125	0	0		
Zinc, Dissolved	0.5521	0.0100	0.5	0	110	75	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75066

DUP

SeqNo: **2681249** **PrepDate:8/16/2019** TestNo: **E200.7F** RunNo: **174398**
Samp ID: **190815066-009** **PrepRef:** Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.003688	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	ND	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.0006256	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.002194	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.0005396	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75070

MBLK

SeqNo: **2681221** PrepDate:**8/16/2019** TestNo: **E200.7** RunNo: **174398**
Samp ID: **MB-75070** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2681222** PrepDate:**8/16/2019** TestNo: **E200.7** RunNo: **174398**
Samp ID: **LCS-75070** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.008	0.00500	2	0	100	89.1	111	0	0		
Barium	2.058	0.0100	2	0	103	85	115	0	0		
Cadmium	1.971	0.00500	2	0	98.5	85	115	0	0		
Chromium	2	0.00500	2	0	100	89.7	109	0	0		
Copper	2.16	0.00500	2	0	108	85	115	0	0		
Lead	2.042	0.00500	2	0	102	88.1	112	0	0		
Selenium	2.015	0.00500	2	0	101	87.5	112	0	0		
Silver	0.4745	0.0100	0.5	0	94.9	85.2	115	0	0		
Zinc	1.954	0.0100	2	0	97.7	88.3	113	0	0		

MS

SeqNo: **2681230** PrepDate:**8/16/2019** TestNo: **E200.7** RunNo: **174398**
Samp ID: **190815066-009 (081519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04348	0.00500	0.04	0	109	75	125	0	0		
Barium	2.209	0.0100	2	0	110	75	119	0	0		
Cadmium	0.05389	0.00500	0.05	0	108	75	118	0	0		
Chromium	0.21	0.00500	0.2	0	105	75	124	0	0		
Copper	0.2829	0.00500	0.25	0	113	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75070

MS

SeqNo: **2681230** PrepDate:**8/16/2019** TestNo: **E200.7** RunNo: **174398**
Samp ID: **190815066-009 (081519-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02206	0.00500	0.02	0	110	75	125	0	0		
Selenium	0.01208	0.00500	0.01	0	121	75	125	0	0		
Silver	0.04901	0.0100	0.05	0	98	75	125	0	0		
Zinc	0.5558	0.0100	0.5	0	111	76.9	125	0	0		

DUP

SeqNo: **2681229** PrepDate:**8/16/2019** TestNo: **E200.7** RunNo: **174398**
Samp ID: **190815066-009** PrepRef: Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001742	0.00500	0	0	0	0	0	0	0	20	
Barium	ND	0.0100	0	0	0	0	0	0	0	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	ND	0.00500	0	0	0	0	0	0	0	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	0.001149	0.00500	0	0	0	0	0	0	0	15	
Silver	0.003066	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.0006079	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75074

LCS

SeqNo: **2681465** **PrepDate:8/16/2019** TestNo: **SM2540D** RunNo: **174411**
Samp ID: **LCS-75074** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	460	40.0	483	0	95.2	86.5	114	0	0		

DUP

SeqNo: **2681470** **PrepDate:8/16/2019** TestNo: **SM2540D** RunNo: **174411**
Samp ID: **190813035-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	680	40.0	0	0	0	0	0	724	6.27	10	

DUP

SeqNo: **2681478** **PrepDate:8/16/2019** TestNo: **SM2540D** RunNo: **174411**
Samp ID: **190814050-008** **PrepRef:** Units: **mg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	6430	100	0	0	0	0	0	5760	11.0	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75085

mblk SeqNo: **2681082** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **mb-75085** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.083	0.0100	0.1	0	83	57.1	135	0	0		

LCS SeqNo: **2681083** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **LCS-75085** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.134	0.0650	0.1	0	134	60	140	0	0		
Surr: Decachlorobiphenyl	0.0992	0.0100	0.1	0	99.2	57.1	135	0	0		

ms SeqNo: **2681118** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190816088-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.0922	0.0650	0.1	0	92.2	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0792	0.0100	0.1	0	79.2	57.1	135	0	0		

dup SeqNo: **2681113** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190815066-001c** PrepRef: Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1242	0.118	0.0810	0	0	0	0	0	0.1566	28.1	25	Z

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75085

dup

SeqNo: **2681113** **PrepDate:8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190815066-001c** **PrepRef:** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1248	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0810	0	0	0	0	0	0	0	25	
PCB, Total	0.118	0.0810	0	0	0	0	0	0.1566	28.1	25	Z
Surr: Decachlorobiphenyl	0.1023	0.0120	0	0	0	0	0	0	0	0	

dup

SeqNo: **2681114** **PrepDate:8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190815066-004c** **PrepRef:** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1242	0.317	0.0800	0	0	0	0	0	0.439	32.3	25	Z
Aroclor 1248	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0800	0	0	0	0	0	0	0	25	
PCB, Total	0.317	0.0800	0	0	0	0	0	0.439	32.3	25	Z
Surr: Decachlorobiphenyl	0.08716	0.0120	0	0	0	0	0	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75087

MBLK

SeqNo: **2680865** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **MB-75087** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2680866** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **LCS-75087** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.58	0.500	10	0	95.8	77	123	0	0		

MS

SeqNo: **2680868** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **190814072-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	1.47	96.2	71	125	0	0		

MSD

SeqNo: **2680869** PrepDate:**8/15/2019** TestNo: **E1631** RunNo: **174371**
Samp ID: **190814072-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.4	0.500	12.5	1.47	87.4	71	125	13.5	8.49	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

mblk	SeqNo: **2681582**	TestNo: **SW8260C**	RunNo: **174415**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	7.5	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	63.7	5.0	50	0	127	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	51.29	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	56.13	5.0	50	0	112	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190815066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

lcs

SeqNo: **2681580** TestNo: **SW8260C** RunNo: **174415**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.03	1.0	10	0	100	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.7	1.0	10	0	77	72.3	118	0	0		
1,1,2-Trichloroethane	9.32	1.0	10	0	93.2	73.1	123	0	0		
1,1-Dichloroethane	10.88	1.0	10	0	109	73.2	127	0	0		
1,1-Dichloroethene	8.07	1.0	10	0	80.7	70.3	128	0	0		
1,2,3-Trichloropropane	3.59	1.0	5	0	71.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.74	1.0	10	0	77.4	71	124	0	0		
1,2-Dichloroethane	13.79	1.0	10	0	138	72.5	127	0	0		S
1,3-Dichlorobenzene	8.74	1.0	10	0	87.4	72.2	121	0	0		
1,3-Dichloropropane	4.86	1.0	5	0	97.2	76	122	0	0		
1,4-Dichlorobenzene	8.74	1.0	10	0	87.4	71.7	127	0	0		
2-Butanone	11.89	5.0	10	0	119	65.1	132	0	0		
4-Methyl-2-pentanone	8.32	5.0	10	0	83.2	68.7	118	0	0		
Acetone	16.12	5.0	10	0	161	69.2	133	0	0		BS
Benzene	8.86	1.0	10	0	88.6	71.2	122	0	0		
Carbon disulfide	4.67	1.0	5	0	93.4	67.8	134	0	0		
Carbon tetrachloride	10.92	1.0	10	0	109	74.5	122	0	0		
Chlorobenzene	8.4	1.0	10	0	84	72.7	124	0	0		
Chloroethane	6.84	1.0	10	0	68.4	72.3	136	0	0		S
Chloroform	13.08	1.0	10	0	131	71.6	133	0	0		
Dibromochloromethane	8.62	1.0	10	0	86.2	70.6	124	0	0		
Ethylbenzene	8.48	1.0	10	0	84.8	70.9	126	0	0		
Methylene chloride	9.48	1.0	10	0	94.8	66.3	130	0	0		
Tetrachloroethene	8.77	1.0	10	0	87.7	72.4	119	0	0		
Toluene	9.53	1.0	10	0	95.3	71.8	116	0	0		
trans-1,2-Dichloroethene	9.51	1.0	10	0	95.1	70.3	120	0	0		
Trichloroethene	8.55	1.0	10	0	85.5	73	127	0	0		
Vinyl chloride	9.15	1.0	10	0	91.5	65.2	134	0	0		
Xylenes, Total	26.77	1.0	30	0	89.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	66.32	5.0	50	0	133	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	48.03	5.0	50	0	96.1	76.5	125	0	0		
Surr: Toluene-d8	52.81	5.0	50	0	106	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190815066

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	224608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081519-01-SW-P-B-1	8/15/19		A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	081519-02-SW-A-A-1	8/15/19		A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	081519-03-SW-D-A-1	8/15/19		A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/15/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/15/19 4:41 PM

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 3C	☒	☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Demo
190815066

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CHAIN OF CUSTODY RECORD

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Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
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Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleier@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081519-03-SW-U-A-1	8/15/19	A/P	W		✓	2	VOCs
	↓	↓	A/P	↓		↓	1	metals/hardness
			A/P				3	mercury
			A/P				1	TSS
004	081519-04-SW-B-B-1	8/15/19	A/P	W		✓	1	metals (filtered)
	↓	↓	A/P	↓		↓	2	PCBs
			A/P				2	VOCs
			A/P				1	metals/hardness
			A/P				3	mercury
			A/P				1	TSS
005	081519-05-SW-B-A-1	8/15/19	A/P	W		✓	1	TSS
006	081519-05-SW-B-A-2	8/15/19	A/P	W		✓	1	metals (filtered)
	↓	↓	A/P	↓		↓	2	PCBs
			A/P				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/15/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/15/19 4:41 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 5°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 1908150066

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Geham
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	081519-05-SW-B-A-2	8/15/19		A	W		✓	1	metals/hardness
	↓	↓		P	↓		↓	3	mercury
	↓	↓		A	↓		↓	1	TSS
				P					
007	081519-TB01			A				1	trip blank
				P					
008	081519-TB02			A				1	trip blank
				P					
009	081519-04-SW-B-B-3	8/15/19		A	W		✓	1	metals (filtered)
	↓	↓		P	↓		↓	2	PCBs
	↓	↓		A	↓		↓	2	VOCs
	↓	↓		P	↓		↓	1	metals/hardness
	↓	↓		A	↓		↓	3	mercury
	↓	↓		P	↓		↓	1	TSS
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/15/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/15/19 4:41 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 8°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190815066

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/19/2019

8/15/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190815066-001	081519-01-SW-D-B-1	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F
190815066-002	081519-02-SW-A-A-1	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F
190815066-003	081519-03-SW-U-A-1	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F
190815066-004	081519-04-SW-B-B-1	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F
190815066-005	081519-05-SW-B-A-1	Water	8/15/2019	8/19/2019							A
190815066-006	081519-05-SW-B-A-2	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F
190815066-007	081519-TB01	Trip Blank	8/15/2019	8/19/2019			A				
190815066-008	081519-TB02	Trip Blank	8/15/2019	8/19/2019			A				
190815066-009	081519-04-SW-B-B-3	Water	8/15/2019	8/19/2019	E	C	B	D	D	A	F

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 20, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190816088
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 8/16/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *20-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190816088	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-01-SW-U-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
PCB, Total	**ND**	0.065		µg/L	1	8/16/2019 9:00:01 PM
Surr: Decachlorobiphenyl	**140**	57.1-135	S	%REC	1	8/16/2019 9:00:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/16/2019)						
Mercury	**1.3**	0.5		ng/L	1	8/19/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 12:32:00 PM
Barium	**0.022**	0.010		mg/L	1	8/20/2019 12:32:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 12:32:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 12:32:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 12:32:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 12:32:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 12:32:00 PM
Silver	**0.006**	0.010	J	mg/L	1	8/20/2019 12:32:00 PM
Zinc	**ND**	0.010		mg/L	1	8/20/2019 12:32:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 1:34:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/20/2019 1:34:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 1:34:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 1:34:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 1:34:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 1:34:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-01-SW-U-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 1:34:00 PM
Silver, Dissolved	**0.008**	0.010	J	mg/L	1	8/20/2019 1:34:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 1:34:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Acetone	**3.7**	5.0	JBS+	µg/L	1	8/19/2019 4:23:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 4:23:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 4:23:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 4:23:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 4:23:00 PM
Surr: 1,2-Dichloroethane-d4	**127**	80.9-122	S	%REC	1	8/19/2019 4:23:00 PM
Surr: 4-Bromofluorobenzene	**91.1**	76.5-125		%REC	1	8/19/2019 4:23:00 PM
Surr: Toluene-d8	**111**	80.4-121		%REC	1	8/19/2019 4:23:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-01-SW-U-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/19/2019)						
TSS (Residue, Non-Filterable)	**6.3**	1.0		mg/L	1	8/19/2019

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-02-SW-A-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1242	**0.058**	0.065	J	µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 8:19:59 PM
PCB, Total	**0.058**	0.065	J	µg/L	1	8/16/2019 8:19:59 PM
Surr: Decachlorobiphenyl	**65.9**	57.1-135		%REC	1	8/16/2019 8:19:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/16/2019)						
Mercury	**5.9**	0.5		ng/L	1	8/19/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**91**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 1:00:00 PM
Barium	**0.022**	0.010		mg/L	1	8/20/2019 1:00:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 1:00:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 1:00:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 1:00:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 1:00:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 1:00:00 PM
Silver	**0.007**	0.010	J	mg/L	1	8/20/2019 1:00:00 PM
Zinc	**ND**	0.010		mg/L	1	8/20/2019 1:00:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/20/2019 2:02:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/20/2019 2:02:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 2:02:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:02:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:02:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:02:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-02-SW-A-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/19/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:02:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:02:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:02:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Acetone	**4.8**	5.0	JBS+	µg/L	1	8/19/2019 4:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 4:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 4:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 4:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 4:44:00 PM
Surr: 1,2-Dichloroethane-d4	**123**	80.9-122	S	%REC	1	8/19/2019 4:44:00 PM
Surr: 4-Bromofluorobenzene	**97.1**	76.5-125		%REC	1	8/19/2019 4:44:00 PM
Surr: Toluene-d8	**112**	80.4-121		%REC	1	8/19/2019 4:44:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-02-SW-A-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/19/2019)						
TSS (Residue, Non-Filterable)	**7.3**	1.1		mg/L	1	8/19/2019

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-03-SW-D-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1242	**0.040**	0.065	J	µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 8:33:19 PM
PCB, Total	**0.040**	0.065	J	µg/L	1	8/16/2019 8:33:19 PM
Surr: Decachlorobiphenyl	**81.2**	57.1-135		%REC	1	8/16/2019 8:33:19 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/16/2019)						
Mercury	**2.9**	0.5		ng/L	1	8/19/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**89**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 1:04:00 PM
Barium	**0.022**	0.010		mg/L	1	8/20/2019 1:04:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 1:04:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 1:04:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 1:04:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 1:04:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 1:04:00 PM
Silver	**0.004**	0.010	J	mg/L	1	8/20/2019 1:04:00 PM
Zinc	**ND**	0.010		mg/L	1	8/20/2019 1:04:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic, Dissolved	**0.003**	0.005	J	mg/L	1	8/20/2019 2:11:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/20/2019 2:11:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 2:11:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:11:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:11:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:11:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-03-SW-D-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:11:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:11:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:11:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Acetone	**4.3**	5.0	JBS+	µg/L	1	8/19/2019 5:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 5:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 5:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 5:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 5:05:00 PM
Surr: 1,2-Dichloroethane-d4	**122**	80.9-122		%REC	1	8/19/2019 5:05:00 PM
Surr: 4-Bromofluorobenzene	**99.8**	76.5-125		%REC	1	8/19/2019 5:05:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/19/2019 5:05:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-03-SW-D-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/19/2019)						
TSS (Residue, Non-Filterable)	**10.9**	1.1		mg/L	1	8/19/2019

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-04-SW-B-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
PCB, Total	**ND**	0.065		µg/L	1	8/16/2019 8:46:39 PM
Surr: Decachlorobiphenyl	**87.8**	57.1-135		%REC	1	8/16/2019 8:46:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/16/2019)						
Mercury	**1.6**	0.5		ng/L	1	8/19/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 1:09:00 PM
Barium	**0.023**	0.010		mg/L	1	8/20/2019 1:09:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 1:09:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 1:09:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 1:09:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 1:09:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 1:09:00 PM
Silver	**0.010**	0.010	J	mg/L	1	8/20/2019 1:09:00 PM
Zinc	**ND**	0.010		mg/L	1	8/20/2019 1:09:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/19/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:36:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/20/2019 2:36:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 2:36:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:36:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:36:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:36:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-04-SW-B-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/19/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 2:36:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:36:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 2:36:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Acetone	**4.5**	5.0	JBS+	µg/L	1	8/19/2019 5:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 5:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 5:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 5:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 5:27:00 PM
Surr: 1,2-Dichloroethane-d4	**129**	80.9-122	S	%REC	1	8/19/2019 5:27:00 PM
Surr: 4-Bromofluorobenzene	**92.5**	76.5-125		%REC	1	8/19/2019 5:27:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/19/2019 5:27:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-04-SW-B-A-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/19/2019)						
TSS (Residue, Non-Filterable)	**5.7**	1.0		mg/L	1	8/19/2019

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-05-SW-B-B-1
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-005
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/19/2019)						
TSS (Residue, Non-Filterable)	**15.6**	1.1		mg/L	1	8/19/2019

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081619-TB01
Work Order:	**190816088**	**Collection Date:**	8/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190816088-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Methylene chloride	**0.8**	1.0	J	µg/L	1	8/19/2019 5:48:00 PM
Acetone	**5.1**	5.0	BS+	µg/L	1	8/19/2019 5:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 5:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 5:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 5:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 5:48:00 PM
Surr: 1,2-Dichloroethane-d4	**126**	80.9-122	S	%REC	1	8/19/2019 5:48:00 PM
Surr: 4-Bromofluorobenzene	**97.5**	76.5-125		%REC	1	8/19/2019 5:48:00 PM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	8/19/2019 5:48:00 PM

Adirondack Environmental Services, Inc

Date: *20-Aug-19*

CLIENT: AECOM Environment
Work Order: **190816088**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# /Task# : 60323713 / 3300

Client Sample ID: 081619-TB02
Collection Date: 8/16/2019
Lab Sample ID: 190816088-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Methylene chloride	**0.8**	1.0	J	µg/L	1	8/19/2019 6:09:00 PM
Acetone	**4.7**	5.0	JBS+	µg/L	1	8/19/2019 6:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/19/2019 6:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/19/2019 6:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Benzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/19/2019 6:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Toluene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/19/2019 6:09:00 PM
Surr: 1,2-Dichloroethane-d4	**134**	80.9-122	S	%REC	1	8/19/2019 6:09:00 PM
Surr: 4-Bromofluorobenzene	**98.2**	76.5-125		%REC	1	8/19/2019 6:09:00 PM
Surr: Toluene-d8	**95.5**	80.4-121		%REC	1	8/19/2019 6:09:00 PM

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75085

mblk

SeqNo: **2681082** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **mb-75085** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.083	0.0100	0.1	0	83	57.1	135	0	0		

LCS

SeqNo: **2681083** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **LCS-75085** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.134	0.0650	0.1	0	134	60	140	0	0		
Surr: Decachlorobiphenyl	0.0992	0.0100	0.1	0	99.2	57.1	135	0	0		

ms

SeqNo: **2681118** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190816088-001c (081619-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.0922	0.0650	0.1	0	92.2	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0792	0.0100	0.1	0	79.2	57.1	135	0	0		

msd

SeqNo: **2682815** PrepDate:**8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190816088-001c (081619-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1336	0.0650	0.1	0	134	46.7	130	0.0922	36.7	30	SZ
PCB, Total	0.1336	0.0650	0.1	0	134	51	150	0.0922	36.7	30	Z

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: 75085

msd

SeqNo: **2682815** **PrepDate:8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190816088-001c (081619-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0972	0.0100	0.1	0	97.2	57.1	135	0	0	0	

dup

SeqNo: **2681113** **PrepDate:8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190815066-001c** **PrepRef:** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1242	0.118	0.0810	0	0	0	0	0	0.1566	28.1	25	Z
Aroclor 1248	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0810	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0810	0	0	0	0	0	0	0	25	
PCB, Total	0.118	0.0810	0	0	0	0	0	0.1566	28.1	25	Z
Surr: Decachlorobiphenyl	0.1023	0.0120	0	0	0	0	0	0	0	0	

dup

SeqNo: **2681114** **PrepDate:8/16/2019** TestNo: **SW8082A** RunNo: **174385**
Samp ID: **190815066-004c** **PrepRef:** Units: **µg/L** Analysis Date: **8/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1242	0.317	0.0800	0	0	0	0	0	0.439	32.3	25	Z
Aroclor 1248	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0800	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0800	0	0	0	0	0	0	0	25	
PCB, Total	0.317	0.0800	0	0	0	0	0	0.439	32.3	25	Z
Surr: Decachlorobiphenyl	0.08716	0.0120	0	0	0	0	0	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75095

LCS

SeqNo: **2682126** **PrepDate:8/19/2019** TestNo: **SM2540D** RunNo: **174435**
Samp ID: **LCS-75095** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	420	40.0	483	0	87	86.5	114	0	0		

LCS

SeqNo: **2682653** **PrepDate:8/19/2019** TestNo: **SM2540D** RunNo: **174457**
Samp ID: **LCS-75095** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	420	40.0	483	0	87	86.5	114	0	0		

DUP

SeqNo: **2682655** **PrepDate:8/19/2019** TestNo: **SM2540D** RunNo: **174457**
Samp ID: **190813035-003** **PrepRef:** Units: **mg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	568	40.0	0	0	0	0	0	596	4.81	10	

DUP

SeqNo: **2682669** **PrepDate:8/19/2019** TestNo: **SM2540D** RunNo: **174457**
Samp ID: **190816088-001F** **PrepRef:** Units: **mg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	5.8	1.00	0	0	0	0	0	6.3	8.26	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75099

MBLK

SeqNo: **2682851** PrepDate:**8/19/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **MB-75099** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2682852** PrepDate:**8/19/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **LCS-75099** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.004	0.00500	2	0	100	85	115	0	0		
Barium, Dissolved	2.03	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	1.968	0.00500	2	0	98.4	85.3	112	0	0		
Chromium, Dissolved	1.995	0.00500	2	0	99.8	89.1	109	0	0		
Copper, Dissolved	2.122	0.00500	2	0	106	86.8	115	0	0		
Lead, Dissolved	2.017	0.00500	2	0	101	86.8	114	0	0		
Selenium, Dissolved	2.002	0.00500	2	0	100	85	115	0	0		
Silver, Dissolved	0.4844	0.0100	0.5	0	96.9	85	115	0	0		
Zinc, Dissolved	1.942	0.0100	2	0	97.1	85	115	0	0		

MS

SeqNo: **2682855** PrepDate:**8/19/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190816088-001 (081619-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04059	0.00500	0.04	0	101	75	123	0	0		
Barium, Dissolved	2.054	0.0100	2	0.02149	102	75	124	0	0		
Cadmium, Dissolved	0.04798	0.00500	0.05	0	96	75	125	0	0		
Chromium, Dissolved	0.1999	0.00500	0.2	0	99.9	77.2	117	0	0		
Copper, Dissolved	0.2642	0.00500	0.25	0	106	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75099

MS

SeqNo: **2682855** **PrepDate:8/19/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190816088-001 (081619-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02012	0.00500	0.02	0	101	75	125	0	0		
Selenium, Dissolved	0.008578	0.00500	0.01	0	85.8	75	125	0	0		
Silver, Dissolved	0.05339	0.0100	0.05	0.007912	91	75	125	0	0		
Zinc, Dissolved	0.4991	0.0100	0.5	0	99.8	75	121	0	0		

DUP

SeqNo: **2682854** **PrepDate:8/19/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190816088-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.002506	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02121	0.0100	0	0	0	0	0	0.02149	1.29	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001673	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.002674	0.0100	0	0	0	0	0	0.007912	0	17.6	
Zinc, Dissolved	0.001924	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75109

MBLK

SeqNo: **2682839** PrepDate:**8/19/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **MB-75109** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	0.004735	0.0100									J
Zinc	ND	0.0100									

LCS

SeqNo: **2682840** PrepDate:**8/19/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **LCS-75109** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.004	0.00500	2	0	100	89.1	111	0	0		
Barium	2.031	0.0100	2	0	102	85	115	0	0		
Cadmium	1.964	0.00500	2	0	98.2	85	115	0	0		
Chromium	1.998	0.00500	2	0	99.9	89.7	109	0	0		
Copper	2.126	0.00500	2	0	106	85	115	0	0		
Lead	2.014	0.00500	2	0	101	88.1	112	0	0		
Selenium	1.989	0.00500	2	0	99.4	87.5	112	0	0		
Silver	0.4866	0.0100	0.5	0	97.3	85.2	115	0	0		
Zinc	1.941	0.0100	2	0	97	88.3	113	0	0		

MS

SeqNo: **2682843** PrepDate:**8/19/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **190816088-001 (081619-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04456	0.00500	0.04	0	111	75	125	0	0		
Barium	2.098	0.0100	2	0.02156	104	75	119	0	0		
Cadmium	0.04874	0.00500	0.05	0	97.5	75	118	0	0		
Chromium	0.2045	0.00500	0.2	0	102	75	124	0	0		
Copper	0.2706	0.00500	0.25	0	108	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75109

MS

SeqNo: **2682843** **PrepDate:8/19/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **190816088-001 (081619-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02068	0.00500	0.02	0	103	75	125	0	0		
Selenium	0.01008	0.00500	0.01	0	101	75	125	0	0		
Silver	0.05316	0.0100	0.05	0.00601	94.3	75	125	0	0		
Zinc	0.5108	0.0100	0.5	0	102	76.9	125	0	0		

DUP

SeqNo: **2682842** **PrepDate:8/19/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **190816088-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00241	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02157	0.0100	0	0	0	0	0	0.02156	0.0742	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.002892	0.00500	0	0	0	0	0	0	0	20	
Lead	0.001211	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.004691	0.0100	0	0	0	0	0	0.00601	0	10.8	
Zinc	0.001457	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75114

MBLK

SeqNo: **2681684** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **MB-75114** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2681685** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **LCS-75114** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.54	0.500	10	0	95.4	77	123	0	0		

MS

SeqNo: **2681690** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **190816088-001 (081619-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12	0.500	12.5	1.26	85.9	71	125	0	0		

MS

SeqNo: **2682178** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **190816008-002** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.8	0.500	12.5	1.39	83.3	71	125	0	0		

MSD

SeqNo: **2681691** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **190816088-001 (081619-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.1	0.500	12.5	1.26	86.7	71	125	12	0.830	24	

MSD

SeqNo: **2682179** PrepDate:**8/16/2019** TestNo: **E1631** RunNo: **174417**
Samp ID: **190816008-002** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	1.39	96.9	71	125	11.8	13.4	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

mblk	SeqNo: **2681582**	TestNo: **SW8260C**	RunNo: **174415**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	7.5	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	63.7	5.0	50	0	127	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	51.29	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	56.13	5.0	50	0	112	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

lcs	SeqNo: **2681580**	TestNo: **SW8260C**	RunNo: **174415**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.03	1.0	10	0	100	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.7	1.0	10	0	77	72.3	118	0	0		
1,1,2-Trichloroethane	9.32	1.0	10	0	93.2	73.1	123	0	0		
1,1-Dichloroethane	10.88	1.0	10	0	109	73.2	127	0	0		
1,1-Dichloroethene	8.07	1.0	10	0	80.7	70.3	128	0	0		
1,2,3-Trichloropropane	3.59	1.0	5	0	71.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.74	1.0	10	0	77.4	71	124	0	0		
1,2-Dichloroethane	13.79	1.0	10	0	138	72.5	127	0	0		S
1,3-Dichlorobenzene	8.74	1.0	10	0	87.4	72.2	121	0	0		
1,3-Dichloropropane	4.86	1.0	5	0	97.2	76	122	0	0		
1,4-Dichlorobenzene	8.74	1.0	10	0	87.4	71.7	127	0	0		
2-Butanone	11.89	5.0	10	0	119	65.1	132	0	0		
4-Methyl-2-pentanone	8.32	5.0	10	0	83.2	68.7	118	0	0		
Acetone	16.12	5.0	10	0	161	69.2	133	0	0		BS
Benzene	8.86	1.0	10	0	88.6	71.2	122	0	0		
Carbon disulfide	4.67	1.0	5	0	93.4	67.8	134	0	0		
Carbon tetrachloride	10.92	1.0	10	0	109	74.5	122	0	0		
Chlorobenzene	8.4	1.0	10	0	84	72.7	124	0	0		
Chloroethane	6.84	1.0	10	0	68.4	72.3	136	0	0		S
Chloroform	13.08	1.0	10	0	131	71.6	133	0	0		
Dibromochloromethane	8.62	1.0	10	0	86.2	70.6	124	0	0		
Ethylbenzene	8.48	1.0	10	0	84.8	70.9	126	0	0		
Methylene chloride	9.48	1.0	10	0	94.8	66.3	130	0	0		
Tetrachloroethene	8.77	1.0	10	0	87.7	72.4	119	0	0		
Toluene	9.53	1.0	10	0	95.3	71.8	116	0	0		
trans-1,2-Dichloroethene	9.51	1.0	10	0	95.1	70.3	120	0	0		
Trichloroethene	8.55	1.0	10	0	85.5	73	127	0	0		
Vinyl chloride	9.15	1.0	10	0	91.5	65.2	134	0	0		
Xylenes, Total	26.77	1.0	30	0	89.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	66.32	5.0	50	0	133	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	48.03	5.0	50	0	96.1	76.5	125	0	0		
Surr: Toluene-d8	52.81	5.0	50	0	106	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

ms	SeqNo: **2682260**	TestNo: **SW8260C**	RunNo: **174415**
	Samp ID: **190816088-001b (081619-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.41	1.0	10	0	104	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.92	1.0	10	0	89.2	70.1	123	0	0		
1,1,2-Trichloroethane	9.37	1.0	10	0	93.7	72.1	119	0	0		
1,1-Dichloroethane	9.09	1.0	10	0	90.9	70.4	126	0	0		
1,1-Dichloroethene	8.62	1.0	10	0	86.2	70.2	125	0	0		
1,2,3-Trichloropropane	3.34	1.0	5	0	66.8	53.7	101	0	0		
1,2-Dichlorobenzene	7.23	1.0	10	0	72.3	70.2	123	0	0		
1,2-Dichloroethane	10.55	1.0	10	0.19	104	73.5	126	0	0		
1,3-Dichlorobenzene	8.24	1.0	10	0	82.4	70.4	124	0	0		
1,3-Dichloropropane	4.95	1.0	5	0	99	64	125	0	0		
1,4-Dichlorobenzene	6.25	1.0	10	0	62.5	70.8	127	0	0		S
2-Butanone	9.09	5.0	10	0	90.9	60.5	123	0	0		
4-Methyl-2-pentanone	9.26	5.0	10	0	92.6	52.8	133	0	0		
Acetone	12.36	5.0	10	3.68	86.8	56.3	135	0	0		B
Benzene	8.6	1.0	10	0	86	70.2	127	0	0		
Carbon disulfide	3.65	1.0	5	0	73	62.2	130	0	0		
Carbon tetrachloride	10.27	1.0	10	0	103	56.4	137	0	0		
Chlorobenzene	8.57	1.0	10	0	85.7	72.7	128	0	0		
Chloroethane	6.92	1.0	10	0	69.2	71.3	135	0	0		S
Chloroform	9.48	1.0	10	0	94.8	70.2	125	0	0		
Dibromochloromethane	8.16	1.0	10	0	81.6	69.5	123	0	0		
Ethylbenzene	7.75	1.0	10	0	77.5	71.9	129	0	0		
Methylene chloride	6.76	1.0	10	0	67.6	65.3	123	0	0		
Tetrachloroethene	8.16	1.0	10	0	81.6	74.5	121	0	0		
Toluene	9.07	1.0	10	0	90.7	73	122	0	0		
trans-1,2-Dichloroethene	8.31	1.0	10	0	83.1	69.1	133	0	0		
Trichloroethene	8.48	1.0	10	0	84.8	71.1	126	0	0		
Vinyl chloride	8.06	1.0	10	0	80.6	65	137	0	0		
Xylenes, Total	26.16	1.0	30	0	87.2	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	57.02	5.0	50	0	114	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.92	5.0	50	0	93.8	76.5	125	0	0		
Surr: Toluene-d8	51.34	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174415

msd

SeqNo: **2682261** TestNo: **SW8260C** RunNo: **174415**
Samp ID: **190816088-001b (081619-01-SW-U-** Units: **µg/L** Analysis Date: **8/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.09	1.0	10	0	111	71.6	126	10.41	6.33	20.4	
1,1,2,2-Tetrachloroethane	8.99	1.0	10	0	89.9	70.1	123	8.92	0.782	18.6	
1,1,2-Trichloroethane	9.79	1.0	10	0	97.9	72.1	119	9.37	4.38	20	
1,1-Dichloroethane	9.78	1.0	10	0	97.8	70.4	126	9.09	7.31	19.2	
1,1-Dichloroethene	8.9	1.0	10	0	89	70.2	125	8.62	3.20	16.1	
1,2,3-Trichloropropane	4.3	1.0	5	0	86	53.7	101	3.34	25.1	20	Z
1,2-Dichlorobenzene	9.68	1.0	10	0	96.8	70.2	123	7.23	29.0	17.9	Z
1,2-Dichloroethane	10.52	1.0	10	0.19	103	73.5	126	10.55	0.285	15.6	
1,3-Dichlorobenzene	9.3	1.0	10	0	93	70.4	124	8.24	12.1	14.3	
1,3-Dichloropropane	4.87	1.0	5	0	97.4	64	125	4.95	1.63	0	
1,4-Dichlorobenzene	8.29	1.0	10	0	82.9	70.8	127	6.25	28.1	14.4	Z
2-Butanone	9.92	5.0	10	0	99.2	60.5	123	9.09	8.73	15	
4-Methyl-2-pentanone	9.71	5.0	10	0	97.1	52.8	133	9.26	4.74	11.9	
Acetone	11.74	5.0	10	3.68	80.6	56.3	135	12.36	5.15	10.6	B
Benzene	9.7	1.0	10	0	97	70.2	127	8.6	12.0	18.4	
Carbon disulfide	3.88	1.0	5	0	77.6	62.2	130	3.65	6.11	13.1	
Carbon tetrachloride	11.32	1.0	10	0	113	56.4	137	10.27	9.73	20.3	
Chlorobenzene	8.78	1.0	10	0	87.8	72.7	128	8.57	2.42	19.6	
Chloroethane	7.5	1.0	10	0	75	71.3	135	6.92	8.04	27.8	
Chloroform	9.67	1.0	10	0	96.7	70.2	125	9.48	1.98	20.3	
Dibromochloromethane	8.05	1.0	10	0	80.5	69.5	123	8.16	1.36	18.8	
Ethylbenzene	9.21	1.0	10	0	92.1	71.9	129	7.75	17.2	16.3	Z
Methylene chloride	7.06	1.0	10	0	70.6	65.3	123	6.76	4.34	21.4	
Tetrachloroethene	8.79	1.0	10	0	87.9	74.5	121	8.16	7.43	20.9	
Toluene	9.17	1.0	10	0	91.7	73	122	9.07	1.10	19.4	
trans-1,2-Dichloroethene	8.42	1.0	10	0	84.2	69.1	133	8.31	1.32	16.1	
Trichloroethene	8.94	1.0	10	0	89.4	71.1	126	8.48	5.28	16.6	
Vinyl chloride	8.28	1.0	10	0	82.8	65	137	8.06	2.69	20.5	
Xylenes, Total	30.52	1.0	30	0	102	72	130	26.16	15.4	16.1	
Surr: 1,2-Dichloroethane-d4	57.38	5.0	50	0	115	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	51.58	5.0	50	0	103	76.5	125	0	0	0	
Surr: Toluene-d8	50.1	5.0	50	0	100	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

CRI

SeqNo: **2682831** TestNo: **E200.7** RunNo: **174471**
Samp ID: **CRI-1** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	200	0	0	0	50	150	0	0		
Antimony	115.7	60.0	120	0	96.4	50	150	0	0		
Arsenic	19.06	10.0	20	0	95.3	50	150	0	0		
Barium	ND	200	0	0	0	50	150	0	0		
Beryllium	9.915	5.00	10	0	99.1	50	150	0	0		
Boron	0.8737	50.0	0	0	0	50	150	0	0		
Cadmium	9.829	5.00	10	0	98.3	50	150	0	0		
Calcium	9.915	5000	0	0	0	50	150	0	0		
Chromium	16.88	10.0	20	0	84.4	50	150	0	0		
Cobalt	95.21	50.0	100	0	95.2	50	150	0	0		
Copper	48.36	25.0	50	0	96.7	50	150	0	0		
Iron	1.799	100	0	0	0	50	150	0	0		
Lead	5.808	3.00	6	0	96.8	50	150	0	0		
Lithium	3.382	100	0	0	0	50	150	0	0		
Magnesium	ND	5000	0	0	0	50	150	0	0		
Manganese	28.38	15.0	30	0	94.6	50	150	0	0		
Molybdenum	0.2022	50.0	0	0	0	50	150	0	0		
Nickel	79.89	40.0	80	0	99.9	50	150	0	0		
Potassium	9.755	5000	0	0	0	50	150	0	0		
Selenium	11.85	5.00	10	0	119	50	150	0	0		
Silver	17.25	10.0	20	0	86.3	50	150	0	0		
Sodium	ND	5000	0	0	0	50	150	0	0		
Strontium	15.97	20.0	0	0	0	50	150	0	0		
Thallium	18.06	10.0	20	0	90.3	50	150	0	0		
Tin	0.4656	50.0	0	0	0	50	150	0	0		
Titanium	1.903	50.0	0	0	0	50	150	0	0		
Vanadium	95.28	50.0	100	0	95.3	50	150	0	0		
Zinc	44.48	20.0	40	0	111	50	150	0	0		

CRA

SeqNo: **2682832** TestNo: **E200.7** RunNo: **174471**
Samp ID: **CRIA-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

CRA

SeqNo: **2682832** TestNo: **E200.7** RunNo: **174471**
Samp ID: **CRIA-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.04782	0.100	0.05	0	95.6	70	130	0	0		
Antimony	0.04884	0.0600	0.05	0	97.7	70	130	0	0		
Arsenic	0.05187	0.00500	0	0	0	70	130	0	0		
Barium	0.04916	0.0100	0	0	0	70	130	0	0		
Beryllium	0.04968	0.00500	0	0	0	70	130	0	0		
Boron	0.05255	0.0500	0.05	0	105	70	130	0	0		
Cadmium	0.05223	0.00500	0	0	0	70	130	0	0		
Calcium	0.05594	0.0500	0.05	0	112	70	130	0	0		
Chromium	0.04605	0.00500	0	0	0	70	130	0	0		
Cobalt	0.04854	0.0500	0.05	0	97.1	70	130	0	0		
Copper	0.04621	0.00500	0	0	0	70	130	0	0		
Iron	0.04655	0.0500	0.05	0	93.1	70	130	0	0		
Lead	0.0508	0.00500	0	0	0	70	130	0	0		
Lithium	0.04698	0.0500	0.05	0	94	70	130	0	0		
Magnesium	0.04762	0.0500	0.05	0	95.2	70	130	0	0		
Manganese	0.04773	0.0200	0	0	0	70	130	0	0		
Molybdenum	0.0475	0.0100	0	0	0	70	130	0	0		
Nickel	0.05026	0.0200	0	0	0	70	130	0	0		
Potassium	0.1608	0.0500	0	0	0	70	130	0	0		
Selenium	0.05848	0.00500	0	0	0	70	130	0	0		
Silver	0.01156	0.0100	0.0125	0	92.5	70	130	0	0		
Sodium	0.04651	0.0500	0.05	0	93	70	130	0	0		
Strontium	0.06454	0.0500	0.05	0	129	70	130	0	0		
Thallium	0.0504	0.0100	0	0	0	70	130	0	0		
Tin	0.0436	0.0500	0.05	0	87.2	70	130	0	0		
Titanium	ND	0.0100	0	0	0	70	130	0	0		
Vanadium	0.04608	0.0200	0	0	0	70	130	0	0		
Zinc	0.0546	0.0100	0	0	0	70	130	0	0		

ICB

SeqNo: **2682830** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICB-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

ICB

SeqNo: **2682830** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICB-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	0.100	0	0	0	0	0	0	0		
Antimony	0.000696	0.0600	0	0	0	0	0	0	0		
Arsenic	0.0003669	0.00500	0	0	0	0	0	0	0		
Barium	ND	0.0100	0	0	0	0	0	0	0		
Beryllium	0.00005545	0.00500	0	0	0	0	0	0	0		
Boron	0.001487	0.0500	0	0	0	0	0	0	0		
Cadmium	ND	0.00500	0	0	0	0	0	0	0		
Calcium	ND	0.0500	0	0	0	0	0	0	0		
Chromium	ND	0.00500	0	0	0	0	0	0	0		
Cobalt	0.00002456	0.0500	0	0	0	0	0	0	0		
Copper	ND	0.00500	0	0	0	0	0	0	0		
Iron	0.0001681	0.0500	0	0	0	0	0	0	0		
Lead	0.0005386	0.00500	0	0	0	0	0	0	0		
Lithium	ND	0.0500	0	0	0	0	0	0	0		
Magnesium	0.00416	0.0500	0	0	0	0	0	0	0		
Manganese	0.00006069	0.0200	0	0	0	0	0	0	0		
Molybdenum	0.00112	0.0100	0	0	0	0	0	0	0		
Nickel	0.00004542	0.0200	0	0	0	0	0	0	0		
Potassium	0.006573	0.0500	0	0	0	0	0	0	0		
Selenium	0.0002569	0.00500	0	0	0	0	0	0	0		
Silver	0.001392	0.0100	0	0	0	0	0	0	0		
Sodium	ND	0.0500	0	0	0	0	0	0	0		
Strontium	0.01463	0.0500	0	0	0	0	0	0	0		
Thallium	ND	0.0100	0	0	0	0	0	0	0		
Tin	ND	0.0500	0	0	0	0	0	0	0		
Titanium	0.0004832	0.0100	0	0	0	0	0	0	0		
Vanadium	0.003109	0.0200	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICV

SeqNo: **2682829** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICV-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

ICV

SeqNo: **2682829** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICV-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	1.946	0.100	2	0	97.3	95	105	0	0		
Antimony	1.994	0.0600	2	0	99.7	95	105	0	0		
Arsenic	2.073	0.00500	2	0	104	95	105	0	0		
Barium	2.049	0.0100	2	0	102	95	105	0	0		
Beryllium	2	0.00500	2	0	100	95	105	0	0		
Boron	2.019	0.0500	2	0	101	95	105	0	0		
Cadmium	2.047	0.00500	2	0	102	95	105	0	0		
Calcium	1.983	0.0500	2	0	99.2	95	105	0	0		
Chromium	2.001	0.00500	2	0	100	95	105	0	0		
Cobalt	1.965	0.0500	2	0	98.2	95	105	0	0		
Copper	2.061	0.00500	2	0	103	95	105	0	0		
Iron	2	0.0500	2	0	100	95	105	0	0		
Lead	2.067	0.00500	2	0	103	95	105	0	0		
Lithium	2.069	0.0500	0	0	0	95	105	0	0		
Magnesium	1.934	0.0500	2	0	96.7	95	105	0	0		
Manganese	1.935	0.0200	2	0	96.7	95	105	0	0		
Molybdenum	2.022	0.0100	2	0	101	95	105	0	0		
Nickel	2.032	0.0200	2	0	102	95	105	0	0		
Potassium	9.848	0.0500	10	0	98.5	95	105	0	0		
Selenium	2.016	0.00500	2	0	101	95	105	0	0		
Silver	0.4894	0.0100	0.5	0	97.9	95	105	0	0		
Sodium	1.944	0.0500	2	0	97.2	95	105	0	0		
Strontium	2.048	0.0500	0	0	0	95	105	0	0		
Thallium	2.081	0.0100	2	0	104	95	105	0	0		
Tin	2.03	0.0500	2	0	102	95	105	0	0		
Titanium	ND	0.0100	0	0	0	95	105	0	0		
Vanadium	2.003	0.0200	2	0	100	95	105	0	0		
Zinc	2.052	0.0100	2	0	103	95	105	0	0		

ICSA

SeqNo: **2682835** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICSA-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

ICSA

SeqNo: **2682835** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICSA-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	504.5	0.100	500	0	101	80	120	0	0		
Antimony	ND	0.0600	0	0	0	0	0	0	0		
Arsenic	ND	0.00500	0	0	0	0	0	0	0		
Barium	ND	0.0100	0	0	0	0	0	0	0		
Beryllium	0.002761	0.00500	0	0	0	0	0	0	0		
Boron	ND	0.0500	0	0	0	0	0	0	0		
Cadmium	ND	0.00500	0	0	0	0	0	0	0		
Calcium	430.4	0.0500	500	0	86.1	80	120	0	0		
Chromium	ND	0.00500	0	0	0	0	0	0	0		
Cobalt	0.0003335	0.0500	0	0	0	0	0	0	0		
Copper	ND	0.00500	0	0	0	0	0	0	0		
Iron	121.3	0.0500	200	0	60.7	80	120	0	0		S
Lead	ND	0.00500	0	0	0	0	0	0	0		
Lithium	ND	0.0500	0	0	0	0	0	0	0		
Magnesium	529.2	0.0500	500	0	106	80	120	0	0		
Manganese	ND	0.0200	0	0	0	0	0	0	0		
Molybdenum	ND	0.0100	0	0	0	0	0	0	0		
Nickel	ND	0.0200	0	0	0	0	0	0	0		
Potassium	0.004673	0.0500	0	0	0	0	0	0	0		
Selenium	ND	0.00500	0	0	0	0	0	0	0		
Silver	ND	0.0100	0	0	0	0	0	0	0		
Sodium	ND	0.0500	0	0	0	0	0	0	0		
Strontium	0.01739	0.0500	0	0	0	0	0	0	0		
Thallium	ND	0.0100	0	0	0	0	0	0	0		
Tin	0.003281	0.0500	0	0	0	0	0	0	0		
Titanium	ND	0.0100	0	0	0	0	0	0	0		
Vanadium	ND	0.0200	0	0	0	0	0	0	0		
Zinc	ND	0.0100	0	0	0	0	0	0	0		

ICSAB

SeqNo: **2682836** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICSAB-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190816088
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174471

ICSAB

SeqNo: **2682836** TestNo: **E200.7** RunNo: **174471**
Samp ID: **ICSAB-1** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	507.5	0.100	500	0	101	80	120	0	0		
Antimony	0.0004267	0.0600	0	0	0	80	120	0	0		
Arsenic	ND	0.00500	0	0	0	80	120	0	0		
Barium	0.5059	0.0100	0.5	0	101	80	120	0	0		
Beryllium	0.4902	0.00500	0.5	0	98	80	120	0	0		
Boron	ND	0.0500	0	0	0	80	120	0	0		
Cadmium	0.9016	0.00500	1	0	90.2	80	120	0	0		
Calcium	433.3	0.0500	500	0	86.7	80	120	0	0		
Chromium	0.5074	0.00500	0.5	0	101	80	120	0	0		
Cobalt	0.4518	0.0500	0.5	0	90.4	80	120	0	0		
Copper	0.5738	0.00500	0.5	0	115	80	120	0	0		
Iron	122.6	0.0500	200	0	61.3	80	120	0	0		S
Lead	0.8454	0.00500	1	0	84.5	80	120	0	0		
Lithium	ND	0.0500	0	0	0	80	120	0	0		
Magnesium	533.2	0.0500	500	0	107	80	120	0	0		
Manganese	0.4571	0.0200	0.5	0	91.4	80	120	0	0		
Molybdenum	ND	0.0100	0	0	0	80	120	0	0		
Nickel	0.8442	0.0200	1	0	84.4	80	120	0	0		
Potassium	0.003699	0.0500	0	0	0	80	120	0	0		
Selenium	ND	0.00500	0	0	0	80	120	0	0		
Silver	1.001	0.0100	1	0	100	80	120	0	0		
Sodium	ND	0.0500	0	0	0	80	120	0	0		
Strontium	0.02303	0.0500	0	0	0	80	120	0	0		
Thallium	ND	0.0100	0	0	0	80	120	0	0		
Tin	0.001884	0.0500	0	0	0	80	120	0	0		
Titanium	ND	0.0100	0	0	0	80	120	0	0		
Vanadium	0.4747	0.0200	0.5	0	94.9	80	120	0	0		
Zinc	0.8502	0.0100	1	0	85	80	120	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190816088

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Geheran
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	johnbleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081619-01-SW-U-A-1	8/16/19	1255	A/P	W		✓	3	metals (filtered)
				A/P				6	PCBs
				A/P				6	VOCs
				A/P				3	metals/hardness
				A/P				9	mercury
				A/P				3	TSS
002	081619-02-SW-A-A-1	8/16/19	1335	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
003	081619-03-SW-D-A-1	8/16/19	1355	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:
081619-01-SW-U-A-1 is MS/MSD

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/16/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	J. M	8/16/19 4:20

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy



Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19081G088

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A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081619-03-SW-D-A-1	8/16/19	1355	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	081619-04-SW-B-A-1	8/16/19	1230	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	081619-05-SW-B-B-1	8/16/19	1425	A	W		✓	1	TSS
006	081619-TB01			P				1	trip blank
007	081619-TB02			A				1	trip blank
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/16/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/16/19 4:20pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190816088

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190816088

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/20/2019

8/16/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190816088-001	081619-01-SW-U-A-1	Water	8/16/2019	8/20/2019	E	C	B	D	D	A	F
190816088-002	081619-02-SW-A-A-1	Water	8/16/2019	8/20/2019	E	C	B	D	D	A	F
190816088-003	081619-03-SW-D-A-1	Water	8/16/2019	8/20/2019	E	C	B	D	D	A	F
190816088-004	081619-04-SW-B-A-1	Water	8/16/2019	8/20/2019	E	C	B	D	D	A	F
190816088-005	081619-05-SW-B-B-1	Water	8/16/2019	8/20/2019							A
190816088-006	081619-TB01	Trip Blank	8/16/2019	8/20/2019			A				
190816088-007	081619-TB02	Trip Blank	8/16/2019	8/20/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 21, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190819059
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/19/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*21-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190819059		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-01-SW-U-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 5:16:55 PM
Surr: Decachlorobiphenyl	**76.6**	57.1-135		%REC	1	8/20/2019 5:16:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**3.2**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**106**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 3:53:00 PM
Barium	**0.032**	0.010		mg/L	1	8/20/2019 3:53:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 3:53:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 3:53:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 3:53:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 3:53:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 3:53:00 PM
Silver	**0.005**	0.010	J	mg/L	1	8/20/2019 3:53:00 PM
Zinc	**0.007**	0.010	J	mg/L	1	8/20/2019 3:53:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic, Dissolved	**0.004**	0.005	J	mg/L	1	8/20/2019 4:56:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/20/2019 4:56:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 4:56:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 4:56:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 4:56:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 4:56:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-01-SW-U-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/20/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 4:56:00 PM
Silver, Dissolved	**0.007**	0.010	J	mg/L	1	8/20/2019 4:56:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 4:56:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Acetone	**ND**	5.0		µg/L	1	8/20/2019 6:55:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	8/20/2019 6:55:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/20/2019 6:55:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/20/2019 6:55:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Benzene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/20/2019 6:55:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Toluene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/20/2019 6:55:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/20/2019 6:55:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/20/2019 6:55:00 PM
Surr: 1,2-Dichloroethane-d4	**112**	80.9-122		%REC	1	8/20/2019 6:55:00 PM
Surr: 4-Bromofluorobenzene	**117**	76.5-125		%REC	1	8/20/2019 6:55:00 PM
Surr: Toluene-d8	**110**	80.4-121		%REC	1	8/20/2019 6:55:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-01-SW-U-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/20/2019)						
TSS (Residue, Non-Filterable)	**35.6**	2.0		mg/L	1	8/20/2019

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-02-SW-A-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 5:30:14 PM
Surr: Decachlorobiphenyl	**72.0**	57.1-135		%REC	1	8/20/2019 5:30:14 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**4.0**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**108**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 3:56:00 PM
Barium	**0.033**	0.010		mg/L	1	8/20/2019 3:56:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 3:56:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 3:56:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 3:56:00 PM
Lead	**0.003**	0.005	J	mg/L	1	8/20/2019 3:56:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 3:56:00 PM
Silver	**ND**	0.010		mg/L	1	8/20/2019 3:56:00 PM
Zinc	**0.007**	0.010	J	mg/L	1	8/20/2019 3:56:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:01:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/20/2019 5:01:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 5:01:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:01:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:01:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:01:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-02-SW-A-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/20/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:01:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	8/20/2019 5:01:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 5:01:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Acetone	**ND**	5.0		µg/L	1	8/20/2019 7:16:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	8/20/2019 7:16:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/20/2019 7:16:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/20/2019 7:16:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Benzene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/20/2019 7:16:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Toluene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/20/2019 7:16:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/20/2019 7:16:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/20/2019 7:16:00 PM
Surr: 1,2-Dichloroethane-d4	**108**	80.9-122		%REC	1	8/20/2019 7:16:00 PM
Surr: 4-Bromofluorobenzene	**120**	76.5-125		%REC	1	8/20/2019 7:16:00 PM
Surr: Toluene-d8	**93.4**	80.4-121		%REC	1	8/20/2019 7:16:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-02-SW-A-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/20/2019)						
TSS (Residue, Non-Filterable)	**29.4**	2.0		mg/L	1	8/20/2019

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-03-SW-D-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 5:43:37 PM
Surr: Decachlorobiphenyl	**122**	57.1-135		%REC	1	8/20/2019 5:43:37 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**3.5**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**105**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**0.004**	0.005	J	mg/L	1	8/20/2019 4:12:00 PM
Barium	**0.032**	0.010		mg/L	1	8/20/2019 4:12:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 4:12:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 4:12:00 PM
Copper	**0.006**	0.005		mg/L	1	8/20/2019 4:12:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 4:12:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 4:12:00 PM
Silver	**0.006**	0.010	J	mg/L	1	8/20/2019 4:12:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/20/2019 4:12:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:29:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/20/2019 5:29:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 5:29:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:29:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:29:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:29:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-03-SW-D-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/20/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:29:00 PM
Silver, Dissolved	**0.005**	0.010	J	mg/L	1	8/20/2019 5:29:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 5:29:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Acetone	**ND**	5.0		µg/L	1	8/20/2019 7:37:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	8/20/2019 7:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/20/2019 7:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/20/2019 7:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Benzene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/20/2019 7:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Toluene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/20/2019 7:37:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/20/2019 7:37:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	8/20/2019 7:37:00 PM
Surr: 4-Bromofluorobenzene	**113**	76.5-125		%REC	1	8/20/2019 7:37:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	8/20/2019 7:37:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-03-SW-D-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/20/2019)						
TSS (Residue, Non-Filterable)	**25.4**	2.0		mg/L	1	8/20/2019

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-04-SW-B-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 5:56:58 PM
Surr: Decachlorobiphenyl	**92.0**	57.1-135		%REC	1	8/20/2019 5:56:58 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**3.6**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**106**	5		mg/L CaCO3	1	8/20/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/20/2019 4:19:00 PM
Barium	**0.032**	0.010		mg/L	1	8/20/2019 4:19:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/20/2019 4:19:00 PM
Chromium	**ND**	0.005		mg/L	1	8/20/2019 4:19:00 PM
Copper	**ND**	0.005		mg/L	1	8/20/2019 4:19:00 PM
Lead	**ND**	0.005		mg/L	1	8/20/2019 4:19:00 PM
Selenium	**ND**	0.005		mg/L	1	8/20/2019 4:19:00 PM
Silver	**0.005**	0.010	JN	mg/L	1	8/20/2019 4:19:00 PM
Zinc	**0.007**	0.010	J	mg/L	1	8/20/2019 4:19:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:32:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/20/2019 5:32:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/20/2019 5:32:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:32:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:32:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:32:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-04-SW-B-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/20/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/20/2019 5:32:00 PM
Silver, Dissolved	**0.004**	0.010	JN	mg/L	1	8/20/2019 5:32:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/20/2019 5:32:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Acetone	**ND**	5.0		µg/L	1	8/20/2019 7:59:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	8/20/2019 7:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/20/2019 7:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/20/2019 7:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Benzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/20/2019 7:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Toluene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/20/2019 7:59:00 PM
Surr: 1,2-Dichloroethane-d4	**108**	80.9-122		%REC	1	8/20/2019 7:59:00 PM
Surr: 4-Bromofluorobenzene	**97.2**	76.5-125		%REC	1	8/20/2019 7:59:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	8/20/2019 7:59:00 PM

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-04-SW-B-A-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/20/2019)						
TSS (Residue, Non-Filterable)	**30.8**	2.0		mg/L	1	8/20/2019

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-05-SW-B-B-1
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/20/2019)						
TSS (Residue, Non-Filterable)	**17.2**	1.0		mg/L	1	8/20/2019

Adirondack Environmental Services, Inc

Date: *21-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	081919-TB01
Work Order:	**190819059**	**Collection Date:**	8/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190819059-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Acetone	**ND**	5.0		µg/L	1	8/20/2019 8:20:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	8/20/2019 8:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/20/2019 8:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/20/2019 8:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Benzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/20/2019 8:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Toluene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/20/2019 8:20:00 PM
Surr: 1,2-Dichloroethane-d4	**109**	80.9-122		%REC	1	8/20/2019 8:20:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	8/20/2019 8:20:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/20/2019 8:20:00 PM

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75123

MBLK

SeqNo: **2683316** PrepDate:**8/20/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **MB-75123** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	0.006006	0.0100									J
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2683317** PrepDate:**8/20/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **LCS-75123** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.98	0.00500	2	0	99	85	115	0	0		
Barium, Dissolved	2.024	0.0100	2	0	101	89	112	0	0		
Cadmium, Dissolved	1.938	0.00500	2	0	96.9	85.3	112	0	0		
Chromium, Dissolved	1.985	0.00500	2	0	99.3	89.1	109	0	0		
Copper, Dissolved	2.116	0.00500	2	0	106	86.8	115	0	0		
Lead, Dissolved	1.988	0.00500	2	0	99.4	86.8	114	0	0		
Selenium, Dissolved	1.99	0.00500	2	0	99.5	85	115	0	0		
Silver, Dissolved	0.4854	0.0100	0.5	0	97.1	85	115	0	0		
Zinc, Dissolved	1.913	0.0100	2	0	95.7	85	115	0	0		

MS

SeqNo: **2683328** PrepDate:**8/20/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190819059-004 (081919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0466	0.00500	0.04	0	117	75	123	0	0		
Barium, Dissolved	2.232	0.0100	2	0.02337	110	75	124	0	0		
Cadmium, Dissolved	0.0525	0.00500	0.05	0	105	75	125	0	0		
Chromium, Dissolved	0.2215	0.00500	0.2	0	111	77.2	117	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75123

MS

SeqNo: **2683328** **PrepDate:8/20/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190819059-004 (081919-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper, Dissolved	0.2466	0.00500	0.25	0	98.7	75	125	0	0		
Lead, Dissolved	0.02268	0.00500	0.02	0	113	75	125	0	0		
Selenium, Dissolved	0.01151	0.00500	0.01	0	115	75	125	0	0		
Silver, Dissolved	0.03063	0.0100	0.05	0.004205	52.8	75	125	0	0		S
Zinc, Dissolved	0.5493	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2683327** **PrepDate:8/20/2019** TestNo: **E200.7F** RunNo: **174471**
Samp ID: **190819059-004** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.003011	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02305	0.0100	0	0	0	0	0	0.02337	1.41	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.003746	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0004591	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.002955	0.0100	0	0	0	0	0	0.004205	0	17.6	
Zinc, Dissolved	0.003417	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75124

MS

SeqNo: **2683512** PrepDate: TestNo: **E200.8** RunNo: **174500**
Samp ID: **190819031-002** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04118	0.00100	0.04	0.0003872	102	70	130	0	0		
Barium	2.411	0.00200	2	0.3636	102	70	130	0	0		
Cadmium	0.04736	0.00100	0.05	0	94.7	70	130	0	0		
Chromium	0.1468	0.00500	0.2	0.001909	72.4	70	130	0	0		
Copper	0.2189	0.00500	0.25	0.0112	83.1	70	130	0	0		
Lead	0.01886	0.00100	0.02	0	94.3	70	130	0	0		
Selenium	0.01168	0.00100	0.01	0.0004981	112	70	130	0	0		
Silver	0.01832	0.00500	0.05	0	36.6	70	130	0	0		S
Zinc	0.4477	0.0100	0.5	0.006146	88.3	70	130	0	0		

DUP

SeqNo: **2683511** PrepDate: TestNo: **E200.8** RunNo: **174500**
Samp ID: **190819031-002** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.000395	0.00100	0	0	0	0	0	0.0003872	0	20	
Barium	0.3568	0.00200	0	0	0	0	0	0.3636	1.89	20	
Cadmium	0.00001676	0.00100	0	0	0	0	0	0	0	20	
Chromium	0.002471	0.00500	0	0	0	0	0	0.001909	0	20	
Copper	0.00941	0.00500	0	0	0	0	0	0.0112	17.4	20	
Lead	0.00001392	0.00100	0	0	0	0	0	0	0	20	
Selenium	0.000659	0.00100	0	0	0	0	0	0.0004981	0	20	
Silver	-0.00000341	0.00500	0	0	0	0	0	0	0	20	
Zinc	0.005897	0.0100	0	0	0	0	0	0.006146	0	20	

MBLK

SeqNo: **2682955** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **MB-75124** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75124

MBLK

SeqNo: **2682955** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **MB-75124** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2682956** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **LCS-75124** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.009	0.00500	2	0	100	89.1	111	0	0		
Barium	2.022	0.0100	2	0	101	85	115	0	0		
Cadmium	1.974	0.00500	2	0	98.7	85	115	0	0		
Chromium	1.983	0.00500	2	0	99.1	89.7	109	0	0		
Copper	2.12	0.00500	2	0	106	85	115	0	0		
Lead	2.025	0.00500	2	0	101	88.1	112	0	0		
Selenium	2.006	0.00500	2	0	100	87.5	112	0	0		
Silver	0.4883	0.0100	0.5	0	97.7	85.2	115	0	0		
Zinc	1.949	0.0100	2	0	97.5	88.3	113	0	0		

MS

SeqNo: **2683313** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174471**
Samp ID: **190819059-004 (081919-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0497	0.00500	0.04	0	124	75	125	0	0		
Barium	2.278	0.0100	2	0.03194	112	75	119	0	0		
Cadmium	0.05422	0.00500	0.05	0	108	75	118	0	0		
Chromium	0.221	0.00500	0.2	0	110	75	124	0	0		
Copper	0.2929	0.00500	0.25	0	117	75	125	0	0		
Lead	0.02331	0.00500	0.02	0	117	75	125	0	0		
Selenium	0.01158	0.00500	0.01	0	116	75	125	0	0		
Silver	0.03255	0.0100	0.05	0.005354	54.4	75	125	0	0		S
Zinc	0.5773	0.0100	0.5	0.006602	114	76.9	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75124

DUP	SeqNo: **2683312**	PrepDate:**8/20/2019**	TestNo: **E200.7**	RunNo: **174471**
	Samp ID: **190819059-004**	PrepRef:	Units: **mg/L**	Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.002987	0.00500	0	0	0	0	0	0	0	20	
Barium	0.03152	0.0100	0	0	0	0	0	0.03194	1.31	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.00497	0.00500	0	0	0	0	0	0	0	20	
Lead	0.002043	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.005874	0.0100	0	0	0	0	0	0.005354	0	10.8	
Zinc	0.00673	0.0100	0	0	0	0	0	0.006602	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75129

LCS

SeqNo: **2683778** **PrepDate:8/20/2019** TestNo: **SM2540D** RunNo: **174517**
Samp ID: **LCS-75129** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	456	40.0	483	0	94.4	86.5	114	0	0		

DUP

SeqNo: **2683788** **PrepDate:8/20/2019** TestNo: **SM2540D** RunNo: **174517**
Samp ID: **190814050-004** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	4672	20.0	0	0	0	0	0	4602	1.51	10	

DUP

SeqNo: **2683793** **PrepDate:8/20/2019** TestNo: **SM2540D** RunNo: **174517**
Samp ID: **190814052-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	847	10.0	0	0	0	0	0	752	11.9	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75144

MBLK

SeqNo: **2683935** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **MB-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2683936** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **LCS-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.68	0.500	10	0	96.8	77	123	0	0		

MS

SeqNo: **2683932** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190819059-003 (081919-03-SW-D-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.4	0.500	12.5	3.51	87.1	71	125	0	0		

MSD

SeqNo: **2683933** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190819059-003 (081919-03-SW-D-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	3.51	83.1	71	125	14.4	3.53	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75147

mblk

SeqNo: **2683153** PrepDate:**8/20/2019** TestNo: **SW8082A** RunNo: **174452**
Samp ID: **mb-75147** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.065	0.0100	0.1	0	65	57.1	135	0	0		

lcs

SeqNo: **2683152** PrepDate:**8/20/2019** TestNo: **SW8082A** RunNo: **174452**
Samp ID: **lcs-75147** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5374	0.0650	0.5	0	107	60	140	0	0		
PCB, Total	0.5374	0.0650	0.5	0	107	60	140	0	0		
Surr: Decachlorobiphenyl	0.1076	0.0100	0.1	0	108	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174498

mblk

SeqNo: **2683479** TestNo: **SW8260C** RunNo: **174498**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.21	1.0									J
1,2-Dichloroethane	0.19	1.0									J
1,3-Dichlorobenzene	0.29	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.32	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.27	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.77	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	54.29	5.0	50	0	109	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.39	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	47.39	5.0	50	0	94.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190819059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174498

lcs

SeqNo: **2683477** TestNo: **SW8260C** RunNo: **174498**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	47.96	1.0	50	0	95.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	41.68	1.0	50	0	83.4	72.3	118	0	0		
1,1,2-Trichloroethane	45.65	1.0	50	0	91.3	73.1	123	0	0		
1,1-Dichloroethane	47.92	1.0	50	0	95.8	73.2	127	0	0		
1,1-Dichloroethene	50.42	1.0	50	0	101	70.3	128	0	0		
1,2,3-Trichloropropane	15.55	1.0	25	0	62.2	68.4	115	0	0		S
1,2-Dichlorobenzene	39.47	1.0	50	0	78.9	71	124	0	0		
1,2-Dichloroethane	43.67	1.0	50	0	87.3	72.5	127	0	0		
1,3-Dichlorobenzene	41.93	1.0	50	0	83.9	72.2	121	0	0		
1,3-Dichloropropane	25.14	1.0	25	0	101	76	122	0	0		
1,4-Dichlorobenzene	44.57	1.0	50	0	89.1	71.7	127	0	0		
2-Butanone	39.05	5.0	50	0	78.1	65.1	132	0	0		
4-Methyl-2-pentanone	52.86	5.0	50	0	106	68.7	118	0	0		
Acetone	34.08	5.0	50	0	68.2	69.2	133	0	0		S
Benzene	46.22	1.0	50	0	92.4	71.2	122	0	0		
Carbon disulfide	25.84	1.0	25	0	103	67.8	134	0	0		
Carbon tetrachloride	50.69	1.0	50	0	101	74.5	122	0	0		
Chlorobenzene	47.85	1.0	50	0	95.7	72.7	124	0	0		
Chloroethane	51.12	1.0	50	0	102	72.3	136	0	0		
Chloroform	49.45	1.0	50	0	98.9	71.6	133	0	0		
Dibromochloromethane	48.38	1.0	50	0	96.8	70.6	124	0	0		
Ethylbenzene	45.71	1.0	50	0	91.4	70.9	126	0	0		
Methylene chloride	58.49	1.0	50	0	117	66.3	130	0	0		
Tetrachloroethene	46.12	1.0	50	0	92.2	72.4	119	0	0		
Toluene	43.49	1.0	50	0	87	71.8	116	0	0		
trans-1,2-Dichloroethene	45.43	1.0	50	0	90.9	70.3	120	0	0		
Trichloroethene	46.16	1.0	50	0	92.3	73	127	0	0		
Vinyl chloride	45.44	1.0	50	0	90.9	65.2	134	0	0		
Xylenes, Total	141.8	1.0	150	0	94.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.23	5.0	50	0	94.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.38	5.0	50	0	98.8	76.5	125	0	0		
Surr: Toluene-d8	49.38	5.0	50	0	98.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190819059

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	081919-01-SW-U-A-1	8/19/19	0845	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	081919-02-SW-A-A-1	8/19/18	0910	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	081919-03-SW-D-A-1	8/19/19	0940	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/19/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/19/19 4:45 PM

Temperature

Ambient or (Chilled)

Notes: 6°C

AES Bottles

Y ☒ N ☐

Properly Preserved

(Y) N

Notes:

Received Within Holding Times

(Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Ser

Demo
190819059

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190819055

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gelan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	081919-03-SW-D-A-1	8/19/19	0940	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	081919-04-SW-B-A-1	8/19/19	0825	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	081919-05-SW-~~B~~ B-B-1	8/19/19	1005	A	W		✓	1	TSS
006	081919-TB01			P	TB				trip blank
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/19/19 1555
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/19/19 4:45

Temperature
Ambient or (Chilled)
Notes: 6°C

AES Bottles
Y ☒ N ☐

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc

190819059

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

TAT: **2**

DateDue: 8/21/2019

QClevel: STD+

☐ Hard Copy

8/19/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190819059-001	081919-01-SW-U-A-1	Water	8/19/2019	8/21/2019	E	C	B	D	D	A	F
190819059-002	081919-02-SW-A-A-1	Water	8/19/2019	8/21/2019	E	C	B	D	D	A	F
190819059-003	081919-03-SW-D-A-1	Water	8/19/2019	8/21/2019	E	C	B	D	D	A	F
190819059-004	081919-04-SW-B-A-1	Water	8/19/2019	8/21/2019	E	C	B	D	D	A	F
190819059-005	081919-05-SW-B-B-1	Water	8/19/2019	8/21/2019							A
190819059-006	081919-TB01	Trip Blank	8/19/2019	8/21/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/20/19 – 8/26/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 8/20/19 through 8/26/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one low level exceedance of the water quality criteria (PCB Aroclor 1242). This exceedance (0.253 µg/l vs threshold of 0.2 µg/l) was at the down-current (Buoy 3) location. The sample was collected about one hour and 30 minutes after high tide and they were dredging a Non-TSCA grid cell at the time. The data received for the next day's sample set (8/26/19) samples came back without any exceedances. Additionally, on August 27, AECOM reported that there was elevated mercury concentrations in four of the samples from August 22 associated with the storm event/ high flows. Upon review of the data, these elevated detections were not in excess of the mercury guidance value (0.05 µg/L)

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU, however there were a seven readings between 28 and 37 NTU over the reporting period. Additionally, all readings on august 22 were extremely elevated due to the storm event (not associated with Site Activities). The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU, with isolated observations to 20-40 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. TSS values on August 22 were between 204 and 295 mg/L due to the storm event. The samples collected the following day (August 23) still had TSS values that were still higher than normal (between 32 and 40 mg/L), as the river was settling back to normal conditions. Otherwise, the lab TSS values were never higher than 14.8 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the first month of the remedial dredging operations (VOCs, hardness, PCBs, TSS, and total and dissolved metals) will be continued on a daily basis (first month completed on 8/13/19). BASF has submitted a request to reduce the sampling program to the NYSDEC. The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
082019-01-SW-U-A-1	08:35	AROCLOR-1242	T	ug/l	0.2	0.057	J		U	18	7.49	3.76	High Tide	12.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-01-SW-U-A-1	08:35	MERCURY	T	ng/l	50	2.2			U	18	7.49	3.76	High Tide	12.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-02-SW-A-A-1	09:00	CHROMIUM, TOTAL	D	mg/l	0.18	0.009			A	24	7.05	3.19	High Tide	11.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-02-SW-A-A-1	09:00	MERCURY	T	ng/l	50	4.2			A	24	7.05	3.19	High Tide	11.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-03-SW-D-B-1	09:25	AROCLOR-1242	T	ug/l	0.2	0.044	J		D	18.5	7.78	2.67	High Tide	12.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-03-SW-D-B-1	09:25	CHROMIUM, TOTAL	D	mg/l	0.18	0.004	J		D	18.5	7.78	2.67	High Tide	12.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-03-SW-D-B-1	09:25	COPPER	D	mg/l	0.01	0.005			D	18.5	7.78	2.67	High Tide	12.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-03-SW-D-B-1	09:25	MERCURY	T	ng/l	50	4.5			D	18.5	7.78	2.67	High Tide	12.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-04-SW-B-B-1	08:15	AROCLOR-1242	T	ug/l	0.2	0.045	J		B	10	7.14	4.03	High Tide	7.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-04-SW-B-B-1	08:15	CHROMIUM, TOTAL	D	mg/l	0.18	0.006			B	10	7.14	4.03	High Tide	7.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082019-04-SW-B-B-1	08:15	MERCURY	T	ng/l	50	2.8			B	10	7.14	4.03	High Tide	7.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
082119-01-SW-U-A-1	09:50	MERCURY	T	ng/l	50	2.3			U	18	6.17	3.17	High Tide	13	Moon Pool, Double Silt Curtain, Bubble Curtain	10:00
082119-02-SW-A-A-1	10:25	MERCURY	T	ng/l	50	2.4			A	23	9.32	2.51	High Tide	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	10:00
082119-03-SW-D-A-1	10:40	AROCLOR-1242	T	ug/l	0.2	0.044	J		D	32	7.71	2.31	Outgoing tide (ebb)	11.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:00
082119-03-SW-D-A-1	10:40	MERCURY	T	ng/l	50	3			D	32	7.71	2.31	Outgoing tide (ebb)	11.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:00
082119-04-SW-B-A-1	09:30	MERCURY	T	ng/l	50	5.2			B	17	4.68	3.42	High Tide	10.8	Moon Pool, Double Silt Curtain, Bubble Curtain	10:00
082219-01-SW-U-A-1	13:10	MERCURY	T	ng/l	50	18			U	16	196.87	0.99	Outgoing tide (ebb)	295	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-02-SW-A-A-1	13:35	MERCURY	T	ng/l	50	21.6			A	23	219.11	0.82	Outgoing tide (ebb)	292	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-1	13:55	AROCLOR-1242	T	ug/l	0.2	0.071			D	30	162.97	0.48	Outgoing tide (ebb)	204	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-1	13:55	BENZENE	T	ug/l	10	0.2	J		D	30	162.97	0.48	Outgoing tide (ebb)	204	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-1	13:55	COPPER	D	mg/l	0.01	0.007			D	30	162.97	0.48	Outgoing tide (ebb)	204	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-1	13:55	MERCURY	T	ng/l	50	22.8			D	30	162.97	0.48	Outgoing tide (ebb)	204	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-1	13:55	ZINC	D	mg/l	0.02	0.003			D	30	162.97	0.48	Outgoing tide (ebb)	204	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-2	14:10	AROCLOR-1242	T	ug/l	0.2	0.066			D	30	226.44	0.31	Outgoing tide (ebb)	213	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-2	14:10	BENZENE	T	ug/l	10	0.2	J		D	30	226.44	0.31	Outgoing tide (ebb)	213	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-2	14:10	COPPER	D	mg/l	0.01	0.004	J		D	30	226.44	0.31	Outgoing tide (ebb)	213	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-03-SW-D-A-2	14:10	MERCURY	T	ng/l	50	24.1			D	30	226.44	0.31	Outgoing tide (ebb)	213	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082219-04-SW-B-A-1	12:50	MERCURY	T	ng/l	50	20.3			B	15	186.30	1.34	Outgoing tide (ebb)	245	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082319-01-SW-U-A-1	11:35	MERCURY	T	ng/l	50	4.2			U	17	28.45	2.3	High Tide	37.4	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-02-SW-A-B-1	12:15	MERCURY	T	ng/l	50	4.8			A	13.5	31.47	1.64	Outgoing tide (ebb)	35.3	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-03-SW-D-B-1	12:35	AROCLOR-1242	T	ug/l	0.2	0.253		x	D	17.5	37.02	1.46	Outgoing tide (ebb)	40.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-03-SW-D-B-1	12:35	BENZENE	T	ug/l	10	0.3	J		D	17.5	37.02	1.46	Outgoing tide (ebb)	40.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-03-SW-D-B-1	12:35	CHLOROBENZENE	T	ug/l	5	1.6			D	17.5	37.02	1.46	Outgoing tide (ebb)	40.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-03-SW-D-B-1	12:35	MERCURY	T	ng/l	50	9.2			D	17.5	37.02	1.46	Outgoing tide (ebb)	40.5	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082319-04-SW-B-A-1	11:15	MERCURY	T	ng/l	50	3.3			B	17	31.41	2.55	High Tide	32.6	Moon Pool, Double Silt Curtain, Bubble Curtain	10:45
082619-01-SW-U-A-1	08:55	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.5			U	14	6.05	2.05	Low Tide	8.5	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-01-SW-U-A-1	08:55	MERCURY	T	ng/l	50	1.7			U	14	6.05	2.05	Low Tide	8.5	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-02-SW-A-B-1	09:35	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.5			A	12	7.43	2.83	Low Tide	10.3	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-02-SW-A-B-1	09:35	MERCURY	T	ng/l	50	2			A	12	7.43	2.83	Low Tide	10.3	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-02-SW-A-B-1	09:35	ZINC	D	mg/l	0.02	0.006	J		A	12	7.43	2.83	Low Tide	10.3	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-03-SW-U-B-1	09:55	AROCLOR-1242	T	ug/l	0.2	0.04	J		U	17.5	9.12	3.5	Low Tide	14.8	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-03-SW-U-B-1	09:55	CHROMIUM, TOTAL	D	mg/l	0.18	0.006			U	17.5	9.12	3.5	Low Tide	14.8	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-03-SW-U-B-1	09:55	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			U	17.5	9.12	3.5	Low Tide	14.8	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-03-SW-U-B-1	09:55	MERCURY	T	ng/l	50	3			U	17.5	9.12	3.5	Low Tide	14.8	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-04-SW-B-A-1	08:30	CHROMIUM, TOTAL	D	mg/l	0.18	0.01			B	13	7.09	1.3	Low Tide	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-04-SW-B-A-1	08:30	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			B	13	7.09	1.3	Low Tide	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15
082619-04-SW-B-A-1	08:30	MERCURY	T	ng/l	50	2.1			B	13	7.09	1.3	Low Tide	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:15

J: Analyte detected below quantitation limit

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 22, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190820050
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/20/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*22-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190820050		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-01-SW-U-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1242	**0.057**	0.065	J	µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 7:51:12 PM
PCB, Total	**0.057**	0.065	J	µg/L	1	8/20/2019 7:51:12 PM
Surr: Decachlorobiphenyl	**83.0**	57.1-135		%REC	1	8/20/2019 7:51:12 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**2.2**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/21/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/21/2019 11:58:00 AM
Barium	**0.027**	0.010		mg/L	1	8/21/2019 11:58:00 AM
Cadmium	**ND**	0.001		mg/L	1	8/21/2019 11:58:00 AM
Chromium	**ND**	0.005		mg/L	1	8/21/2019 11:58:00 AM
Copper	**ND**	0.005		mg/L	1	8/21/2019 11:58:00 AM
Lead	**ND**	0.005		mg/L	1	8/21/2019 11:58:00 AM
Selenium	**ND**	0.005		mg/L	1	8/21/2019 11:58:00 AM
Silver	**ND**	0.010		mg/L	1	8/21/2019 11:58:00 AM
Zinc	**ND**	0.010		mg/L	1	8/21/2019 11:58:00 AM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/21/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:32:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/21/2019 1:32:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/21/2019 1:32:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:32:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:32:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:32:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-01-SW-U-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/21/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:32:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:32:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:32:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Acetone	**ND**	5.0	N	µg/L	1	8/21/2019 4:12:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/21/2019 4:12:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 4:12:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 4:12:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:12:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	8/21/2019 4:12:00 PM
Surr: 1,2-Dichloroethane-d4	**108**	80.9-122		%REC	1	8/21/2019 4:12:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	8/21/2019 4:12:00 PM
Surr: Toluene-d8	**106**	80.4-121		%REC	1	8/21/2019 4:12:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-01-SW-U-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**12.3**	1.0		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 8:04:32 PM
Surr: Decachlorobiphenyl	**68.2**	57.1-135		%REC	1	8/20/2019 8:04:32 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**4.2**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	8/21/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/21/2019 12:04:00 PM
Barium	**0.028**	0.010		mg/L	1	8/21/2019 12:04:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/21/2019 12:04:00 PM
Chromium	**ND**	0.005		mg/L	1	8/21/2019 12:04:00 PM
Copper	**0.007**	0.005		mg/L	1	8/21/2019 12:04:00 PM
Lead	**ND**	0.005		mg/L	1	8/21/2019 12:04:00 PM
Selenium	**ND**	0.005		mg/L	1	8/21/2019 12:04:00 PM
Silver	**ND**	0.010		mg/L	1	8/21/2019 12:04:00 PM
Zinc	**ND**	0.010		mg/L	1	8/21/2019 12:04:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/21/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:45:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/21/2019 1:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/21/2019 1:45:00 PM
Chromium, Dissolved	**0.009**	0.005		mg/L	1	8/21/2019 1:45:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:45:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/21/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 4:33:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/21/2019 4:33:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 4:33:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 4:33:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:33:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	8/21/2019 4:33:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	8/21/2019 4:33:00 PM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	8/21/2019 4:33:00 PM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	8/21/2019 4:33:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**11.2**	1.0		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-03-SW-D-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1242	**0.044**	0.065	J	µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 8:17:53 PM
PCB, Total	**0.044**	0.065	J	µg/L	1	8/20/2019 8:17:53 PM
Surr: Decachlorobiphenyl	**40.6**	57.1-135	S	%REC	1	8/20/2019 8:17:53 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**4.5**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/21/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/21/2019 12:11:00 PM
Barium	**0.025**	0.010		mg/L	1	8/21/2019 12:11:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/21/2019 12:11:00 PM
Chromium	**ND**	0.005		mg/L	1	8/21/2019 12:11:00 PM
Copper	**0.006**	0.005		mg/L	1	8/21/2019 12:11:00 PM
Lead	**ND**	0.005		mg/L	1	8/21/2019 12:11:00 PM
Selenium	**ND**	0.005		mg/L	1	8/21/2019 12:11:00 PM
Silver	**ND**	0.010		mg/L	1	8/21/2019 12:11:00 PM
Zinc	**ND**	0.010		mg/L	1	8/21/2019 12:11:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/21/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:52:00 PM
Barium, Dissolved	**0.028**	0.010		mg/L	1	8/21/2019 1:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/21/2019 1:52:00 PM
Chromium, Dissolved	**0.004**	0.005	J	mg/L	1	8/21/2019 1:52:00 PM
Copper, Dissolved	**0.005**	0.005		mg/L	1	8/21/2019 1:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:52:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-03-SW-D-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/21/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 1:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 1:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 4:54:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/21/2019 4:54:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 4:54:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 4:54:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 4:54:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	8/21/2019 4:54:00 PM
Surr: 1,2-Dichloroethane-d4	**112**	80.9-122		%REC	1	8/21/2019 4:54:00 PM
Surr: 4-Bromofluorobenzene	**121**	76.5-125		%REC	1	8/21/2019 4:54:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/21/2019 4:54:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-03-SW-D-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**12.7**	1.0		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-04-SW-B-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1242	**0.045**	0.065	J	µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 8:31:14 PM
PCB, Total	**0.045**	0.065	J	µg/L	1	8/20/2019 8:31:14 PM
Surr: Decachlorobiphenyl	**88.8**	57.1-135		%REC	1	8/20/2019 8:31:14 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**2.8**	0.5		ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	8/21/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/21/2019 12:19:00 PM
Barium	**0.028**	0.010		mg/L	1	8/21/2019 12:19:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/21/2019 12:19:00 PM
Chromium	**ND**	0.005		mg/L	1	8/21/2019 12:19:00 PM
Copper	**0.005**	0.005		mg/L	1	8/21/2019 12:19:00 PM
Lead	**ND**	0.005		mg/L	1	8/21/2019 12:19:00 PM
Selenium	**ND**	0.005		mg/L	1	8/21/2019 12:19:00 PM
Silver	**ND**	0.010		mg/L	1	8/21/2019 12:19:00 PM
Zinc	**ND**	0.010		mg/L	1	8/21/2019 12:19:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/21/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:03:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/21/2019 2:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/21/2019 2:03:00 PM
Chromium, Dissolved	**0.006**	0.005		mg/L	1	8/21/2019 2:03:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:03:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-04-SW-B-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/21/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:03:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 2:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 2:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 5:16:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/21/2019 5:16:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 5:16:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 5:16:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/21/2019 5:16:00 PM
Surr: 1,2-Dichloroethane-d4	**118**	80.9-122		%REC	1	8/21/2019 5:16:00 PM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	8/21/2019 5:16:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/21/2019 5:16:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-04-SW-B-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**7.7**	1.1		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-05-SW-B-B-1
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**8.6**	1.1		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-3
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
PCB, Total	**ND**	0.065		µg/L	1	8/20/2019 10:04:40 PM
Surr: Decachlorobiphenyl	**28.6**	57.1-135	S	%REC	1	8/20/2019 10:04:40 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/20/2019)						
Mercury	**0.1**	0.5	J	ng/L	1	8/21/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/21/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/20/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/21/2019 12:32:00 PM
Barium	**ND**	0.010		mg/L	1	8/21/2019 12:32:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/21/2019 12:32:00 PM
Chromium	**ND**	0.005		mg/L	1	8/21/2019 12:32:00 PM
Copper	**0.005**	0.005		mg/L	1	8/21/2019 12:32:00 PM
Lead	**ND**	0.005		mg/L	1	8/21/2019 12:32:00 PM
Selenium	**ND**	0.005		mg/L	1	8/21/2019 12:32:00 PM
Silver	**ND**	0.010		mg/L	1	8/21/2019 12:32:00 PM
Zinc	**ND**	0.010		mg/L	1	8/21/2019 12:32:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/21/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:52:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 2:52:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/21/2019 2:52:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:52:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:52:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:52:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-3
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/21/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/21/2019 2:52:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 2:52:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/21/2019 2:52:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 5:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/21/2019 5:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 5:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 5:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/21/2019 5:37:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	8/21/2019 5:37:00 PM
Surr: 4-Bromofluorobenzene	**98.0**	76.5-125		%REC	1	8/21/2019 5:37:00 PM
Surr: Toluene-d8	**111**	80.4-121		%REC	1	8/21/2019 5:37:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-02-SW-A-A-3
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/21/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/21/2019

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-TB01
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 5:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/21/2019 5:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 5:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 5:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/21/2019 5:58:00 PM
Surr: 1,2-Dichloroethane-d4	**115**	80.9-122		%REC	1	8/21/2019 5:58:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	8/21/2019 5:58:00 PM
Surr: Toluene-d8	**110**	80.4-121		%REC	1	8/21/2019 5:58:00 PM

Adirondack Environmental Services, Inc

Date: *22-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082019-TB02
Work Order:	**190820050**	**Collection Date:**	8/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190820050-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Acetone	**ND**	5.0		µg/L	1	8/21/2019 6:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/21/2019 6:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Benzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/21/2019 6:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Toluene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/21/2019 6:19:00 PM
Surr: 1,2-Dichloroethane-d4	**117**	80.9-122		%REC	1	8/21/2019 6:19:00 PM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	8/21/2019 6:19:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/21/2019 6:19:00 PM

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75141

MBLK

SeqNo: **2683508** PrepDate: TestNo: **E200.8** RunNo: **174500**
Samp ID: **MBLK** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00100									
Barium	ND	0.00200									
Cadmium	ND	0.00100									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00100									
Selenium	ND	0.00100									
Silver	ND	0.00500									
Zinc	ND	0.0100									

LCS

SeqNo: **2683509** PrepDate: TestNo: **E200.8** RunNo: **174500**
Samp ID: **LCS** PrepRef: Units: **mg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.01977	0.00100	0.02	0	98.8	85	115	0	0		
Barium	0.0206	0.00200	0.02	0	103	85	115	0	0		
Cadmium	0.02069	0.00100	0.02	0	103	85	115	0	0		
Chromium	0.0192	0.00500	0.02	0	96	85	115	0	0		
Copper	0.02079	0.00500	0.02	0	104	85	115	0	0		
Lead	0.02072	0.00100	0.02	0	104	85	115	0	0		
Selenium	0.01843	0.00100	0.02	0	92.2	85	115	0	0		
Silver	0.005065	0.00500	0.005	0	101	85	115	0	0		
Zinc	0.02016	0.0100	0.02	0	101	85	115	0	0		

MBLK

SeqNo: **2684001** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174523**
Samp ID: **MB-75141** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75141

MBLK

SeqNo: **2684001** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174523**
Samp ID: **MB-75141** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2684002** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174523**
Samp ID: **LCS-75141** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.956	0.00500	2	0	97.8	89.1	111	0	0		
Barium	2.005	0.0100	2	0	100	85	115	0	0		
Cadmium	1.952	0.00500	2	0	97.6	85	115	0	0		
Chromium	1.969	0.00500	2	0	98.4	89.7	109	0	0		
Copper	2.13	0.00500	2	0	106	85	115	0	0		
Lead	2.028	0.00500	2	0	101	88.1	112	0	0		
Selenium	1.951	0.00500	2	0	97.5	87.5	112	0	0		
Silver	0.5489	0.0100	0.5	0	110	85.2	115	0	0		
Zinc	1.911	0.0100	2	0	95.6	88.3	113	0	0		

MS

SeqNo: **2684013** PrepDate:**8/20/2019** TestNo: **E200.7** RunNo: **174523**
Samp ID: **190820050-006 (082019-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04041	0.00500	0.04	0	101	75	125	0	0		
Barium	2.187	0.0100	2	0	109	75	119	0	0		
Cadmium	0.05514	0.00500	0.05	0	110	75	118	0	0		
Chromium	0.2112	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2802	0.00500	0.25	0.005259	110	75	125	0	0		
Lead	0.0223	0.00500	0.02	0	111	75	125	0	0		
Selenium	0.01778	0.00500	0.01	0	178	75	125	0	0		S
Silver	0.04329	0.0100	0.05	0	86.6	75	125	0	0		
Zinc	0.5618	0.0100	0.5	0	112	76.9	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75141

DUP	SeqNo: **2684010**	PrepDate:**8/20/2019**	TestNo: **E200.7**	RunNo: **174523**
	Samp ID: **190820050-006**	PrepRef:	Units: **mg/L**	Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	ND	0.0100	0	0	0	0	0	0	0	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.0055	0.00500	0	0	0	0	0	0.005259	4.48	20	
Lead	ND	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	0.001698	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002246	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75144

MBLK

SeqNo: **2683935** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **MB-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2684250** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **MB-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2683936** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **LCS-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.68	0.500	10	0	96.8	77	123	0	0		

LCS

SeqNo: **2684251** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **LCS-75144** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.72	0.500	10	0	97.2	77	123	0	0		

MS

SeqNo: **2683932** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190819059-003** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.4	0.500	12.5	3.51	87.1	71	125	0	0		

MS

SeqNo: **2684254** PrepDate:**8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190820050-001 (082019-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.1	0.500	12.5	2.18	87.4	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75144

MSD

SeqNo: **2683933** **PrepDate:8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190819059-003** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	3.51	83.1	71	125	14.4	3.53	24	

MSD

SeqNo: **2684255** **PrepDate:8/20/2019** TestNo: **E1631** RunNo: **174520**
Samp ID: **190820050-001 (082019-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13	0.500	12.5	2.18	86.6	71	125	13.1	0.766	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75147

mblk

SeqNo: **2683153** PrepDate:**8/20/2019** TestNo: **SW8082A** RunNo: **174452**
Samp ID: **mb-75147** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.065	0.0100	0.1	0	65	57.1	135	0	0		

lcs

SeqNo: **2683152** PrepDate:**8/20/2019** TestNo: **SW8082A** RunNo: **174452**
Samp ID: **lcs-75147** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5374	0.0650	0.5	0	107	60	140	0	0		
PCB, Total	0.5374	0.0650	0.5	0	107	60	140	0	0		
Surr: Decachlorobiphenyl	0.1076	0.0100	0.1	0	108	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75148

LCS

SeqNo: **2684159** **PrepDate:8/21/2019** TestNo: **SM2540D** RunNo: **174534**
Samp ID: **LCS-75148** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	448	40.0	483	0	92.8	86.5	114	0	0		

LCS

SeqNo: **2684296** **PrepDate:8/21/2019** TestNo: **SM2540D** RunNo: **174541**
Samp ID: **LCS-75148** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	448	40.0	483	0	92.8	86.5	114	0	0		

DUP

SeqNo: **2684299** **PrepDate:8/21/2019** TestNo: **SM2540D** RunNo: **174541**
Samp ID: **190815047-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	324	20.0	0	0	0	0	0	304	6.37	10	

DUP

SeqNo: **2684304** **PrepDate:8/21/2019** TestNo: **SM2540D** RunNo: **174541**
Samp ID: **190815050-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	330	20.0	0	0	0	0	0	318	3.70	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75151

MBLK

SeqNo: **2684016** PrepDate:**8/21/2019** TestNo: **E200.7F** RunNo: **174523**
Samp ID: **MB-75151** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2684017** PrepDate:**8/21/2019** TestNo: **E200.7F** RunNo: **174523**
Samp ID: **LCS-75151** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	1.991	0.00500	2	0	99.5	85	115	0	0		
Barium, Dissolved	2.016	0.0100	2	0	101	89	112	0	0		
Cadmium, Dissolved	1.991	0.00500	2	0	99.5	85.3	112	0	0		
Chromium, Dissolved	1.972	0.00500	2	0	98.6	89.1	109	0	0		
Copper, Dissolved	2.103	0.00500	2	0	105	86.8	115	0	0		
Lead, Dissolved	2.055	0.00500	2	0	103	86.8	114	0	0		
Selenium, Dissolved	1.996	0.00500	2	0	99.8	85	115	0	0		
Silver, Dissolved	0.5389	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	1.93	0.0100	2	0	96.5	85	115	0	0		

MS

SeqNo: **2684029** PrepDate:**8/21/2019** TestNo: **E200.7F** RunNo: **174523**
Samp ID: **190820050-006 (082019-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04139	0.00500	0.04	0	103	75	123	0	0		
Barium, Dissolved	2.179	0.0100	2	0	109	75	124	0	0		
Cadmium, Dissolved	0.0552	0.00500	0.05	0	110	75	125	0	0		
Chromium, Dissolved	0.2056	0.00500	0.2	0	103	77.2	117	0	0		
Copper, Dissolved	0.2764	0.00500	0.25	0	111	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75151

MS

SeqNo: **2684029** **PrepDate:8/21/2019** TestNo: **E200.7F** RunNo: **174523**
Samp ID: **190820050-006 (082019-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.0223	0.00500	0.02	0	111	75	125	0	0		
Selenium, Dissolved	0.01094	0.00500	0.01	0	109	75	125	0	0		
Silver, Dissolved	0.03956	0.0100	0.05	0	79.1	75	125	0	0		
Zinc, Dissolved	0.5628	0.0100	0.5	0	113	75	121	0	0		

DUP

SeqNo: **2684028** **PrepDate:8/21/2019** TestNo: **E200.7F** RunNo: **174523**
Samp ID: **190820050-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	ND	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	0.00005137	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.003176	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	0.0001345	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002368	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174545

mblk	SeqNo: **2684406**	TestNo: **SW8260C**	RunNo: **174545**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	57.48	5.0	50	0	115	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	57.6	5.0	50	0	115	76.5	125	0	0		
Surr: Toluene-d8	54.94	5.0	50	0	110	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174545

lcs

SeqNo: **2684405** TestNo: **SW8260C** RunNo: **174545**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.3	1.0	10	0	93	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.35	1.0	10	0	83.5	72.3	118	0	0		
1,1,2-Trichloroethane	10.19	1.0	10	0	102	73.1	123	0	0		
1,1-Dichloroethane	9.07	1.0	10	0	90.7	73.2	127	0	0		
1,1-Dichloroethene	8.3	1.0	10	0	83	70.3	128	0	0		
1,2,3-Trichloropropane	3.33	1.0	5	0	66.6	68.4	115	0	0		S
1,2-Dichlorobenzene	7.73	1.0	10	0	77.3	71	124	0	0		
1,2-Dichloroethane	8.73	1.0	10	0	87.3	72.5	127	0	0		
1,3-Dichlorobenzene	7.85	1.0	10	0	78.5	72.2	121	0	0		
1,3-Dichloropropane	5.38	1.0	5	0	108	76	122	0	0		
1,4-Dichlorobenzene	9.04	1.0	10	0	90.4	71.7	127	0	0		
2-Butanone	9.6	5.0	10	0	96	65.1	132	0	0		
4-Methyl-2-pentanone	10.43	5.0	10	0	104	68.7	118	0	0		
Acetone	7.24	5.0	10	0	72.4	69.2	133	0	0		
Benzene	8.15	1.0	10	0	81.5	71.2	122	0	0		
Carbon disulfide	4.17	1.0	5	0	83.4	67.8	134	0	0		
Carbon tetrachloride	10.08	1.0	10	0	101	74.5	122	0	0		
Chlorobenzene	7.37	1.0	10	0	73.7	72.7	124	0	0		
Chloroethane	10.93	1.0	10	0	109	72.3	136	0	0		
Chloroform	9.07	1.0	10	0	90.7	71.6	133	0	0		
Dibromochloromethane	9.58	1.0	10	0	95.8	70.6	124	0	0		
Ethylbenzene	9	1.0	10	0	90	70.9	126	0	0		
Methylene chloride	8.26	1.0	10	0	82.6	66.3	130	0	0		
Tetrachloroethene	8.8	1.0	10	0	88	72.4	119	0	0		
Toluene	7.75	1.0	10	0	77.5	71.8	116	0	0		
trans-1,2-Dichloroethene	8.39	1.0	10	0	83.9	70.3	120	0	0		
Trichloroethene	7.72	1.0	10	0	77.2	73	127	0	0		
Vinyl chloride	9.64	1.0	10	0	96.4	65.2	134	0	0		
Xylenes, Total	22.03	1.0	30	0	73.4	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	52.31	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.96	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	53.63	5.0	50	0	107	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174545

ms	SeqNo: **2684416**	TestNo: **SW8260C**	RunNo: **174545**
	Samp ID: **190820050-001b (082019-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.31	1.0	10	0	103	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.2	1.0	10	0	92	70.1	123	0	0		
1,1,2-Trichloroethane	9.31	1.0	10	0	93.1	72.1	119	0	0		
1,1-Dichloroethane	10.6	1.0	10	0	106	70.4	126	0	0		
1,1-Dichloroethene	10.23	1.0	10	0	102	70.2	125	0	0		
1,2,3-Trichloropropane	3.96	1.0	5	0	79.2	53.7	101	0	0		
1,2-Dichlorobenzene	10.34	1.0	10	0	103	70.2	123	0	0		
1,2-Dichloroethane	10.09	1.0	10	0.19	99	73.5	126	0	0		
1,3-Dichlorobenzene	9.76	1.0	10	0	97.6	70.4	124	0	0		
1,3-Dichloropropane	4.9	1.0	5	0	98	64	125	0	0		
1,4-Dichlorobenzene	9.38	1.0	10	0	93.8	70.8	127	0	0		
2-Butanone	9.84	5.0	10	0	98.4	60.5	123	0	0		
4-Methyl-2-pentanone	9.89	5.0	10	0	98.9	52.8	133	0	0		
Acetone	3.37	5.0	10	0	33.7	56.3	135	0	0		JS
Benzene	9.86	1.0	10	0	98.6	70.2	127	0	0		
Carbon disulfide	5.19	1.0	5	0	104	62.2	130	0	0		
Carbon tetrachloride	10.58	1.0	10	0	106	56.4	137	0	0		
Chlorobenzene	8.94	1.0	10	0	89.4	72.7	128	0	0		
Chloroethane	11.33	1.0	10	0	113	71.3	135	0	0		
Chloroform	10.29	1.0	10	0	103	70.2	125	0	0		
Dibromochloromethane	8.14	1.0	10	0	81.4	69.5	123	0	0		
Ethylbenzene	10.49	1.0	10	0	105	71.9	129	0	0		
Methylene chloride	8.14	1.0	10	0	81.4	65.3	123	0	0		
Tetrachloroethene	8.88	1.0	10	0	88.8	74.5	121	0	0		
Toluene	8.7	1.0	10	0	87	73	122	0	0		
trans-1,2-Dichloroethene	10.07	1.0	10	0	101	69.1	133	0	0		
Trichloroethene	8.47	1.0	10	0	84.7	71.1	126	0	0		
Vinyl chloride	10.66	1.0	10	0	107	65	137	0	0		
Xylenes, Total	30.73	1.0	30	0.38	101	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	55.7	5.0	50	0	111	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	60.66	5.0	50	0	121	76.5	125	0	0		
Surr: Toluene-d8	52.05	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190820050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174545

msd

SeqNo: **2684417** TestNo: **SW8260C** RunNo: **174545**
Samp ID: **190820050-001b (082019-01-SW-U-** Units: **µg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.59	1.0	10	0	95.9	71.6	126	10.31	7.24	20.4	
1,1,2,2-Tetrachloroethane	9.05	1.0	10	0	90.5	70.1	123	9.2	1.64	18.6	
1,1,2-Trichloroethane	9.19	1.0	10	0	91.9	72.1	119	9.31	1.30	20	
1,1-Dichloroethane	9.99	1.0	10	0	99.9	70.4	126	10.6	5.93	19.2	
1,1-Dichloroethene	9.64	1.0	10	0	96.4	70.2	125	10.23	5.94	16.1	
1,2,3-Trichloropropane	3.45	1.0	5	0	69	53.7	101	3.96	13.8	20	
1,2-Dichlorobenzene	7.81	1.0	10	0	78.1	70.2	123	10.34	27.9	17.9	Z
1,2-Dichloroethane	9.61	1.0	10	0.19	94.2	73.5	126	10.09	4.87	15.6	
1,3-Dichlorobenzene	7.85	1.0	10	0	78.5	70.4	124	9.76	21.7	14.3	Z
1,3-Dichloropropane	4.8	1.0	5	0	96	64	125	4.9	2.06	0	
1,4-Dichlorobenzene	8.55	1.0	10	0	85.5	70.8	127	9.38	9.26	14.4	
2-Butanone	8.49	5.0	10	0	84.9	60.5	123	9.84	14.7	15	
4-Methyl-2-pentanone	9.66	5.0	10	0	96.6	52.8	133	9.89	2.35	11.9	
Acetone	3.09	5.0	10	0	30.9	56.3	135	3.37	0	10.6	JS
Benzene	8.45	1.0	10	0	84.5	70.2	127	9.86	15.4	18.4	
Carbon disulfide	4.76	1.0	5	0	95.2	62.2	130	5.19	8.64	13.1	
Carbon tetrachloride	9.88	1.0	10	0	98.8	56.4	137	10.58	6.84	20.3	
Chlorobenzene	8.34	1.0	10	0	83.4	72.7	128	8.94	6.94	19.6	
Chloroethane	10.58	1.0	10	0	106	71.3	135	11.33	6.85	27.8	
Chloroform	9.71	1.0	10	0	97.1	70.2	125	10.29	5.80	20.3	
Dibromochloromethane	8.45	1.0	10	0	84.5	69.5	123	8.14	3.74	18.8	
Ethylbenzene	7.94	1.0	10	0	79.4	71.9	129	10.49	27.7	16.3	Z
Methylene chloride	7.23	1.0	10	0	72.3	65.3	123	8.14	11.8	21.4	
Tetrachloroethene	8.52	1.0	10	0	85.2	74.5	121	8.88	4.14	20.9	
Toluene	8.89	1.0	10	0	88.9	73	122	8.7	2.16	19.4	
trans-1,2-Dichloroethene	8.73	1.0	10	0	87.3	69.1	133	10.07	14.3	16.1	
Trichloroethene	8.08	1.0	10	0	80.8	71.1	126	8.47	4.71	16.6	
Vinyl chloride	10.01	1.0	10	0	100	65	137	10.66	6.29	20.5	
Xylenes, Total	24.38	1.0	30	0.38	80	72	130	30.73	23.0	16.1	Z
Surr: 1,2-Dichloroethane-d4	56.56	5.0	50	0	113	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	55.46	5.0	50	0	111	76.5	125	0	0	0	
Surr: Toluene-d8	52.45	5.0	50	0	105	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190820050

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bluhm@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082019-01-SW-U-A-1	8/20/19	0835	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	082019-02-SW-A-A-1	8/20/19	0900	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	082019-03-SW-D-B-1	8/20/19	0925	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/20/19 4:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/20/19 @ 5:12pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services, Inc.

Demo
190820050

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order #

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082019-03-SW-D-B-1	8/20/19	0925	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
004	082019-04-SW-B-B-1	8/20/19	0815	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
005	082019-05-SW-B-B-1	8/20/19	0940	A/P	W		✓	1	TSS
006	082019-02-SW-A-A-3	8/20/19	1145	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/20/19 905
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/20/19 @ 5:13 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	Y (N)	Y (N)
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order #

Experience is the solution

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	082019-02-SW-A-A-3	8/20/19	1145	A	W		✓	1	metals/hardness
	↓	↓	↓	A	↓		↓	3	mercury
	↓	↓	↓	A	↓		↓	1	TSS
007	082019-TB01			A	TB				trip blank
008	082019-TB02			A	TB				trip blank
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/20/19 905
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/20/19 @ 5:12 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☐ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190820050

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/22/2019

8/20/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190820050-001	082019-01-SW-U-A-1	Water	8/20/2019	8/22/2019	E	C	B	D	D	A	F
190820050-002	082019-02-SW-A-A-1	Water	8/20/2019	8/22/2019	E	C	B	D	D	A	F
190820050-003	082019-03-SW-D-B-1	Water	8/20/2019	8/22/2019	E	C	B	D	D	A	F
190820050-004	082019-04-SW-B-B-1	Water	8/20/2019	8/22/2019	E	C	B	D	D	A	F
190820050-005	082019-05-SW-B-B-1	Water	8/20/2019	8/22/2019							A
190820050-006	082019-02-SW-A-A-3	Water	8/20/2019	8/22/2019	E	C	B	D	D	A	F
190820050-007	082019-TB01	Trip Blank	8/20/2019	8/22/2019			A				
190820050-008	082019-TB02	Trip Blank	8/20/2019	8/22/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 23, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190821069
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/21/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *23-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190821069	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-01-SW-U-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/21/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
PCB, Total	**ND**	0.065		µg/L	1	8/21/2019 7:57:05 PM
Surr: Decachlorobiphenyl	**90.0**	57.1-135		%REC	1	8/21/2019 7:57:05 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/22/2019)						
Mercury	**2.3**	0.5		ng/L	1	8/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Total Hardness (As CaCO3)	**85**	5		mg/L CaCO3	1	8/23/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/23/2019 1:08:00 PM
Barium	**0.024**	0.010		mg/L	1	8/23/2019 1:08:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/23/2019 1:08:00 PM
Chromium	**ND**	0.005		mg/L	1	8/23/2019 1:08:00 PM
Copper	**ND**	0.005		mg/L	1	8/23/2019 1:08:00 PM
Lead	**ND**	0.005		mg/L	1	8/23/2019 1:08:00 PM
Selenium	**ND**	0.005		mg/L	1	8/23/2019 1:08:00 PM
Silver	**0.006**	0.010	JN	mg/L	1	8/23/2019 1:08:00 PM
Zinc	**ND**	0.010		mg/L	1	8/23/2019 1:08:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:19:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/23/2019 2:19:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/23/2019 2:19:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:19:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:19:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:19:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-01-SW-U-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:19:00 PM
Silver, Dissolved	**0.004**	0.010	JN	mg/L	1	8/23/2019 2:19:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:19:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Acetone	**ND**	5.0	SN	µg/L	1	8/22/2019 1:24:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/22/2019 1:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/22/2019 1:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Benzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/22/2019 1:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Toluene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/22/2019 1:24:00 PM
Surr: 1,2-Dichloroethane-d4	**120**	80.9-122		%REC	1	8/22/2019 1:24:00 PM
Surr: 4-Bromofluorobenzene	**123**	76.5-125		%REC	1	8/22/2019 1:24:00 PM
Surr: Toluene-d8	**111**	80.4-121		%REC	1	8/22/2019 1:24:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-01-SW-U-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/22/2019)						
TSS (Residue, Non-Filterable)	**13.0**	1.0		mg/L	1	8/22/2019

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-02-SW-A-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/21/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
PCB, Total	**ND**	0.065		µg/L	1	8/21/2019 8:10:24 PM
Surr: Decachlorobiphenyl	**80.8**	57.1-135		%REC	1	8/21/2019 8:10:24 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/22/2019)						
Mercury	**2.4**	0.5		ng/L	1	8/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Total Hardness (As CaCO3)	**84**	5		mg/L CaCO3	1	8/23/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/23/2019 1:29:00 PM
Barium	**0.024**	0.010		mg/L	1	8/23/2019 1:29:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/23/2019 1:29:00 PM
Chromium	**ND**	0.005		mg/L	1	8/23/2019 1:29:00 PM
Copper	**0.005**	0.005	J	mg/L	1	8/23/2019 1:29:00 PM
Lead	**ND**	0.005		mg/L	1	8/23/2019 1:29:00 PM
Selenium	**ND**	0.005		mg/L	1	8/23/2019 1:29:00 PM
Silver	**0.004**	0.010	J	mg/L	1	8/23/2019 1:29:00 PM
Zinc	**ND**	0.010		mg/L	1	8/23/2019 1:29:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:40:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/23/2019 2:40:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/23/2019 2:40:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:40:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:40:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:40:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-02-SW-A-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/22/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:40:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:40:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:40:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/22/2019 1:45:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/22/2019 1:45:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/22/2019 1:45:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Benzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/22/2019 1:45:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Toluene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/22/2019 1:45:00 PM
Surr: 1,2-Dichloroethane-d4	**114**	80.9-122		%REC	1	8/22/2019 1:45:00 PM
Surr: 4-Bromofluorobenzene	**121**	76.5-125		%REC	1	8/22/2019 1:45:00 PM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	8/22/2019 1:45:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-02-SW-A-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/22/2019)						
TSS (Residue, Non-Filterable)	**11.1**	1.1		mg/L	1	8/22/2019

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-03-SW-D-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/21/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1242	**0.044**	0.065	J	µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/21/2019 8:23:45 PM
PCB, Total	**0.044**	0.065	J	µg/L	1	8/21/2019 8:23:45 PM
Surr: Decachlorobiphenyl	**73.2**	57.1-135		%REC	1	8/21/2019 8:23:45 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/22/2019)						
Mercury	**3.0**	0.5		ng/L	1	8/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/23/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/23/2019 1:33:00 PM
Barium	**0.025**	0.010		mg/L	1	8/23/2019 1:33:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/23/2019 1:33:00 PM
Chromium	**ND**	0.005		mg/L	1	8/23/2019 1:33:00 PM
Copper	**ND**	0.005		mg/L	1	8/23/2019 1:33:00 PM
Lead	**ND**	0.005		mg/L	1	8/23/2019 1:33:00 PM
Selenium	**ND**	0.005		mg/L	1	8/23/2019 1:33:00 PM
Silver	**0.004**	0.010	J	mg/L	1	8/23/2019 1:33:00 PM
Zinc	**ND**	0.010		mg/L	1	8/23/2019 1:33:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:49:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/23/2019 2:49:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/23/2019 2:49:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:49:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:49:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:49:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-03-SW-D-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/22/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:49:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:49:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:49:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/22/2019 2:06:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/22/2019 2:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/22/2019 2:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Benzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/22/2019 2:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Toluene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/22/2019 2:06:00 PM
Surr: 1,2-Dichloroethane-d4	**117**	80.9-122		%REC	1	8/22/2019 2:06:00 PM
Surr: 4-Bromofluorobenzene	**127**	76.5-125	S	%REC	1	8/22/2019 2:06:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	8/22/2019 2:06:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-03-SW-D-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/22/2019)						
TSS (Residue, Non-Filterable)	**11.5**	1.1		mg/L	1	8/22/2019

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-04-SW-B-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/21/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/21/2019 8:37:06 PM
PCB, Total	**0.023**	0.065	J	µg/L	1	8/21/2019 8:37:06 PM
Surr: Decachlorobiphenyl	**82.6**	57.1-135		%REC	1	8/21/2019 8:37:06 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/22/2019)						
Mercury	**5.2**	0.5		ng/L	1	8/23/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Total Hardness (As CaCO3)	**84**	5		mg/L CaCO3	1	8/23/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/23/2019 1:37:00 PM
Barium	**0.024**	0.010		mg/L	1	8/23/2019 1:37:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/23/2019 1:37:00 PM
Chromium	**ND**	0.005		mg/L	1	8/23/2019 1:37:00 PM
Copper	**ND**	0.005		mg/L	1	8/23/2019 1:37:00 PM
Lead	**ND**	0.005		mg/L	1	8/23/2019 1:37:00 PM
Selenium	**ND**	0.005		mg/L	1	8/23/2019 1:37:00 PM
Silver	**ND**	0.010		mg/L	1	8/23/2019 1:37:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/23/2019 1:37:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/22/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:56:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/23/2019 2:56:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/23/2019 2:56:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:56:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:56:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:56:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-04-SW-B-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/22/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/23/2019 2:56:00 PM
Silver, Dissolved	**0.005**	0.010	J	mg/L	1	8/23/2019 2:56:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/23/2019 2:56:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/22/2019 2:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/22/2019 2:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/22/2019 2:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Benzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/22/2019 2:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Toluene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/22/2019 2:27:00 PM
Surr: 1,2-Dichloroethane-d4	**117**	80.9-122		%REC	1	8/22/2019 2:27:00 PM
Surr: 4-Bromofluorobenzene	**128**	76.5-125	S	%REC	1	8/22/2019 2:27:00 PM
Surr: Toluene-d8	**112**	80.4-121		%REC	1	8/22/2019 2:27:00 PM

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-04-SW-B-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/22/2019)						
TSS (Residue, Non-Filterable)	**10.8**	1.0		mg/L	1	8/22/2019

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-05-SW-B-A-1
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/22/2019)						
TSS (Residue, Non-Filterable)	**9.9**	1.1		mg/L	1	8/22/2019

Adirondack Environmental Services, Inc

Date: *23-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082119-TB01
Work Order:	**190821069**	**Collection Date:**	8/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190821069-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Acetone	**ND**	5.0	S	µg/L	1	8/22/2019 2:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Chloroform	**0.4**	1.0	J	µg/L	1	8/22/2019 2:48:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/22/2019 2:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/22/2019 2:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Benzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/22/2019 2:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Toluene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/22/2019 2:48:00 PM
Surr: 1,2-Dichloroethane-d4	**116**	80.9-122		%REC	1	8/22/2019 2:48:00 PM
Surr: 4-Bromofluorobenzene	**124**	76.5-125		%REC	1	8/22/2019 2:48:00 PM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	8/22/2019 2:48:00 PM

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75166

dup

SeqNo: **2684182** **PrepDate:8/21/2019** TestNo: **E608** RunNo: **174536**
Samp ID: **190821052-001a** **PrepRef:** Units: **µg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1242	0.0646	0.0650	0	0	0	0	0	0.0544	0	31.2	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.0874	0	0.1	0	87.4	48.8	140	0	0	0	

mblk

SeqNo: **2684178** **PrepDate:8/21/2019** TestNo: **SW8082A** RunNo: **174536**
Samp ID: **mb-75166** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0796	0	0.1	0	79.6	57.1	135	0	0		

lcs

SeqNo: **2684179** **PrepDate:8/21/2019** TestNo: **SW8082A** RunNo: **174536**
Samp ID: **lcs-75166** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **8/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5634	0.0650	0.5	0	113	60	140	0	0		
Surr: Decachlorobiphenyl	0.1056	0	0.1	0	106	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75171

MBLK

SeqNo: **2685812** PrepDate:**8/22/2019** TestNo: **E200.7F** RunNo: **174630**
Samp ID: **MB-75171** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	0.005952	0.0100									J
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2685813** PrepDate:**8/22/2019** TestNo: **E200.7F** RunNo: **174630**
Samp ID: **LCS-75171** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.076	0.00500	2	0	104	85	115	0	0		
Barium, Dissolved	2.008	0.0100	2	0	100	89	112	0	0		
Cadmium, Dissolved	2.044	0.00500	2	0	102	85.3	112	0	0		
Chromium, Dissolved	1.979	0.00500	2	0	99	89.1	109	0	0		
Copper, Dissolved	2.027	0.00500	2	0	101	86.8	115	0	0		
Lead, Dissolved	2.083	0.00500	2	0	104	86.8	114	0	0		
Selenium, Dissolved	2.112	0.00500	2	0	106	85	115	0	0		
Silver, Dissolved	0.5242	0.0100	0.5	0	105	85	115	0	0		
Zinc, Dissolved	2.044	0.0100	2	0	102	85	115	0	0		

MS

SeqNo: **2685816** PrepDate:**8/22/2019** TestNo: **E200.7F** RunNo: **174630**
Samp ID: **190821069-001 (082119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0447	0.00500	0.04	0	112	75	123	0	0		
Barium, Dissolved	2.172	0.0100	2	0.0223	107	75	124	0	0		
Cadmium, Dissolved	0.05207	0.00500	0.05	0	104	75	125	0	0		
Chromium, Dissolved	0.2238	0.00500	0.2	0	112	77.2	117	0	0		
Copper, Dissolved	0.2864	0.00500	0.25	0	115	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75171

MS

SeqNo: **2685816** **PrepDate:8/22/2019** TestNo: **E200.7F** RunNo: **174630**
Samp ID: **190821069-001 (082119-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02047	0.00500	0.02	0	102	75	125	0	0		
Selenium, Dissolved	0.009506	0.00500	0.01	0	95.1	75	125	0	0		
Silver, Dissolved	0.02517	0.0100	0.05	0.004411	41.5	75	125	0	0		S
Zinc, Dissolved	0.5486	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2685815** **PrepDate:8/22/2019** TestNo: **E200.7F** RunNo: **174630**
Samp ID: **190821069-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001686	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02298	0.0100	0	0	0	0	0	0.0223	2.97	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001005	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.003445	0.0100	0	0	0	0	0	0.004411	0	17.6	
Zinc, Dissolved	0.003303	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75172

MBLK

SeqNo: **2685797** PrepDate:**8/22/2019** TestNo: **E200.7** RunNo: **174630**
Samp ID: **MB-75172** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2685798** PrepDate:**8/22/2019** TestNo: **E200.7** RunNo: **174630**
Samp ID: **LCS-75172** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.084	0.00500	2	0	104	89.1	111	0	0		
Barium	2.02	0.0100	2	0	101	85	115	0	0		
Cadmium	2.05	0.00500	2	0	103	85	115	0	0		
Chromium	1.984	0.00500	2	0	99.2	89.7	109	0	0		
Copper	2.041	0.00500	2	0	102	85	115	0	0		
Lead	2.087	0.00500	2	0	104	88.1	112	0	0		
Selenium	2.125	0.00500	2	0	106	87.5	112	0	0		
Silver	0.5266	0.0100	0.5	0	105	85.2	115	0	0		
Zinc	2.05	0.0100	2	0	103	88.3	113	0	0		

MS

SeqNo: **2685801** PrepDate:**8/22/2019** TestNo: **E200.7** RunNo: **174630**
Samp ID: **190821069-001 (082119-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04353	0.00500	0.04	0	109	75	125	0	0		
Barium	2.176	0.0100	2	0.02352	108	75	119	0	0		
Cadmium	0.05244	0.00500	0.05	0	105	75	118	0	0		
Chromium	0.2184	0.00500	0.2	0	109	75	124	0	0		
Copper	0.2811	0.00500	0.25	0	112	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75172

MS

SeqNo: **2685801** **PrepDate:8/22/2019** TestNo: **E200.7** RunNo: **174630**
Samp ID: **190821069-001 (082119-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02125	0.00500	0.02	0	106	75	125	0	0		
Selenium	0.01053	0.00500	0.01	0	105	75	125	0	0		
Silver	0.02311	0.0100	0.05	0.005726	34.8	75	125	0	0		S
Zinc	0.5501	0.0100	0.5	0	110	76.9	125	0	0		

DUP

SeqNo: **2685800** **PrepDate:8/22/2019** TestNo: **E200.7** RunNo: **174630**
Samp ID: **190821069-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02414	0.0100	0	0	0	0	0	0.02352	2.63	20	
Cadmium	0.0000585	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.001047	0.00500	0	0	0	0	0	0	0	20	
Lead	0.000145	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.003777	0.0100	0	0	0	0	0	0.005726	0	10.8	
Zinc	0.004525	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75178

LCS

SeqNo: **2685435** **PrepDate:8/22/2019** TestNo: **SM2540D** RunNo: **174614**
Samp ID: **LCS-75178** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	428	40.0	483	0	88.6	86.5	114	0	0		

DUP

SeqNo: **2685439** **PrepDate:8/22/2019** TestNo: **SM2540D** RunNo: **174614**
Samp ID: **190816051-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1400	67.0	0	0	0	0	0	1433	2.35	10	

DUP

SeqNo: **2685441** **PrepDate:8/22/2019** TestNo: **SM2540D** RunNo: **174614**
Samp ID: **190816053-002** **PrepRef:** Units: **mg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	104.5	5.00	0	0	0	0	0	102	2.42	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75207

MBLK

SeqNo: **2685459** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **MB-75207** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2685886** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **MB-75207** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2685460** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **LCS-75207** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.2	0.500	10	0	112	77	123	0	0		

LCS

SeqNo: **2685887** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **LCS-75207** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.2	0.500	10	0	112	77	123	0	0		

MS

SeqNo: **2685464** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190821069-003 (082119-03-SW-D-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.9	0.500	12.5	3.05	111	71	125	0	0		

MS

SeqNo: **2685470** PrepDate:**8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190822099-002** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.1	0.500	12.5	2.92	105	71	125	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75207

MS

SeqNo: **2685889** **PrepDate:8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190821060-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.5	0.500	12.5	0.935	92.5	71	125	0	0		

MSD

SeqNo: **2685465** **PrepDate:8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190821069-003 (082119-03-SW-D-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.9	0.500	12.5	3.05	111	71	125	16.9	0	24	

MSD

SeqNo: **2685471** **PrepDate:8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190822099-002** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.3	0.500	12.5	2.92	107	71	125	16.1	1.23	24	

MSD

SeqNo: **2685890** **PrepDate:8/22/2019** TestNo: **E1631** RunNo: **174616**
Samp ID: **190821060-001** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.1	0.500	12.5	0.935	89.3	71	125	12.5	3.25	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174593

mblk

SeqNo: **2684995** TestNo: **SW8260C** RunNo: **174593**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.2	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	59.9	5.0	50	0	120	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.04	5.0	50	0	116	76.5	125	0	0		
Surr: Toluene-d8	51.48	5.0	50	0	103	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174593

lcs

SeqNo: **2684993** TestNo: **SW8260C** RunNo: **174593**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.2	1.0	10	0	102	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.17	1.0	10	0	102	72.3	118	0	0		
1,1,2-Trichloroethane	10.27	1.0	10	0	103	73.1	123	0	0		
1,1-Dichloroethane	10.29	1.0	10	0	103	73.2	127	0	0		
1,1-Dichloroethene	8.6	1.0	10	0	86	70.3	128	0	0		
1,2,3-Trichloropropane	3.78	1.0	5	0	75.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.73	1.0	10	0	87.3	71	124	0	0		
1,2-Dichloroethane	10.21	1.0	10	0	102	72.5	127	0	0		
1,3-Dichlorobenzene	7.99	1.0	10	0	79.9	72.2	121	0	0		
1,3-Dichloropropane	5.64	1.0	5	0	113	76	122	0	0		
1,4-Dichlorobenzene	8.04	1.0	10	0	80.4	71.7	127	0	0		
2-Butanone	10.73	5.0	10	0	107	65.1	132	0	0		
4-Methyl-2-pentanone	21.7	5.0	20	0	108	68.7	118	0	0		
Acetone	5.45	5.0	10	0	54.5	69.2	133	0	0		S
Benzene	9.57	1.0	10	0	95.7	71.2	122	0	0		
Carbon disulfide	4.91	1.0	5	0	98.2	67.8	134	0	0		
Carbon tetrachloride	11.06	1.0	10	0	111	74.5	122	0	0		
Chlorobenzene	8.37	1.0	10	0	83.7	72.7	124	0	0		
Chloroethane	9.8	1.0	10	0	98	72.3	136	0	0		
Chloroform	10.83	1.0	10	0	108	71.6	133	0	0		
Dibromochloromethane	11.06	1.0	10	0	111	70.6	124	0	0		
Ethylbenzene	8.38	1.0	10	0	83.8	70.9	126	0	0		
Methylene chloride	8.74	1.0	10	0	87.4	66.3	130	0	0		
Tetrachloroethene	9.64	1.0	10	0	96.4	72.4	119	0	0		
Toluene	8.72	1.0	10	0	87.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.07	1.0	10	0	90.7	70.3	120	0	0		
Trichloroethene	8.44	1.0	10	0	84.4	73	127	0	0		
Vinyl chloride	10.63	1.0	10	0	106	65.2	134	0	0		
Xylenes, Total	43.47	1.0	50	0	86.9	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	57.94	5.0	50	0	116	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.29	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	57.48	5.0	50	0	115	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174593

ms	SeqNo: **2685001**	TestNo: **SW8260C**	RunNo: **174593**
	Samp ID: **190821069-001b (082119-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.05	1.0	10	0	110	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.13	1.0	10	0	91.3	70.1	123	0	0		
1,1,2-Trichloroethane	10.26	1.0	10	0	103	72.1	119	0	0		
1,1-Dichloroethane	10.32	1.0	10	0	103	70.4	126	0	0		
1,1-Dichloroethene	10.36	1.0	10	0	104	70.2	125	0	0		
1,2,3-Trichloropropane	3.62	1.0	5	0	72.4	53.7	101	0	0		
1,2-Dichlorobenzene	6.89	1.0	10	0	68.9	70.2	123	0	0		S
1,2-Dichloroethane	10.35	1.0	10	0.19	102	73.5	126	0	0		
1,3-Dichlorobenzene	9.25	1.0	10	0	92.5	70.4	124	0	0		
1,3-Dichloropropane	5.53	1.0	5	0	111	64	125	0	0		
1,4-Dichlorobenzene	7.36	1.0	10	0	73.6	70.8	127	0	0		
2-Butanone	9.45	5.0	10	0	94.5	60.5	123	0	0		
4-Methyl-2-pentanone	10.67	5.0	10	0	107	52.8	133	0	0		
Acetone	4.89	5.0	10	0	48.9	56.3	135	0	0		JS
Benzene	9.92	1.0	10	0	99.2	70.2	127	0	0		
Carbon disulfide	5.36	1.0	5	0	107	62.2	130	0	0		
Carbon tetrachloride	10.71	1.0	10	0	107	56.4	137	0	0		
Chlorobenzene	9.73	1.0	10	0	97.3	72.7	128	0	0		
Chloroethane	10.55	1.0	10	0	106	71.3	135	0	0		
Chloroform	10.83	1.0	10	0	108	70.2	125	0	0		
Dibromochloromethane	9.1	1.0	10	0	91	69.5	123	0	0		
Ethylbenzene	9.27	1.0	10	0	92.7	71.9	129	0	0		
Methylene chloride	7.67	1.0	10	0	76.7	65.3	123	0	0		
Tetrachloroethene	8.22	1.0	10	0	82.2	74.5	121	0	0		
Toluene	9.24	1.0	10	0	92.4	73	122	0	0		
trans-1,2-Dichloroethene	8.85	1.0	10	0	88.5	69.1	133	0	0		
Trichloroethene	8.76	1.0	10	0	87.6	71.1	126	0	0		
Vinyl chloride	11.06	1.0	10	0	111	65	137	0	0		
Xylenes, Total	27.06	1.0	30	0	90.2	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	59.74	5.0	50	0	119	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	54.97	5.0	50	0	110	76.5	125	0	0		
Surr: Toluene-d8	60.18	5.0	50	0	120	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190821069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174593

msd

SeqNo: **2685002** TestNo: **SW8260C** RunNo: **174593**
Samp ID: **190821069-001b (082119-01-SW-U-** Units: **µg/L** Analysis Date: **8/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.1	1.0	10	0	111	71.6	126	11.05	0.451	20.4	
1,1,2,2-Tetrachloroethane	9.91	1.0	10	0	99.1	70.1	123	9.13	8.19	18.6	
1,1,2-Trichloroethane	9.73	1.0	10	0	97.3	72.1	119	10.26	5.30	20	
1,1-Dichloroethane	9.45	1.0	10	0	94.5	70.4	126	10.32	8.80	19.2	
1,1-Dichloroethene	10.08	1.0	10	0	101	70.2	125	10.36	2.74	16.1	
1,2,3-Trichloropropane	4.04	1.0	5	0	80.8	53.7	101	3.62	11.0	20	
1,2-Dichlorobenzene	7.98	1.0	10	0	79.8	70.2	123	6.89	14.7	17.9	
1,2-Dichloroethane	9.93	1.0	10	0.19	97.4	73.5	126	10.35	4.14	15.6	
1,3-Dichlorobenzene	8.66	1.0	10	0	86.6	70.4	124	9.25	6.59	14.3	
1,3-Dichloropropane	5.14	1.0	5	0	103	64	125	5.53	7.31	0	
1,4-Dichlorobenzene	8.56	1.0	10	0	85.6	70.8	127	7.36	15.1	14.4	Z
2-Butanone	9.22	5.0	10	0	92.2	60.5	123	9.45	2.46	15	
4-Methyl-2-pentanone	11.36	5.0	10	0	114	52.8	133	10.67	6.26	11.9	
Acetone	4.28	5.0	10	0	42.8	56.3	135	4.89	0	10.6	JS
Benzene	9.89	1.0	10	0	98.9	70.2	127	9.92	0.303	18.4	
Carbon disulfide	4.74	1.0	5	0	94.8	62.2	130	5.36	12.3	13.1	
Carbon tetrachloride	9.9	1.0	10	0	99	56.4	137	10.71	7.86	20.3	
Chlorobenzene	8.66	1.0	10	0	86.6	72.7	128	9.73	11.6	19.6	
Chloroethane	9.43	1.0	10	0	94.3	71.3	135	10.55	11.2	27.8	
Chloroform	9.73	1.0	10	0	97.3	70.2	125	10.83	10.7	20.3	
Dibromochloromethane	9.55	1.0	10	0	95.5	69.5	123	9.1	4.83	18.8	
Ethylbenzene	8.05	1.0	10	0	80.5	71.9	129	9.27	14.1	16.3	
Methylene chloride	6.62	1.0	10	0	66.2	65.3	123	7.67	14.7	21.4	
Tetrachloroethene	8.62	1.0	10	0	86.2	74.5	121	8.22	4.75	20.9	
Toluene	8.88	1.0	10	0	88.8	73	122	9.24	3.97	19.4	
trans-1,2-Dichloroethene	8.73	1.0	10	0	87.3	69.1	133	8.85	1.37	16.1	
Trichloroethene	8.42	1.0	10	0	84.2	71.1	126	8.76	3.96	16.6	
Vinyl chloride	9.82	1.0	10	0	98.2	65	137	11.06	11.9	20.5	
Xylenes, Total	28.33	1.0	30	0	94.4	72	130	27.06	4.59	16.1	
Surr: 1,2-Dichloroethane-d4	52.22	5.0	50	0	104	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	57.39	5.0	50	0	115	76.5	125	0	0	0	
Surr: Toluene-d8	52.64	5.0	50	0	105	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190821069

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082119-01-SW-U-A-1	8/21/19	0950	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
002	082119-02-SW-A-A-1	8/21/19	1025	P	W		✓	1	metals (filtered)
				A				2	PCBs
				P				2	VOCs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	082119-03-SW-D-A-1	8/21/19	1040	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		8/21/19 4:45 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/21/19 5:16 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: GC		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy



Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19082106 9

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.hueiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
09004	082119-03-SW-D-A-1	8/21/19	1040	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
09005	082119-04-SW-B-A-1	8/21/19	0930	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
09006	082119-05-SW-B-A-1	8/21/19	1100	P	W		✓	1	TSS
09007	082119-TB01			A	TB				trip blank
				P					
				A					
				P					
				A					
				P					

8/21/19

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/21/19 4:15 pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
		8/21/19 5:16 pm

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 6°	☒	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190821069

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/23/2019

8/21/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190821069-001	082119-01-SW-U-A-1	Water	8/21/2019	8/23/2019	E	C	B	D	D	A	F
190821069-002	082119-02-SW-A-A-1	Water	8/21/2019	8/23/2019	E	C	B	D	D	A	F
190821069-003	082119-03-SW-D-A-1	Water	8/21/2019	8/23/2019	E	C	B	D	D	A	F
190821069-004	082119-04-SW-B-A-1	Water	8/21/2019	8/23/2019	E	C	B	D	D	A	F
190821069-005	082119-05-SW-B-A-1	Water	8/21/2019	8/23/2019							A
190821069-006	082119-TB01	Trip Blank	8/21/2019	8/23/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 26, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190822104
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/22/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*26-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190822104		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-01-SW-U-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-001
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 7:18:40 PM
Surr: Decachlorobiphenyl	**88.8**	57.1-135		%REC	1	8/23/2019 7:18:40 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**18.0**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 12:30:00 PM
Barium	**0.075**	0.010		mg/L	1	8/26/2019 12:30:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 12:30:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 12:30:00 PM
Copper	**0.007**	0.005		mg/L	1	8/26/2019 12:30:00 PM
Lead	**0.005**	0.005		mg/L	1	8/26/2019 12:30:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 12:30:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 12:30:00 PM
Zinc	**0.027**	0.010		mg/L	1	8/26/2019 12:30:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 1:58:00 PM
Barium, Dissolved	**0.021**	0.010		mg/L	1	8/26/2019 1:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 1:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 1:58:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 1:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 1:58:00 PM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-01-SW-U-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 1:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 1:58:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 1:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 12:50:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 12:50:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 12:50:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 12:50:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 12:50:00 AM
Surr: 1,2-Dichloroethane-d4	**124**	80.9-122	S	%REC	1	8/24/2019 12:50:00 AM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/24/2019 12:50:00 AM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	8/24/2019 12:50:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-01-SW-U-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**295**	10.0		mg/L	1	8/23/2019

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-02-SW-A-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 7:32:01 PM
Surr: Decachlorobiphenyl	**96.4**	57.1-135		%REC	1	8/23/2019 7:32:01 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**21.6**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 12:35:00 PM
Barium	**0.080**	0.010		mg/L	1	8/26/2019 12:35:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 12:35:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 12:35:00 PM
Copper	**0.010**	0.005		mg/L	1	8/26/2019 12:35:00 PM
Lead	**0.006**	0.005		mg/L	1	8/26/2019 12:35:00 PM
Selenium	**ND**	0.005	N	mg/L	1	8/26/2019 12:35:00 PM
Silver	**ND**	0.010	N	mg/L	1	8/26/2019 12:35:00 PM
Zinc	**0.030**	0.010		mg/L	1	8/26/2019 12:35:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:02:00 PM
Barium, Dissolved	**0.020**	0.010		mg/L	1	8/26/2019 2:02:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 2:02:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:02:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:02:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:02:00 PM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-02-SW-A-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/23/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:02:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:02:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:02:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 1:11:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/24/2019 1:11:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 1:11:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 1:11:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 1:11:00 AM
Surr: 1,2-Dichloroethane-d4	**130**	80.9-122	S	%REC	1	8/24/2019 1:11:00 AM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	8/24/2019 1:11:00 AM
Surr: Toluene-d8	**110**	80.4-121		%REC	1	8/24/2019 1:11:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-02-SW-A-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**292**	10.0		mg/L	1	8/23/2019

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-003
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1242	**0.071**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 7:45:21 PM
PCB, Total	**0.071**	0.065		µg/L	1	8/23/2019 7:45:21 PM
Surr: Decachlorobiphenyl	**53.2**	57.1-135	S	%REC	1	8/23/2019 7:45:21 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**22.8**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Total Hardness (As CaCO3)	**87**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 1:32:00 PM
Barium	**0.067**	0.010		mg/L	1	8/26/2019 1:32:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 1:32:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 1:32:00 PM
Copper	**0.006**	0.005		mg/L	1	8/26/2019 1:32:00 PM
Lead	**0.005**	0.005	J	mg/L	1	8/26/2019 1:32:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 1:32:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 1:32:00 PM
Zinc	**0.026**	0.010		mg/L	1	8/26/2019 1:32:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:49:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/26/2019 2:49:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 2:49:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:49:00 PM
Copper, Dissolved	**0.007**	0.005		mg/L	1	8/26/2019 2:49:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:49:00 PM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/23/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:49:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:49:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:49:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 1:32:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 1:32:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 1:32:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Benzene	**0.2**	1.0	J	µg/L	1	8/24/2019 1:32:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 1:32:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 1:32:00 AM
Surr: 1,2-Dichloroethane-d4	**130**	80.9-122	S	%REC	1	8/24/2019 1:32:00 AM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	8/24/2019 1:32:00 AM
Surr: Toluene-d8	**88.0**	80.4-121		%REC	1	8/24/2019 1:32:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**204**	10.0		mg/L	1	8/23/2019

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-04-SW-B-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 8:14:37 PM
Surr: Decachlorobiphenyl	**68.2**	57.1-135		%REC	1	8/23/2019 8:14:37 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**20.3**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 1:38:00 PM
Barium	**0.070**	0.010		mg/L	1	8/26/2019 1:38:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 1:38:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 1:38:00 PM
Copper	**0.007**	0.005		mg/L	1	8/26/2019 1:38:00 PM
Lead	**0.005**	0.005		mg/L	1	8/26/2019 1:38:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 1:38:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 1:38:00 PM
Zinc	**0.026**	0.010		mg/L	1	8/26/2019 1:38:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:54:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/26/2019 2:54:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 2:54:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:54:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:54:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:54:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-04-SW-B-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/23/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:54:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:54:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:54:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 1:53:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 1:53:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 1:53:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 1:53:00 AM
Surr: 1,2-Dichloroethane-d4	**124**	80.9-122	S	%REC	1	8/24/2019 1:53:00 AM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/24/2019 1:53:00 AM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	8/24/2019 1:53:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-04-SW-B-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**245**	10.0		mg/L	1	8/23/2019

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-05-SW-B-A-1
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-005
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**220**	10.0		mg/L	1	8/23/2019

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-2
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-006
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1242	**0.066**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 9:07:59 PM
PCB, Total	**0.066**	0.065		µg/L	1	8/23/2019 9:07:59 PM
Surr: Decachlorobiphenyl	**80.6**	57.1-135		%REC	1	8/23/2019 9:07:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**24.1**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Total Hardness (As CaCO3)	**88**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 1:42:00 PM
Barium	**0.070**	0.010		mg/L	1	8/26/2019 1:42:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 1:42:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 1:42:00 PM
Copper	**0.005**	0.005		mg/L	1	8/26/2019 1:42:00 PM
Lead	**0.006**	0.005		mg/L	1	8/26/2019 1:42:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 1:42:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 1:42:00 PM
Zinc	**0.020**	0.010		mg/L	1	8/26/2019 1:42:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/23/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:58:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/26/2019 2:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 2:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:58:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/26/2019 2:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:58:00 PM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-2
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/23/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 2:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:58:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 2:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 2:14:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/24/2019 2:14:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 2:14:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Benzene	**0.2**	1.0	J	µg/L	1	8/24/2019 2:14:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 2:14:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 2:14:00 AM
Surr: 1,2-Dichloroethane-d4	**115**	80.9-122		%REC	1	8/24/2019 2:14:00 AM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/24/2019 2:14:00 AM
Surr: Toluene-d8	**110**	80.4-121		%REC	1	8/24/2019 2:14:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-03-SW-D-A-2
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/23/2019)						
TSS (Residue, Non-Filterable)	**213**	10.0		mg/L	1	8/23/2019

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-TB01
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Acetone	**3.7**	5.0	J	µg/L	1	8/24/2019 2:35:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Chloroform	**0.9**	1.0	J	µg/L	1	8/24/2019 2:35:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 2:35:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 2:35:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 2:35:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 2:35:00 AM
Surr: 1,2-Dichloroethane-d4	**118**	80.9-122		%REC	1	8/24/2019 2:35:00 AM
Surr: 4-Bromofluorobenzene	**118**	76.5-125		%REC	1	8/24/2019 2:35:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/24/2019 2:35:00 AM

Adirondack Environmental Services, Inc

Date: *26-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082219-TB02
Work Order:	**190822104**	**Collection Date:**	8/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190822104-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 2:56:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Chloroform	**0.3**	1.0	J	µg/L	1	8/24/2019 2:56:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 2:56:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 2:56:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 2:56:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 2:56:00 AM
Surr: 1,2-Dichloroethane-d4	**113**	80.9-122		%REC	1	8/24/2019 2:56:00 AM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	8/24/2019 2:56:00 AM
Surr: Toluene-d8	**124**	80.4-121	S	%REC	1	8/24/2019 2:56:00 AM

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75193

MBLK

SeqNo: **2686991** PrepDate:**8/23/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **MB-75193** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	0.005469	0.0100									J
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2686992** PrepDate:**8/23/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **LCS-75193** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.026	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	1.945	0.0100	2	0	97.2	89	112	0	0		
Cadmium, Dissolved	2.012	0.00500	2	0	101	85.3	112	0	0		
Chromium, Dissolved	1.968	0.00500	2	0	98.4	89.1	109	0	0		
Copper, Dissolved	2.033	0.00500	2	0	102	86.8	115	0	0		
Lead, Dissolved	2.066	0.00500	2	0	103	86.8	114	0	0		
Selenium, Dissolved	1.902	0.00500	2	0	95.1	85	115	0	0		
Silver, Dissolved	0.5201	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	1.921	0.0100	2	0	96	85	115	0	0		

MS

SeqNo: **2686996** PrepDate:**8/23/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190822104-002 (082219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04601	0.00500	0.04	0	115	75	123	0	0		
Barium, Dissolved	2.158	0.0100	2	0.01999	107	75	124	0	0		
Cadmium, Dissolved	0.05468	0.00500	0.05	0	109	75	125	0	0		
Chromium, Dissolved	0.2182	0.00500	0.2	0	109	77.2	117	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75193

MS

SeqNo: **2686996** **PrepDate:8/23/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190822104-002 (082219-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper, Dissolved	0.2797	0.00500	0.25	0	112	75	125	0	0		
Lead, Dissolved	0.02152	0.00500	0.02	0	108	75	125	0	0		
Selenium, Dissolved	0.009222	0.00500	0.01	0	92.2	75	125	0	0		
Silver, Dissolved	0.04344	0.0100	0.05	0	86.9	75	125	0	0		
Zinc, Dissolved	0.5507	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2686995** **PrepDate:8/23/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190822104-002** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.00184	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.01952	0.0100	0	0	0	0	0	0.01999	2.40	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001872	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0006144	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002724	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75195

MBLK

SeqNo: **2686978** PrepDate:**8/23/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **MB-75195** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2686979** PrepDate:**8/23/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **LCS-75195** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.032	0.00500	2	0	102	89.1	111	0	0		
Barium	1.966	0.0100	2	0	98.3	85	115	0	0		
Cadmium	2.028	0.00500	2	0	101	85	115	0	0		
Chromium	1.988	0.00500	2	0	99.4	89.7	109	0	0		
Copper	2.053	0.00500	2	0	103	85	115	0	0		
Lead	2.071	0.00500	2	0	104	88.1	112	0	0		
Selenium	1.939	0.00500	2	0	96.9	87.5	112	0	0		
Silver	0.5416	0.0100	0.5	0	108	85.2	115	0	0		
Zinc	1.92	0.0100	2	0	96	88.3	113	0	0		

MS

SeqNo: **2686983** PrepDate:**8/23/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190822104-002 (082219-02-SW-A-** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.03526	0.00500	0.04	0	88.2	75	125	0	0		
Barium	2.243	0.0100	2	0.08001	108	75	119	0	0		
Cadmium	0.05704	0.00500	0.05	0	114	75	118	0	0		
Chromium	0.2284	0.00500	0.2	0	114	75	124	0	0		
Copper	0.2894	0.00500	0.25	0.01022	112	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75195

MS

SeqNo: **2686983** **PrepDate:8/23/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190822104-002 (082219-02-SW-A-** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02857	0.00500	0.02	0.006255	112	75	125	0	0		
Selenium	0.006008	0.00500	0.01	0	60.1	75	125	0	0		S
Silver	0.01979	0.0100	0.05	0	39.6	75	125	0	0		S
Zinc	0.6031	0.0100	0.5	0.02965	115	76.9	125	0	0		

DUP

SeqNo: **2686982** **PrepDate:8/23/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190822104-002** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001178	0.00500	0	0	0	0	0	0	0	20	
Barium	0.07809	0.0100	0	0	0	0	0	0.08001	2.42	20	
Cadmium	0.0000522	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.006147	0.00500	0	0	0	0	0	0.01022	49.8	20	Z
Lead	0.006073	0.00500	0	0	0	0	0	0.006255	2.95	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.02901	0.0100	0	0	0	0	0	0.02965	2.18	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75214

LCS

SeqNo: **2686384** **PrepDate:8/23/2019** TestNo: **SM2540D** RunNo: **174658**
Samp ID: **LCS-75214** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	436	40.0	483	0	90.3	86.5	114	0	0		

DUP

SeqNo: **2686392** **PrepDate:8/23/2019** TestNo: **SM2540D** RunNo: **174658**
Samp ID: **190821044-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	444	20.0	0	0	0	0	0	470	5.69	10	

DUP

SeqNo: **2686396** **PrepDate:8/23/2019** TestNo: **SM2540D** RunNo: **174658**
Samp ID: **190821064-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	980	40.0	0	0	0	0	0	924	5.88	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75216

MBLK

SeqNo: **2686744** PrepDate:**8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **MB-75216** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2686745** PrepDate:**8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **LCS-75216** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.73	0.500	10	0	97.3	77	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75222

mblk SeqNo: **2686111** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **mb-75222** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0934	0.0100	0.1	0	93.4	57.1	135	0	0		

lcs SeqNo: **2686112** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **lcs-75222** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.569	0.0650	0.5	0	114	60	140	0	0		
Surr: Decachlorobiphenyl	0.0828	0.0100	0.1	0	82.8	57.1	135	0	0		

ms SeqNo: **2686119** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **190823069-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5774	0.0650	0.5	0	115	46.7	130	0	0		
PCB, Total	0.5774	0.0650	0.5	0	115	51	150	0	0		
Surr: Decachlorobiphenyl	0.092	0.0100	0.1	0	92	57.1	135	0	0		

msd SeqNo: **2686124** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **190823069-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0916	0.0100	0.1	0	91.6	57.1	135	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

mblk

SeqNo: **2686336** TestNo: **SW8260C** RunNo: **174653**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	5.0									
Surr: 1,2-Dichloroethane-d4	58.98	5.0	50	0	118	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.4	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	51.95	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

lcs	SeqNo: **2686334**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.95	1.0	10	0	89.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.7	1.0	10	0	97	72.3	118	0	0		
1,1,2-Trichloroethane	9.47	1.0	10	0	94.7	73.1	123	0	0		
1,1-Dichloroethane	11.05	1.0	10	0	110	73.2	127	0	0		
1,1-Dichloroethene	10.09	1.0	10	0	101	70.3	128	0	0		
1,2,3-Trichloropropane	3.81	1.0	5	0	76.2	68.4	115	0	0		
1,2-Dichlorobenzene	8.1	1.0	10	0	81	71	124	0	0		
1,2-Dichloroethane	11.11	1.0	10	0	111	72.5	127	0	0		
1,3-Dichlorobenzene	8.71	1.0	10	0	87.1	72.2	121	0	0		
1,3-Dichloropropane	5.31	1.0	5	0	106	76	122	0	0		
1,4-Dichlorobenzene	7.99	1.0	10	0	79.9	71.7	127	0	0		
2-Butanone	12.1	5.0	10	0	121	65.1	132	0	0		
4-Methyl-2-pentanone	12.16	5.0	10	0	122	68.7	118	0	0		S
Acetone	10.51	5.0	10	0	105	69.2	133	0	0		
Benzene	8.6	1.0	10	0	86	71.2	122	0	0		
Carbon disulfide	5.41	1.0	5	0	108	67.8	134	0	0		
Carbon tetrachloride	9.69	1.0	10	0	96.9	74.5	122	0	0		
Chlorobenzene	8.71	1.0	10	0	87.1	72.7	124	0	0		
Chloroethane	10.57	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.78	1.0	10	0	108	71.6	133	0	0		
Dibromochloromethane	10.1	1.0	10	0	101	70.6	124	0	0		
Ethylbenzene	8.57	1.0	10	0	85.7	70.9	126	0	0		
Methylene chloride	8.51	1.0	10	0	85.1	66.3	130	0	0		
Tetrachloroethene	6.98	1.0	10	0	69.8	72.4	119	0	0		S
Toluene	8.31	1.0	10	0	83.1	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	8.15	1.0	10	0	81.5	73	127	0	0		
Vinyl chloride	10.16	1.0	10	0	102	65.2	134	0	0		
Xylenes, Total	25.83	1.0	30	0	86.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	63.15	5.0	50	0	126	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	56.96	5.0	50	0	114	76.5	125	0	0		
Surr: Toluene-d8	47.65	5.0	50	0	95.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

lcsd

SeqNo: **2686335** TestNo: **SW8260C** RunNo: **174653**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.02	1.0	10	0	100	72.3	121	8.95	11.3	25	
1,1,2,2-Tetrachloroethane	10.25	1.0	10	0	103	72.3	118	9.7	5.51	25	
1,1,2-Trichloroethane	9.51	1.0	10	0	95.1	73.1	123	9.47	0.421	25	
1,1-Dichloroethane	9.94	1.0	10	0	99.4	73.2	127	11.05	10.6	25	
1,1-Dichloroethene	9.21	1.0	10	0	92.1	70.3	128	10.09	9.12	25	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	68.4	115	3.81	0.263	25	
1,2-Dichlorobenzene	8.3	1.0	10	0	83	71	124	8.1	2.44	25	
1,2-Dichloroethane	11.14	1.0	10	0	111	72.5	127	11.11	0.270	25	
1,3-Dichlorobenzene	7.75	1.0	10	0	77.5	72.2	121	8.71	11.7	25	
1,3-Dichloropropane	4.96	1.0	5	0	99.2	76	122	5.31	6.82	0	
1,4-Dichlorobenzene	7.25	1.0	10	0	72.5	71.7	127	7.99	9.71	25	
2-Butanone	11.4	5.0	10	0	114	65.1	132	12.1	5.96	25	
4-Methyl-2-pentanone	12.96	5.0	10	0	130	68.7	118	12.16	6.37	25	S
Acetone	10.14	5.0	10	0	101	69.2	133	10.51	3.58	25	
Benzene	8.76	1.0	10	0	87.6	71.2	122	8.6	1.84	25	
Carbon disulfide	4.89	1.0	5	0	97.8	67.8	134	5.41	10.1	25	
Carbon tetrachloride	10.07	1.0	10	0	101	74.5	122	9.69	3.85	25	
Chlorobenzene	7.81	1.0	10	0	78.1	72.7	124	8.71	10.9	25	
Chloroethane	11.63	1.0	10	0	116	72.3	136	10.57	9.55	25	
Chloroform	11.03	1.0	10	0	110	71.6	133	10.78	2.29	25	
Dibromochloromethane	10.3	1.0	10	0	103	70.6	124	10.1	1.96	25	
Ethylbenzene	9.23	1.0	10	0	92.3	70.9	126	8.57	7.42	25	
Methylene chloride	7.99	1.0	10	0	79.9	66.3	130	8.51	6.30	25	
Tetrachloroethene	7.85	1.0	10	0	78.5	72.4	119	6.98	11.7	25	
Toluene	7.43	1.0	10	0	74.3	71.8	116	8.31	11.2	25	
trans-1,2-Dichloroethene	9.06	1.0	10	0	90.6	70.3	120	9.32	2.83	25	
Trichloroethene	8	1.0	10	0	80	73	127	8.15	1.86	25	
Vinyl chloride	9.62	1.0	10	0	96.2	65.2	134	10.16	5.46	25	
Surr: 1,2-Dichloroethane-d4	61.53	5.0	50	0	123	80.9	122	0	0	25	S
Surr: 4-Bromofluorobenzene	52.2	5.0	50	0	104	76.5	125	0	0	25	
Surr: Toluene-d8	50	5.0	50	0	100	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

ms	SeqNo: **2686351**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **190823069-001b**	Units: **µg/L**	Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.73	1.0	10	0	117	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.47	1.0	10	0	94.7	70.1	123	0	0		
1,1,2-Trichloroethane	9.49	1.0	10	0	94.9	72.1	119	0	0		
1,1-Dichloroethane	10.32	1.0	10	0	103	70.4	126	0	0		
1,1-Dichloroethene	8.73	1.0	10	0	87.3	70.2	125	0	0		
1,2,3-Trichloropropane	3.28	1.0	5	0	65.6	53.7	101	0	0		
1,2-Dichlorobenzene	6.67	1.0	10	0	66.7	70.2	123	0	0		S
1,2-Dichloroethane	10	1.0	10	0.19	98.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.13	1.0	10	0	71.3	70.4	124	0	0		
1,3-Dichloropropane	5.12	1.0	5	0	102	64	125	0	0		
1,4-Dichlorobenzene	8.37	1.0	10	0	83.7	70.8	127	0	0		
2-Butanone	10.06	5.0	10	0	101	60.5	123	0	0		
4-Methyl-2-pentanone	12.18	5.0	10	0	122	52.8	133	0	0		
Acetone	6.8	5.0	10	0	68	56.3	135	0	0		
Benzene	8.92	1.0	10	0	89.2	70.2	127	0	0		
Carbon disulfide	4.33	1.0	5	0	86.6	62.2	130	0	0		
Carbon tetrachloride	10.66	1.0	10	0	107	56.4	137	0	0		
Chlorobenzene	7.44	1.0	10	0	74.4	72.7	128	0	0		
Chloroethane	9.42	1.0	10	0	94.2	71.3	135	0	0		
Chloroform	9.39	1.0	10	0	93.9	70.2	125	0	0		
Dibromochloromethane	10	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	7.52	1.0	10	0	75.2	71.9	129	0	0		
Methylene chloride	6.11	1.0	10	0	61.1	65.3	123	0	0		S
Tetrachloroethene	8.67	1.0	10	0	86.7	74.5	121	0	0		
Toluene	8.68	1.0	10	0	86.8	73	122	0	0		
trans-1,2-Dichloroethene	7.88	1.0	10	0	78.8	69.1	133	0	0		
Trichloroethene	7.94	1.0	10	0	79.4	71.1	126	0	0		
Vinyl chloride	9.2	1.0	10	0	92	65	137	0	0		
Xylenes, Total	21.79	1.0	30	0	72.6	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	52.34	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	61.17	5.0	50	0	122	76.5	125	0	0		
Surr: Toluene-d8	51.22	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190822104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

msd	SeqNo: **2686352**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **190823069-001b**	Units: **µg/L**	Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.58	1.0	10	0	95.8	71.6	126	11.73	20.2	20.4	
1,1,2,2-Tetrachloroethane	10.37	1.0	10	0	104	70.1	123	9.47	9.07	18.6	
1,1,2-Trichloroethane	8.97	1.0	10	0	89.7	72.1	119	9.49	5.63	20	
1,1-Dichloroethane	10.85	1.0	10	0	108	70.4	126	10.32	5.01	19.2	
1,1-Dichloroethene	9.41	1.0	10	0	94.1	70.2	125	8.73	7.50	16.1	
1,2,3-Trichloropropane	4.08	1.0	5	0	81.6	53.7	101	3.28	21.7	20	Z
1,2-Dichlorobenzene	8.65	1.0	10	0	86.5	70.2	123	6.67	25.8	17.9	Z
1,2-Dichloroethane	10.97	1.0	10	0.19	108	73.5	126	10	9.25	15.6	
1,3-Dichlorobenzene	8.39	1.0	10	0	83.9	70.4	124	7.13	16.2	14.3	Z
1,3-Dichloropropane	5.01	1.0	5	0	100	64	125	5.12	2.17	0	
1,4-Dichlorobenzene	8.94	1.0	10	0	89.4	70.8	127	8.37	6.59	14.4	
2-Butanone	11.78	5.0	10	0	118	60.5	123	10.06	15.8	15	Z
4-Methyl-2-pentanone	10.57	5.0	10	0	106	52.8	133	12.18	14.2	11.9	Z
Acetone	6.96	5.0	10	0	69.6	56.3	135	6.8	2.33	10.6	
Benzene	8.9	1.0	10	0	89	70.2	127	8.92	0.224	18.4	
Carbon disulfide	5.21	1.0	5	0	104	62.2	130	4.33	18.4	13.1	Z
Carbon tetrachloride	9.8	1.0	10	0	98	56.4	137	10.66	8.41	20.3	
Chlorobenzene	9.24	1.0	10	0	92.4	72.7	128	7.44	21.6	19.6	Z
Chloroethane	10.36	1.0	10	0	104	71.3	135	9.42	9.50	27.8	
Chloroform	10.34	1.0	10	0	103	70.2	125	9.39	9.63	20.3	
Dibromochloromethane	7.95	1.0	10	0	79.5	69.5	123	10	22.8	18.8	Z
Ethylbenzene	8.78	1.0	10	0	87.8	71.9	129	7.52	15.5	16.3	
Methylene chloride	7.68	1.0	10	0	76.8	65.3	123	6.11	22.8	21.4	Z
Tetrachloroethene	7.51	1.0	10	0	75.1	74.5	121	8.67	14.3	20.9	
Toluene	7.12	1.0	10	0	71.2	73	122	8.68	19.7	19.4	SZ
trans-1,2-Dichloroethene	9.21	1.0	10	0	92.1	69.1	133	7.88	15.6	16.1	
Trichloroethene	7.48	1.0	10	0	74.8	71.1	126	7.94	5.97	16.6	
Vinyl chloride	9.82	1.0	10	0	98.2	65	137	9.2	6.52	20.5	
Xylenes, Total	28.51	1.0	30	0	95	72	130	21.79	26.7	16.1	Z
Surr: 1,2-Dichloroethane-d4	63.75	5.0	50	0	128	80.9	122	0	0	0	S
Surr: 4-Bromofluorobenzene	58.73	5.0	50	0	117	76.5	125	0	0	0	
Surr: Toluene-d8	46.96	5.0	50	0	93.9	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190822104

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082219-01-SW-U-A-1	8/22/19	1310	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
002	082219-02-SW-A-A-1	8/22/19	1335	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
003	082219-03-SW-D-A-1	8/22/19	1335	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/22/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/22/19 5:05

Temperature
Ambient or (Chilled)
Notes: 6°C

AES Bottles Y ☐ N ☐

Properly Preserved (Y) N
Notes:

Received Within Holding Times (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190822104

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190822104

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		
Patrick Gehan		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082219-03-SW-D-A-1	8/22/19	1355	A	W		✓	2	VOCs
				A				1	metals/hardness
				A				3	mercury
				A				1	TSS
004	082219-04-SW-B-A-1	8/22/19	1250	A	W		✓	1	metals (filtered)
				A				2	PCBs
				A				2	VOCs
				A				1	metals/hardness
				A				3	mercury
				A				1	TSS
005	082219-05-SW-B-A-1	8/22/19	1420	A	W		✓	1	TSS
006	082219-03-SW-D-A-2	8/22/19	1410	A	W		✓	1	metals (filtered)
				A				2	PCBs
				A				2	VOCs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		8/22/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/22/19 5:05

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☐ N ☐	Y N	Y N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

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CHAIN OF CUSTODY RECORD

AES Work Order # 190822104

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	082219-03-SW-D-A-2	8/22/19	1410	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A P	↓		↓	1	TSS
007	082219-TB01			A P	TB				trip blank F45.1
008	082219-TB02			A P	TB				trip blank F 45.2
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/22/19 1600
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/22/19 1705

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☐ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190822104

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

190822104

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project# /Task# :
ClientReferenceNo: 60323713 / 3300

DateDue: 8/26/2019

QClevel: STD+

☐ Hard Copy

8/22/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190822104-001	082219-01-SW-U-A-1	Water	8/22/2019	8/26/2019	E	C	B	D	D	A	F
190822104-002	082219-02-SW-A-A-1	Water	8/22/2019	8/26/2019	E	C	B	D	D	A	F
190822104-003	082219-03-SW-D-A-1	Water	8/22/2019	8/26/2019	E	C	B	D	D	A	F
190822104-004	082219-04-SW-B-A-1	Water	8/22/2019	8/26/2019	E	C	B	D	D	A	F
190822104-005	082219-05-SW-B-A-1	Water	8/22/2019	8/26/2019							A
190822104-006	082219-03-SW-D-A-2	Water	8/22/2019	8/26/2019	E	C	B	D	D	A	F
190822104-007	082219-TB01	Trip Blank	8/22/2019	8/26/2019			A				
190822104-008	082219-TB02	Trip Blank	8/22/2019	8/26/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 27, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190823069
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*27-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190823069		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 8:27:59 PM
Surr: Decachlorobiphenyl	**82.8**	57.1-135		%REC	1	8/23/2019 8:27:59 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**4.2**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/26/2019 3:10:00 PM
Barium	**0.034**	0.010		mg/L	1	8/26/2019 3:10:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 3:10:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 3:10:00 PM
Copper	**ND**	0.005		mg/L	1	8/26/2019 3:10:00 PM
Lead	**ND**	0.005		mg/L	1	8/26/2019 3:10:00 PM
Selenium	**ND**	0.005	N	mg/L	1	8/26/2019 3:10:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 3:10:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/26/2019 3:10:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 4:15:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/26/2019 4:15:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 4:15:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 4:15:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 4:15:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 4:15:00 PM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 4:15:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 4:15:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 4:15:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 5:47:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 5:47:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 5:47:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 5:47:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 5:47:00 AM
Surr: 1,2-Dichloroethane-d4	**122**	80.9-122	S	%REC	1	8/24/2019 5:47:00 AM
Surr: 4-Bromofluorobenzene	**136**	76.5-125	S	%REC	1	8/24/2019 5:47:00 AM
Surr: Toluene-d8	**94.6**	80.4-121		%REC	1	8/24/2019 5:47:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**37.4**	2.9		mg/L	1	8/26/2019

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-02-SW-A-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 8:41:18 PM
Surr: Decachlorobiphenyl	**95.0**	57.1-135		%REC	1	8/23/2019 8:41:18 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**4.8**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 3:46:00 PM
Barium	**0.033**	0.010		mg/L	1	8/26/2019 3:46:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 3:46:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 3:46:00 PM
Copper	**ND**	0.005		mg/L	1	8/26/2019 3:46:00 PM
Lead	**ND**	0.005		mg/L	1	8/26/2019 3:46:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 3:46:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 3:46:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/26/2019 3:46:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:02:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/26/2019 5:02:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 5:02:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:02:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:02:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:02:00 PM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-02-SW-A-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:02:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:02:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:02:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 6:08:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 6:08:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 6:08:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 6:08:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 6:08:00 AM
Surr: 1,2-Dichloroethane-d4	**127**	80.9-122	S	%REC	1	8/24/2019 6:08:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	8/24/2019 6:08:00 AM
Surr: Toluene-d8	**135**	80.4-121	S	%REC	1	8/24/2019 6:08:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-02-SW-A-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**35.3**	3.3		mg/L	1	8/26/2019

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-03-SW-D-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1242	**0.253**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 9:21:21 PM
PCB, Total	**0.253**	0.065		µg/L	1	8/23/2019 9:21:21 PM
Surr: Decachlorobiphenyl	**85.8**	57.1-135		%REC	1	8/23/2019 9:21:21 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**9.2**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Total Hardness (As CaCO3)	**95**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 3:51:00 PM
Barium	**0.033**	0.010		mg/L	1	8/26/2019 3:51:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 3:51:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 3:51:00 PM
Copper	**ND**	0.005		mg/L	1	8/26/2019 3:51:00 PM
Lead	**0.003**	0.005	J	mg/L	1	8/26/2019 3:51:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 3:51:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 3:51:00 PM
Zinc	**0.008**	0.010	J	mg/L	1	8/26/2019 3:51:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:05:00 PM
Barium, Dissolved	**0.022**	0.010		mg/L	1	8/26/2019 5:05:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 5:05:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:05:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:05:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:05:00 PM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-03-SW-D-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:05:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:05:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:05:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 6:29:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 6:29:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 6:29:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Benzene	**0.3**	1.0	J	µg/L	1	8/24/2019 6:29:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 6:29:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Chlorobenzene	**1.6**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 6:29:00 AM
Surr: 1,2-Dichloroethane-d4	**112**	80.9-122		%REC	1	8/24/2019 6:29:00 AM
Surr: 4-Bromofluorobenzene	**125**	76.5-125	S	%REC	1	8/24/2019 6:29:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/24/2019 6:29:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-03-SW-D-B-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**40.5**	2.5		mg/L	1	8/26/2019

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-04-SW-B-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 9:34:39 PM
Surr: Decachlorobiphenyl	**98.0**	57.1-135		%REC	1	8/23/2019 9:34:39 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**3.3**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 3:55:00 PM
Barium	**0.031**	0.010		mg/L	1	8/26/2019 3:55:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 3:55:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 3:55:00 PM
Copper	**ND**	0.005		mg/L	1	8/26/2019 3:55:00 PM
Lead	**ND**	0.005		mg/L	1	8/26/2019 3:55:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 3:55:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 3:55:00 PM
Zinc	**ND**	0.010		mg/L	1	8/26/2019 3:55:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:09:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/26/2019 5:09:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 5:09:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:09:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:09:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:09:00 PM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-04-SW-B-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:09:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:09:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:09:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 6:50:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 6:50:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 6:50:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 6:50:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 6:50:00 AM
Surr: 1,2-Dichloroethane-d4	**130**	80.9-122	S	%REC	1	8/24/2019 6:50:00 AM
Surr: 4-Bromofluorobenzene	**119**	76.5-125		%REC	1	8/24/2019 6:50:00 AM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	8/24/2019 6:50:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-04-SW-B-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**32.6**	2.9		mg/L	1	8/26/2019

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-05-SW-B-A-1
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**35.3**	3.3		mg/L	1	8/26/2019

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT: AECOM Environment
Work Order: **190823069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082319-TB01
Collection Date: 8/23/2019
Lab Sample ID: 190823069-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 7:12:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 7:12:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 7:12:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 7:12:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 7:12:00 AM
Surr: 1,2-Dichloroethane-d4	**132**	80.9-122	S	%REC	1	8/24/2019 7:12:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	8/24/2019 7:12:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	8/24/2019 7:12:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT: AECOM Environment
Work Order: **190823069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082319-TB02
Collection Date: 8/23/2019
Lab Sample ID: 190823069-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Acetone	**ND**	5.0		µg/L	1	8/24/2019 7:33:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 7:33:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 7:33:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 7:33:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 7:33:00 AM
Surr: 1,2-Dichloroethane-d4	**126**	80.9-122	S	%REC	1	8/24/2019 7:33:00 AM
Surr: 4-Bromofluorobenzene	**126**	76.5-125	S	%REC	1	8/24/2019 7:33:00 AM
Surr: Toluene-d8	**92.7**	80.4-121		%REC	1	8/24/2019 7:33:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-3
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-008
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
PCB, Total	**ND**	0.065		µg/L	1	8/23/2019 9:47:58 PM
Surr: Decachlorobiphenyl	**53.4**	57.1-135	S	%REC	1	8/23/2019 9:47:58 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/23/2019)						
Mercury	**ND**	0.5		ng/L	1	8/26/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/26/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/26/2019 4:01:00 PM
Barium	**ND**	0.010		mg/L	1	8/26/2019 4:01:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/26/2019 4:01:00 PM
Chromium	**ND**	0.005		mg/L	1	8/26/2019 4:01:00 PM
Copper	**ND**	0.005		mg/L	1	8/26/2019 4:01:00 PM
Lead	**ND**	0.005		mg/L	1	8/26/2019 4:01:00 PM
Selenium	**ND**	0.005		mg/L	1	8/26/2019 4:01:00 PM
Silver	**ND**	0.010		mg/L	1	8/26/2019 4:01:00 PM
Zinc	**ND**	0.010		mg/L	1	8/26/2019 4:01:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/26/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:14:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:14:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/26/2019 5:14:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:14:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:14:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:14:00 PM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-3
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-008
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/26/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/26/2019 5:14:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:14:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/26/2019 5:14:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Acetone	**4.9**	5.0	J	µg/L	1	8/24/2019 7:54:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/24/2019 7:54:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/24/2019 7:54:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Benzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/24/2019 7:54:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Toluene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/24/2019 7:54:00 AM
Surr: 1,2-Dichloroethane-d4	**140**	80.9-122	S	%REC	1	8/24/2019 7:54:00 AM
Surr: 4-Bromofluorobenzene	**115**	76.5-125		%REC	1	8/24/2019 7:54:00 AM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	8/24/2019 7:54:00 AM

Adirondack Environmental Services, Inc

Date: *27-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082319-01-SW-U-A-3
Work Order:	**190823069**	**Collection Date:**	8/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190823069-008
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/26/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	8/26/2019

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75216

MBLK

SeqNo: **2686744** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **MB-75216** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2687386** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **MB-75216** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2686745** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **LCS-75216** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.73	0.500	10	0	97.3	77	123	0	0		

LCS

SeqNo: **2687387** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **LCS-75216** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.61	0.500	10	0	96.1	77	123	0	0		

MS

SeqNo: **2687389** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **190823069-001 (082319-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15.5	0.500	12.5	4.19	90.5	71	125	0	0		

MS

SeqNo: **2687400** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **190823021-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.9	0.500	12.5	1.47	91.4	71	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75216

MSD

SeqNo: **2687390** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **190823069-001 (082319-01-SW-U-** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.7	0.500	12.5	4.19	84.1	71	125	15.5	5.30	24	

MSD

SeqNo: **2687401** **PrepDate:8/23/2019** TestNo: **E1631** RunNo: **174665**
Samp ID: **190823021-004** **PrepRef:(1631E)** Units: **ng/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.5	0.500	12.5	1.47	96.2	71	125	12.9	4.55	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75222

mblk

SeqNo: **2686111** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **mb-75222** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0934	0.0100	0.1	0	93.4	57.1	135	0	0		

lcs

SeqNo: **2686112** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **lcs-75222** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.569	0.0650	0.5	0	114	60	140	0	0		
Surr: Decachlorobiphenyl	0.0828	0.0100	0.1	0	82.8	57.1	135	0	0		

ms

SeqNo: **2686119** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **190823069-001c (082319-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5774	0.0650	0.5	0	115	46.7	130	0	0		
PCB, Total	0.5774	0.0650	0.5	0	115	51	150	0	0		
Surr: Decachlorobiphenyl	0.092	0.0100	0.1	0	92	57.1	135	0	0		

msd

SeqNo: **2686124** PrepDate:**8/23/2019** TestNo: **SW8082A** RunNo: **174634**
Samp ID: **190823069-001c (082319-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0916	0.0100	0.1	0	91.6	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75226

LCS

SeqNo: **2687860** PrepDate:**8/26/2019** TestNo: **SM2540D** RunNo: **174716**
Samp ID: **LCS-75226** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	452	40.0	483	0	93.6	86.5	114	0	0		

DUP

SeqNo: **2687871** PrepDate:**8/26/2019** TestNo: **SM2540D** RunNo: **174716**
Samp ID: **190821026-001** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	272	20.0	0	0	0	0	0	312	13.7	10	Z

DUP

SeqNo: **2687877** PrepDate:**8/26/2019** TestNo: **SM2540D** RunNo: **174716**
Samp ID: **190823069-001F** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	41.14	2.90	0	0	0	0	0	37.43	9.45	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75228

MBLK

SeqNo: **2687525** PrepDate:**8/26/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **MB-75228** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2687526** PrepDate:**8/26/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **LCS-75228** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.047	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	1.955	0.0100	2	0	97.8	89	112	0	0		
Cadmium, Dissolved	2.029	0.00500	2	0	101	85.3	112	0	0		
Chromium, Dissolved	1.973	0.00500	2	0	98.6	89.1	109	0	0		
Copper, Dissolved	2.04	0.00500	2	0	102	86.8	115	0	0		
Lead, Dissolved	2.088	0.00500	2	0	104	86.8	114	0	0		
Selenium, Dissolved	1.934	0.00500	2	0	96.7	85	115	0	0		
Silver, Dissolved	0.5183	0.0100	0.5	0	104	85	115	0	0		
Zinc, Dissolved	1.932	0.0100	2	0	96.6	85	115	0	0		

MS

SeqNo: **2687534** PrepDate:**8/26/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190823069-001 (082319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04492	0.00500	0.04	0	112	75	123	0	0		
Barium, Dissolved	2.138	0.0100	2	0.0248	106	75	124	0	0		
Cadmium, Dissolved	0.05373	0.00500	0.05	0	107	75	125	0	0		
Chromium, Dissolved	0.2072	0.00500	0.2	0	104	77.2	117	0	0		
Copper, Dissolved	0.277	0.00500	0.25	0	111	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75228

MS

SeqNo: **2687534** PrepDate:**8/26/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190823069-001 (082319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02109	0.00500	0.02	0	105	75	125	0	0		
Selenium, Dissolved	0.01011	0.00500	0.01	0	101	75	125	0	0		
Silver, Dissolved	0.04492	0.0100	0.05	0	89.8	75	125	0	0		
Zinc, Dissolved	0.5408	0.0100	0.5	0	108	75	121	0	0		

DUP

SeqNo: **2687528** PrepDate:**8/26/2019** TestNo: **E200.7F** RunNo: **174675**
Samp ID: **190823069-001** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02445	0.0100	0	0	0	0	0	0.0248	1.40	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.001542	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	ND	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.002458	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002019	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75229

MBLK

SeqNo: **2687099** PrepDate:**8/26/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **MB-75229** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2687100** PrepDate:**8/26/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **LCS-75229** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.042	0.00500	2	0	102	89.1	111	0	0		
Barium	1.96	0.0100	2	0	98	85	115	0	0		
Cadmium	2.023	0.00500	2	0	101	85	115	0	0		
Chromium	1.987	0.00500	2	0	99.3	89.7	109	0	0		
Copper	2.055	0.00500	2	0	103	85	115	0	0		
Lead	2.086	0.00500	2	0	104	88.1	112	0	0		
Selenium	1.919	0.00500	2	0	96	87.5	112	0	0		
Silver	0.521	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	1.934	0.0100	2	0	96.7	88.3	113	0	0		

MS

SeqNo: **2687103** PrepDate:**8/26/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190823069-001 (082319-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04355	0.00500	0.04	0.003105	101	75	125	0	0		
Barium	2.115	0.0100	2	0.03414	104	75	119	0	0		
Cadmium	0.053	0.00500	0.05	0	106	75	118	0	0		
Chromium	0.2154	0.00500	0.2	0	108	75	124	0	0		
Copper	0.2735	0.00500	0.25	0	109	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75229

MS

SeqNo: **2687103** **PrepDate:8/26/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190823069-001 (082319-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02214	0.00500	0.02	0	111	75	125	0	0		
Selenium	0.006076	0.00500	0.01	0	60.8	75	125	0	0		S
Silver	0.04346	0.0100	0.05	0	86.9	75	125	0	0		
Zinc	0.5349	0.0100	0.5	0.005868	106	76.9	125	0	0		

DUP

SeqNo: **2687102** **PrepDate:8/26/2019** TestNo: **E200.7** RunNo: **174675**
Samp ID: **190823069-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.00166	0.00500	0	0	0	0	0	0.003105	0	20	
Barium	0.03189	0.0100	0	0	0	0	0	0.03414	6.83	20	
Cadmium	0.00002586	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.001897	0.00500	0	0	0	0	0	0	0	20	
Lead	0.001042	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.004178	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.006043	0.0100	0	0	0	0	0	0.005868	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

mblk	SeqNo: **2686336**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	5.0									
Surr: 1,2-Dichloroethane-d4	58.98	5.0	50	0	118	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.4	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	51.95	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

lcs	SeqNo: **2686334**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **8/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.95	1.0	10	0	89.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.7	1.0	10	0	97	72.3	118	0	0		
1,1,2-Trichloroethane	9.47	1.0	10	0	94.7	73.1	123	0	0		
1,1-Dichloroethane	11.05	1.0	10	0	110	73.2	127	0	0		
1,1-Dichloroethene	10.09	1.0	10	0	101	70.3	128	0	0		
1,2,3-Trichloropropane	3.81	1.0	5	0	76.2	68.4	115	0	0		
1,2-Dichlorobenzene	8.1	1.0	10	0	81	71	124	0	0		
1,2-Dichloroethane	11.11	1.0	10	0	111	72.5	127	0	0		
1,3-Dichlorobenzene	8.71	1.0	10	0	87.1	72.2	121	0	0		
1,3-Dichloropropane	5.31	1.0	5	0	106	76	122	0	0		
1,4-Dichlorobenzene	7.99	1.0	10	0	79.9	71.7	127	0	0		
2-Butanone	12.1	5.0	10	0	121	65.1	132	0	0		
4-Methyl-2-pentanone	12.16	5.0	10	0	122	68.7	118	0	0		S
Acetone	10.51	5.0	10	0	105	69.2	133	0	0		
Benzene	8.6	1.0	10	0	86	71.2	122	0	0		
Carbon disulfide	5.41	1.0	5	0	108	67.8	134	0	0		
Carbon tetrachloride	9.69	1.0	10	0	96.9	74.5	122	0	0		
Chlorobenzene	8.71	1.0	10	0	87.1	72.7	124	0	0		
Chloroethane	10.57	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.78	1.0	10	0	108	71.6	133	0	0		
Dibromochloromethane	10.1	1.0	10	0	101	70.6	124	0	0		
Ethylbenzene	8.57	1.0	10	0	85.7	70.9	126	0	0		
Methylene chloride	8.51	1.0	10	0	85.1	66.3	130	0	0		
Tetrachloroethene	6.98	1.0	10	0	69.8	72.4	119	0	0		S
Toluene	8.31	1.0	10	0	83.1	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	8.15	1.0	10	0	81.5	73	127	0	0		
Vinyl chloride	10.16	1.0	10	0	102	65.2	134	0	0		
Xylenes, Total	25.83	1.0	30	0	86.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	63.15	5.0	50	0	126	80.9	122	0	0		S
Surr: 4-Bromofluorobenzene	56.96	5.0	50	0	114	76.5	125	0	0		
Surr: Toluene-d8	47.65	5.0	50	0	95.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

ms	SeqNo: **2686351**	TestNo: **SW8260C**	RunNo: **174653**
	Samp ID: **190823069-001b (082319-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.73	1.0	10	0	117	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.47	1.0	10	0	94.7	70.1	123	0	0		
1,1,2-Trichloroethane	9.49	1.0	10	0	94.9	72.1	119	0	0		
1,1-Dichloroethane	10.32	1.0	10	0	103	70.4	126	0	0		
1,1-Dichloroethene	8.73	1.0	10	0	87.3	70.2	125	0	0		
1,2,3-Trichloropropane	3.28	1.0	5	0	65.6	53.7	101	0	0		
1,2-Dichlorobenzene	6.67	1.0	10	0	66.7	70.2	123	0	0		S
1,2-Dichloroethane	10	1.0	10	0.19	98.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.13	1.0	10	0	71.3	70.4	124	0	0		
1,3-Dichloropropane	5.12	1.0	5	0	102	64	125	0	0		
1,4-Dichlorobenzene	8.37	1.0	10	0	83.7	70.8	127	0	0		
2-Butanone	10.06	5.0	10	0	101	60.5	123	0	0		
4-Methyl-2-pentanone	12.18	5.0	10	0	122	52.8	133	0	0		
Acetone	6.8	5.0	10	0	68	56.3	135	0	0		
Benzene	8.92	1.0	10	0	89.2	70.2	127	0	0		
Carbon disulfide	4.33	1.0	5	0	86.6	62.2	130	0	0		
Carbon tetrachloride	10.66	1.0	10	0	107	56.4	137	0	0		
Chlorobenzene	7.44	1.0	10	0	74.4	72.7	128	0	0		
Chloroethane	9.42	1.0	10	0	94.2	71.3	135	0	0		
Chloroform	9.39	1.0	10	0	93.9	70.2	125	0	0		
Dibromochloromethane	10	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	7.52	1.0	10	0	75.2	71.9	129	0	0		
Methylene chloride	6.11	1.0	10	0	61.1	65.3	123	0	0		S
Tetrachloroethene	8.67	1.0	10	0	86.7	74.5	121	0	0		
Toluene	8.68	1.0	10	0	86.8	73	122	0	0		
trans-1,2-Dichloroethene	7.88	1.0	10	0	78.8	69.1	133	0	0		
Trichloroethene	7.94	1.0	10	0	79.4	71.1	126	0	0		
Vinyl chloride	9.2	1.0	10	0	92	65	137	0	0		
Xylenes, Total	21.79	1.0	30	0	72.6	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	52.34	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	61.17	5.0	50	0	122	76.5	125	0	0		
Surr: Toluene-d8	51.22	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190823069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174653

msd

SeqNo: **2686352** TestNo: **SW8260C** RunNo: **174653**
Samp ID: **190823069-001b (082319-01-SW-U-** Units: **µg/L** Analysis Date: **8/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.58	1.0	10	0	95.8	71.6	126	11.73	20.2	20.4	
1,1,2,2-Tetrachloroethane	10.37	1.0	10	0	104	70.1	123	9.47	9.07	18.6	
1,1,2-Trichloroethane	8.97	1.0	10	0	89.7	72.1	119	9.49	5.63	20	
1,1-Dichloroethane	10.85	1.0	10	0	108	70.4	126	10.32	5.01	19.2	
1,1-Dichloroethene	9.41	1.0	10	0	94.1	70.2	125	8.73	7.50	16.1	
1,2,3-Trichloropropane	4.08	1.0	5	0	81.6	53.7	101	3.28	21.7	20	Z
1,2-Dichlorobenzene	8.65	1.0	10	0	86.5	70.2	123	6.67	25.8	17.9	Z
1,2-Dichloroethane	10.97	1.0	10	0.19	108	73.5	126	10	9.25	15.6	
1,3-Dichlorobenzene	8.39	1.0	10	0	83.9	70.4	124	7.13	16.2	14.3	Z
1,3-Dichloropropane	5.01	1.0	5	0	100	64	125	5.12	2.17	0	
1,4-Dichlorobenzene	8.94	1.0	10	0	89.4	70.8	127	8.37	6.59	14.4	
2-Butanone	11.78	5.0	10	0	118	60.5	123	10.06	15.8	15	Z
4-Methyl-2-pentanone	10.57	5.0	10	0	106	52.8	133	12.18	14.2	11.9	Z
Acetone	6.96	5.0	10	0	69.6	56.3	135	6.8	2.33	10.6	
Benzene	8.9	1.0	10	0	89	70.2	127	8.92	0.224	18.4	
Carbon disulfide	5.21	1.0	5	0	104	62.2	130	4.33	18.4	13.1	Z
Carbon tetrachloride	9.8	1.0	10	0	98	56.4	137	10.66	8.41	20.3	
Chlorobenzene	9.24	1.0	10	0	92.4	72.7	128	7.44	21.6	19.6	Z
Chloroethane	10.36	1.0	10	0	104	71.3	135	9.42	9.50	27.8	
Chloroform	10.34	1.0	10	0	103	70.2	125	9.39	9.63	20.3	
Dibromochloromethane	7.95	1.0	10	0	79.5	69.5	123	10	22.8	18.8	Z
Ethylbenzene	8.78	1.0	10	0	87.8	71.9	129	7.52	15.5	16.3	
Methylene chloride	7.68	1.0	10	0	76.8	65.3	123	6.11	22.8	21.4	Z
Tetrachloroethene	7.51	1.0	10	0	75.1	74.5	121	8.67	14.3	20.9	
Toluene	7.12	1.0	10	0	71.2	73	122	8.68	19.7	19.4	SZ
trans-1,2-Dichloroethene	9.21	1.0	10	0	92.1	69.1	133	7.88	15.6	16.1	
Trichloroethene	7.48	1.0	10	0	74.8	71.1	126	7.94	5.97	16.6	
Vinyl chloride	9.82	1.0	10	0	98.2	65	137	9.2	6.52	20.5	
Xylenes, Total	28.51	1.0	30	0	95	72	130	21.79	26.7	16.1	Z
Surr: 1,2-Dichloroethane-d4	63.75	5.0	50	0	128	80.9	122	0	0	0	S
Surr: 4-Bromofluorobenzene	58.73	5.0	50	0	117	76.5	125	0	0	0	
Surr: Toluene-d8	46.96	5.0	50	0	93.9	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190823069

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082319-01-SW-U-A-1	8/23/19	1135	A	W		✓	3	metals (filtered)
				P				6	PCBs
				A				6	VOCs
				P				3	metals/hardness
				A				9	mercury
				P				3	TSS
				A					
002	082319-02-SW-A-B-1	8/23/19	1215	P	W		✓	1	metals (filtered)
				A				2	PCBs
				P				2	VOCs
				A				1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
003	082319-03-SW-D-B-1	8/23/19	1235	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/23/19 4:01 PM
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/23/19 4:25 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic



Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190823069

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gelas
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	johnbleiler@aecom.com	229608
Samplers: (Signature)		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082319-03-SW-D-B-1	8/23/19	1235	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	metals/hardness
				A/P				3	mercury
			↓	A/P	↓		↓	1	TSS
004	082319-04-SW-B-A-1	8/23/19	1115	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
			↓	A/P	↓		↓	1	TSS
005	082319-05-SW-B-A-1	8/23/19	1250	A/P	W		✓	1	TSS
006	082319-TB01			A/P	TB				trip blank
007	082319-TB02			A/P	TB				trip blank
008	082319-01-SW-U-A-3	8/23/19	1080	A/P	W		✓	1	metals (filtered)

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/23/19 4:01PM
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/23/19 4:25

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190823069

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.hieber@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
008	082319-01-SW-U-A-3	8/23/19	1030	A	W		✓	2	PCBs
				A				2	VOCs
				A				1	metals/hardness
				A				3	mercury
				A				1	TSS
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/23/19 4:01pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/23/19 4:25pm

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 6°C	☒	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190823069

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/27/2019

8/23/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190823069-001	082319-01-SW-U-A-1	Water	8/23/2019	8/27/2019	E	C	B	D	D	A	F
190823069-002	082319-02-SW-A-B-1	Water	8/23/2019	8/27/2019	E	C	B	D	D	A	F
190823069-003	082319-03-SW-D-B-1	Water	8/23/2019	8/27/2019	E	C	B	D	D	A	F
190823069-004	082319-04-SW-B-A-1	Water	8/23/2019	8/27/2019	E	C	B	D	D	A	F
190823069-005	082319-05-SW-B-A-1	Water	8/23/2019	8/27/2019							A
190823069-006	082319-TB01	Trip Blank	8/23/2019	8/27/2019			A				
190823069-007	082319-TB02	Trip Blank	8/23/2019	8/27/2019			A				
190823069-008	082319-01-SW-U-A-1	Water	8/23/2019	8/27/2019	E	C	B	D	D	A	F

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 28, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190826046
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/26/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*28-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190826046		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-01-SW-U-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 3:40:31 PM
Surr: Decachlorobiphenyl	**88.0**	57.1-135		%REC	1	8/27/2019 3:40:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**1.7**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	8/27/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/27/2019 12:45:00 PM
Barium	**0.028**	0.010		mg/L	1	8/27/2019 12:45:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/27/2019 12:45:00 PM
Chromium	**0.006**	0.005	B	mg/L	1	8/27/2019 12:45:00 PM
Copper	**ND**	0.005		mg/L	1	8/27/2019 12:45:00 PM
Lead	**ND**	0.005		mg/L	1	8/27/2019 12:45:00 PM
Selenium	**ND**	0.005		mg/L	1	8/27/2019 12:45:00 PM
Silver	**ND**	0.010		mg/L	1	8/27/2019 12:45:00 PM
Zinc	**ND**	0.010		mg/L	1	8/27/2019 12:45:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:12:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/27/2019 2:12:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/27/2019 2:12:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:12:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:12:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:12:00 PM

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-01-SW-U-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/27/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:12:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 2:12:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 2:12:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 11:36:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 11:36:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 11:36:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 11:36:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/28/2019 11:36:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/28/2019 11:36:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 11:36:00 AM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	8/28/2019 11:36:00 AM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	8/28/2019 11:36:00 AM
Surr: Toluene-d8	**97.2**	80.4-121		%REC	1	8/28/2019 11:36:00 AM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-01-SW-U-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/27/2019)						
TSS (Residue, Non-Filterable)	**8.5**	1.1		mg/L	1	8/27/2019

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-02-SW-A-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 5:12:31 PM
Surr: Decachlorobiphenyl	**79.0**	57.1-135		%REC	1	8/27/2019 5:12:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**2.0**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	8/27/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/27/2019 1:01:00 PM
Barium	**0.028**	0.010		mg/L	1	8/27/2019 1:01:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/27/2019 1:01:00 PM
Chromium	**0.006**	0.005	B	mg/L	1	8/27/2019 1:01:00 PM
Copper	**0.005**	0.005	J	mg/L	1	8/27/2019 1:01:00 PM
Lead	**ND**	0.005		mg/L	1	8/27/2019 1:01:00 PM
Selenium	**ND**	0.005		mg/L	1	8/27/2019 1:01:00 PM
Silver	**ND**	0.010		mg/L	1	8/27/2019 1:01:00 PM
Zinc	**ND**	0.010		mg/L	1	8/27/2019 1:01:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:41:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	8/27/2019 2:41:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/27/2019 2:41:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:41:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:41:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:41:00 PM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-02-SW-A-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/27/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:41:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 2:41:00 PM
Zinc, Dissolved	**0.006**	0.010	J	mg/L	1	8/27/2019 2:41:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Methylene chloride	**0.6**	1.0	J	µg/L	1	8/28/2019 11:57:00 AM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 11:57:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 11:57:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 11:57:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 11:57:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/28/2019 11:57:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/28/2019 11:57:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 11:57:00 AM
Surr: 1,2-Dichloroethane-d4	**97.0**	80.9-122		%REC	1	8/28/2019 11:57:00 AM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	8/28/2019 11:57:00 AM
Surr: Toluene-d8	**96.8**	80.4-121		%REC	1	8/28/2019 11:57:00 AM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-02-SW-A-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/27/2019)						
TSS (Residue, Non-Filterable)	**10.3**	1.1		mg/L	1	8/27/2019

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-03-SW-U-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1242	**0.040**	0.065	J	µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 4:07:11 PM
PCB, Total	**0.040**	0.065	J	µg/L	1	8/27/2019 4:07:11 PM
Surr: Decachlorobiphenyl	**113**	57.1-135		%REC	1	8/27/2019 4:07:11 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**3.0**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	8/27/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/27/2019 1:05:00 PM
Barium	**0.029**	0.010		mg/L	1	8/27/2019 1:05:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/27/2019 1:05:00 PM
Chromium	**0.006**	0.005	B	mg/L	1	8/27/2019 1:05:00 PM
Copper	**0.006**	0.005		mg/L	1	8/27/2019 1:05:00 PM
Lead	**ND**	0.005		mg/L	1	8/27/2019 1:05:00 PM
Selenium	**ND**	0.005		mg/L	1	8/27/2019 1:05:00 PM
Silver	**ND**	0.010		mg/L	1	8/27/2019 1:05:00 PM
Zinc	**ND**	0.010		mg/L	1	8/27/2019 1:05:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:45:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	8/27/2019 2:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/27/2019 2:45:00 PM
Chromium, Dissolved	**0.006**	0.005		mg/L	1	8/27/2019 2:45:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-03-SW-U-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/27/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 2:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 2:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 2:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 12:18:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 12:18:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 12:18:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/28/2019 12:18:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 12:18:00 PM
Surr: 1,2-Dichloroethane-d4	**97.2**	80.9-122		%REC	1	8/28/2019 12:18:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	8/28/2019 12:18:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	8/28/2019 12:18:00 PM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-03-SW-U-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/27/2019)						
TSS (Residue, Non-Filterable)	**14.8**	1.1		mg/L	1	8/27/2019

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-04-SW-B-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 4:33:55 PM
Surr: Decachlorobiphenyl	**82.8**	57.1-135		%REC	1	8/27/2019 4:33:55 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**2.1**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	8/27/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/27/2019 1:12:00 PM
Barium	**0.028**	0.010		mg/L	1	8/27/2019 1:12:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/27/2019 1:12:00 PM
Chromium	**0.010**	0.005	B	mg/L	1	8/27/2019 1:12:00 PM
Copper	**ND**	0.005		mg/L	1	8/27/2019 1:12:00 PM
Lead	**ND**	0.005		mg/L	1	8/27/2019 1:12:00 PM
Selenium	**ND**	0.005		mg/L	1	8/27/2019 1:12:00 PM
Silver	**ND**	0.010	N	mg/L	1	8/27/2019 1:12:00 PM
Zinc	**ND**	0.010		mg/L	1	8/27/2019 1:12:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/27/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 3:11:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/27/2019 3:11:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/27/2019 3:11:00 PM
Chromium, Dissolved	**0.010**	0.005		mg/L	1	8/27/2019 3:11:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 3:11:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 3:11:00 PM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-04-SW-B-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/27/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/27/2019 3:11:00 PM
Silver, Dissolved	**ND**	0.010	N	mg/L	1	8/27/2019 3:11:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/27/2019 3:11:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 12:40:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 12:40:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 12:40:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 12:40:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/28/2019 12:40:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 12:40:00 PM
Surr: 1,2-Dichloroethane-d4	**96.7**	80.9-122		%REC	1	8/28/2019 12:40:00 PM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	8/28/2019 12:40:00 PM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/28/2019 12:40:00 PM

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-04-SW-B-A-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/27/2019)						
TSS (Residue, Non-Filterable)	**11.1**	1.1		mg/L	1	8/27/2019

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082619-05-SW-B-B-1
Work Order:	**190826046**	**Collection Date:**	8/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190826046-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/27/2019)						
TSS (Residue, Non-Filterable)	**13.0**	1.0		mg/L	1	8/27/2019

Adirondack Environmental Services, Inc

Date: *28-Aug-19*

CLIENT: AECOM Environment
Work Order: **190826046**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082619-TB01
Collection Date: 8/26/2019
Lab Sample ID: 190826046-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Methylene chloride	**1.7**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 1:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 1:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 1:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 1:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/28/2019 1:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 1:01:00 PM
Surr: 1,2-Dichloroethane-d4	**95.5**	80.9-122		%REC	1	8/28/2019 1:01:00 PM
Surr: 4-Bromofluorobenzene	**113**	76.5-125		%REC	1	8/28/2019 1:01:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	8/28/2019 1:01:00 PM

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75250

MBLK

SeqNo: **2688426** PrepDate:**8/27/2019** TestNo: **E200.7F** RunNo: **174748**
Samp ID: **MB-75250** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2688427** PrepDate:**8/27/2019** TestNo: **E200.7F** RunNo: **174748**
Samp ID: **LCS-75250** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.006	0.00500	2	0	100	85	115	0	0		
Barium, Dissolved	1.994	0.0100	2	0	99.7	89	112	0	0		
Cadmium, Dissolved	1.999	0.00500	2	0	99.9	85.3	112	0	0		
Chromium, Dissolved	1.984	0.00500	2	0	99.2	89.1	109	0	0		
Copper, Dissolved	2.075	0.00500	2	0	104	86.8	115	0	0		
Lead, Dissolved	2.067	0.00500	2	0	103	86.8	114	0	0		
Selenium, Dissolved	1.994	0.00500	2	0	99.7	85	115	0	0		
Silver, Dissolved	0.5424	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	1.935	0.0100	2	0	96.7	85	115	0	0		

MS

SeqNo: **2688433** PrepDate:**8/27/2019** TestNo: **E200.7F** RunNo: **174748**
Samp ID: **190826046-004 (082619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04281	0.00500	0.04	0	107	75	123	0	0		
Barium, Dissolved	2.221	0.0100	2	0.02408	110	75	124	0	0		
Cadmium, Dissolved	0.05295	0.00500	0.05	0	106	75	125	0	0		
Chromium, Dissolved	0.1971	0.00500	0.2	0.01041	93.3	77.2	117	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75250

MS

SeqNo: **2688433** **PrepDate:8/27/2019** TestNo: **E200.7F** RunNo: **174748**
Samp ID: **190826046-004 (082619-04-SW-B-** **PrepRef:** Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper, Dissolved	0.2527	0.00500	0.25	0	101	75	125	0	0		
Lead, Dissolved	0.0197	0.00500	0.02	0	98.5	75	125	0	0		
Selenium, Dissolved	0.008329	0.00500	0.01	0	83.3	75	125	0	0		
Silver, Dissolved	0.03282	0.0100	0.05	0	65.6	75	125	0	0		S
Zinc, Dissolved	0.5381	0.0100	0.5	0	108	75	121	0	0		

DUP

SeqNo: **2688432** **PrepDate:8/27/2019** TestNo: **E200.7F** RunNo: **174748**
Samp ID: **190826046-004** **PrepRef:** Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02546	0.0100	0	0	0	0	0	0.02408	5.57	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.00987	0.00500	0	0	0	0	0	0.01041	5.34	20	
Copper, Dissolved	0.001982	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0007214	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.003243	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75251

MBLK

SeqNo: **2688412** PrepDate:**8/27/2019** TestNo: **E200.7** RunNo: **174748**
Samp ID: **MB-75251** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	0.00925	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2688413** PrepDate:**8/27/2019** TestNo: **E200.7** RunNo: **174748**
Samp ID: **LCS-75251** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.024	0.00500	2	0	101	89.1	111	0	0		
Barium	1.996	0.0100	2	0	99.8	85	115	0	0		
Cadmium	2.007	0.00500	2	0	100	85	115	0	0		
Chromium	1.979	0.00500	2	0	99	89.7	109	0	0		B
Copper	2.074	0.00500	2	0	104	85	115	0	0		
Lead	2.082	0.00500	2	0	104	88.1	112	0	0		
Selenium	2.007	0.00500	2	0	100	87.5	112	0	0		
Silver	0.5444	0.0100	0.5	0	109	85.2	115	0	0		
Zinc	1.941	0.0100	2	0	97.1	88.3	113	0	0		

MS

SeqNo: **2688421** PrepDate:**8/27/2019** TestNo: **E200.7** RunNo: **174748**
Samp ID: **190826046-004 (082619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0403	0.00500	0.04	0	101	75	125	0	0		
Barium	2.199	0.0100	2	0.02834	109	75	119	0	0		
Cadmium	0.0528	0.00500	0.05	0	106	75	118	0	0		
Chromium	0.2248	0.00500	0.2	0.009784	107	75	124	0	0		B
Copper	0.2835	0.00500	0.25	0	113	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75251

MS

SeqNo: **2688421** PrepDate:**8/27/2019** TestNo: **E200.7** RunNo: **174748**
Samp ID: **190826046-004 (082619-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02028	0.00500	0.02	0	101	75	125	0	0		
Selenium	0.01119	0.00500	0.01	0	112	75	125	0	0		
Silver	0.01658	0.0100	0.05	0	33.2	75	125	0	0		S
Zinc	0.5428	0.0100	0.5	0	109	76.9	125	0	0		

DUP

SeqNo: **2688420** PrepDate:**8/27/2019** TestNo: **E200.7** RunNo: **174748**
Samp ID: **190826046-004** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0007912	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02775	0.0100	0	0	0	0	0	0.02834	2.09	20	
Cadmium	0.0000203	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.01042	0.00500	0	0	0	0	0	0.009784	6.34	20	B
Copper	0.005409	0.00500	0	0	0	0	0	0	200	20	Z
Lead	0.0000321	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.001813	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.003774	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75260

LCS

SeqNo: **2688802** PrepDate:**8/27/2019** TestNo: **SM2540D** RunNo: **174767**
Samp ID: **LCS-75260** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	520	40.0	483	0	108	86.5	114	0	0		

DUP

SeqNo: **2688808** PrepDate:**8/27/2019** TestNo: **SM2540D** RunNo: **174767**
Samp ID: **190822057-002** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	208	10.0	0	0	0	0	0	222	6.51	10	

DUP

SeqNo: **2688818** PrepDate:**8/27/2019** TestNo: **SM2540D** RunNo: **174767**
Samp ID: **190823002-001** PrepRef: Units: **mg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1624	40.0	0	0	0	0	0	1536	5.57	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75270

mblk SeqNo: **2688305** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **mb-75270** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0756	0	0.1	0	75.6	57.1	135	0	0		

lcs SeqNo: **2688311** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **lcs-75270** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3488	0.0650	0.5	0	69.8	60	140	0	0		
PCB, Total	0.3488	0.0650	0.5	0	69.8	60	140	0	0		
Surr: Decachlorobiphenyl	0.11	0.0100	0.1	0	110	57.1	135	0	0		

lcs SeqNo: **2688317** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **lcsredo** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.382	0.0650	0.5	0	76.4	60	140	0	0		
PCB, Total	0.382	0.0650	0.5	0	76.4	60	140	0	0		
Surr: Decachlorobiphenyl	0.0832	0.0100	0.1	0	83.2	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75278

MBLK

SeqNo: **2689039** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **MB-75278** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2689040** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **LCS-75278** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	10	0	113	77	123	0	0		

MS

SeqNo: **2688874** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190826046-001 (082619-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	1.68	97.8	71	125	0	0		

MSD

SeqNo: **2688875** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190826046-001 (082619-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.3	0.500	12.5	1.68	101	71	125	13.9	2.84	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174774

mblk

SeqNo: **2688937** TestNo: **SW8260C** RunNo: **174774**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.46	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.33	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.49	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.43	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	53.39	5.0	50	0	107	76.5	125	0	0		
Surr: Toluene-d8	49.33	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190826046
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174774

lcs

SeqNo: **2688935** TestNo: **SW8260C** RunNo: **174774**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.41	1.0	10	0	84.1	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.36	1.0	10	0	83.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.1	1.0	10	0	91	73.1	123	0	0		
1,1-Dichloroethane	9.43	1.0	10	0	94.3	73.2	127	0	0		
1,1-Dichloroethene	9.62	1.0	10	0	96.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.05	1.0	5	0	81	68.4	115	0	0		
1,2-Dichlorobenzene	8.32	1.0	10	0	83.2	71	124	0	0		
1,2-Dichloroethane	8.39	1.0	10	0	83.9	72.5	127	0	0		
1,3-Dichlorobenzene	8.06	1.0	10	0	80.6	72.2	121	0	0		
1,3-Dichloropropane	4.47	1.0	5	0	89.4	76	122	0	0		
1,4-Dichlorobenzene	8.83	1.0	10	0	88.3	71.7	127	0	0		
2-Butanone	8.48	5.0	10	0	84.8	65.1	132	0	0		
4-Methyl-2-pentanone	8.46	5.0	10	0	84.6	68.7	118	0	0		
Acetone	10.74	5.0	10	0	107	69.2	133	0	0		
Benzene	8.8	1.0	10	0	88	71.2	122	0	0		
Carbon disulfide	4.35	1.0	5	0	87	67.8	134	0	0		
Carbon tetrachloride	8.37	1.0	10	0	83.7	74.5	122	0	0		
Chlorobenzene	8.78	1.0	10	0	87.8	72.7	124	0	0		
Chloroethane	7.5	1.0	10	0	75	72.3	136	0	0		
Chloroform	8.57	1.0	10	0	85.7	71.6	133	0	0		
Dibromochloromethane	8.53	1.0	10	0	85.3	70.6	124	0	0		
Ethylbenzene	8.98	1.0	10	0	89.8	70.9	126	0	0		
Methylene chloride	9.25	1.0	10	0	92.5	66.3	130	0	0		
Tetrachloroethene	8.78	1.0	10	0	87.8	72.4	119	0	0		
Toluene	8.28	1.0	10	0	82.8	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.17	1.0	10	0	81.7	73	127	0	0		
Vinyl chloride	7.85	1.0	10	0	78.5	65.2	134	0	0		
Xylenes, Total	26.64	1.0	30	0	88.8	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	46.98	5.0	50	0	94	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.78	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	49.32	5.0	50	0	98.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack environmental services inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190826046

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082619-01-SW-U-A-1	8/26/19	0855	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	082619-02-SW-A-B-1	8/26/19	0935	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	082619-03-SW-U-B-1	8/26/19	0955	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/26/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/26/19 5:00PM

Temperature: Ambient or (Chilled) Notes: 6°C

AES Bottles: Y ☒ N ☐

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190826046

Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190826046

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	[redacted] 082619-03-SW-U-B-1	8/26/19	0955	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	082619-04-SW-B-A-1	8/26/19	0830	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	082619-05-SW-B-B-1	8/26/19	1015	A	W		✓	1	TSS
006	082619-TB01			P	TB			1	trip blank
	Lot # 40A-F45.2			A					
	Jm. 5/26/19			P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		8/26/19 1555
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/26/19 5:00 pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190826046

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



190826046

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/28/2019

8/26/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190826046-001	082619-01-SW-U-A-1	Water	8/26/2019	8/28/2019	E	C	B	D	D	A	F
190826046-002	082619-02-SW-A-B-1	Water	8/26/2019	8/28/2019	E	C	B	D	D	A	F
190826046-003	082619-03-SW-U-B-1	Water	8/26/2019	8/28/2019	E	C	B	D	D	A	F
190826046-004	082619-04-SW-B-A-1	Water	8/26/2019	8/28/2019	E	C	B	D	D	A	F
190826046-005	082619-05-SW-B-B-1	Water	8/26/2019	8/28/2019							A
190826046-006	082619-TB01	Trip Blank	8/26/2019	8/28/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**8/27/19 – 9/2/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (4 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals:
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 8/27/19 through 9/2/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample

bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one low level exceedance of the water quality criteria (PCB Aroclor 1242). This exceedance (0.235 µg/l vs threshold of 0.2 µg/l) was at the background (Buoy 4) location. The sample was collected approximately 3.0 hours prior to high tide and they were dredging a Non-TSCA grid cell at the time. The data received for the next day's sample set (8/29/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 11 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU, with isolated observations to 15-20 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically in the low teens and never higher than 17.0 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/4/19 call with Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
082719-01-SW-U-A-1	08:45	COPPER	D	mg/l	0.01	0.005			U	14	6.17	-0.05	Low Tide	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-01-SW-U-A-1	08:45	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.3			U	14	6.17	-0.05	Low Tide	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-01-SW-U-A-1	08:45	MERCURY	T	ng/l	50	2.1			U	14	6.17	-0.05	Low Tide	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-01-SW-U-A-2	09:00	MERCURY	T	ng/l	50	2.7			U	14	5.24	0.15	Low Tide	9.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-02-SW-A-A-1	09:10	COPPER	D	mg/l	0.01	0.006			A	21	4.34	0.53	Low Tide	12.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-02-SW-A-A-1	09:10	MERCURY	T	ng/l	50	1.8			A	21	4.34	0.53	Low Tide	12.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-03-SW-D-A-1	09:40	AROCLOR-1242	T	ug/l	0.2	0.044	J		D	29	8.55	1.35	Low Tide	14.1	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-03-SW-D-A-1	09:40	MERCURY	T	ng/l	50	8.5			D	29	8.55	1.35	Low Tide	14.1	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-03-SW-D-A-1	09:40	ZINC	D	mg/l	0.02	0.005	J		D	29	8.55	1.35	Low Tide	14.1	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-04-SW-B-A-1	08:25	COPPER	D	mg/l	0.01	0.004	J		B	13	5.04	-0.11	Outgoing High (Ebb)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082719-04-SW-B-A-1	08:25	MERCURY	T	ng/l	50	2			B	13	5.04	-0.11	Outgoing High (Ebb)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	8:20
082819-01-SW-U-A-1	13:35	AROCLOR-1242	T	ug/l	0.2	0.148			U	17	7.43	4.67	Incoming High Tide (Flood)	11.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-01-SW-U-A-1	13:35	BENZENE	T	ug/l	10	0.3	J		U	17	7.43	4.67	Incoming High Tide (Flood)	11.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-01-SW-U-A-1	13:35	CHLOROBENZENE	T	ug/l	5	1.6			U	17	7.43	4.67	Incoming High Tide (Flood)	11.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-01-SW-U-A-1	13:35	COPPER	D	mg/l	0.01	0.005	J		U	17	7.43	4.67	Incoming High Tide (Flood)	11.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-01-SW-U-A-1	13:35	MERCURY	T	ng/l	50	10.7			U	17	7.43	4.67	Incoming High Tide (Flood)	11.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-02-SW-A-A-1	13:55	AROCLOR-1242	T	ug/l	0.2	0.051	J		A	26	6.04	4.87	Incoming High Tide (Flood)	12.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-02-SW-A-A-1	13:55	MERCURY	T	ng/l	50	4.4			A	26	6.04	4.87	Incoming High Tide (Flood)	12.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-03-SW-D-A-1	14:15	AROCLOR-1242	T	ug/l	0.2	0.037	J		D	34	6.88	4.89	Incoming High Tide (Flood)	12.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-03-SW-D-A-1	14:15	MERCURY	T	ng/l	50	2.4			D	34	6.88	4.89	Incoming High Tide (Flood)	12.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-04-SW-B-A-1	13:15	AROCLOR-1242	T	ug/l	0.2	0.235		X	B	16	8.65	4.54	Incoming High Tide (Flood)	13.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-04-SW-B-A-1	13:15	BENZENE	T	ug/l	10	0.4	J		B	16	8.65	4.54	Incoming High Tide (Flood)	13.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-04-SW-B-A-1	13:15	CHLOROBENZENE	T	ug/l	5	2.2			B	16	8.65	4.54	Incoming High Tide (Flood)	13.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-04-SW-B-A-1	13:15	COPPER	D	mg/l	0.01	0.005	J		B	16	8.65	4.54	Incoming High Tide (Flood)	13.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082819-04-SW-B-A-1	13:15	MERCURY	T	ng/l	50	14.9			B	16	8.65	4.54	Incoming High Tide (Flood)	13.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
082919-01-SW-D-A-1	13:10	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			D	15	6.53	3.76	Incoming High Tide (Flood)	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-01-SW-D-A-1	13:10	MERCURY	T	ng/l	50	4.4			D	15	6.53	3.76	Incoming High Tide (Flood)	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-02-SW-A-A-1	13:30	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			A	20	7.58	3.93	Incoming High Tide (Flood)	14.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-02-SW-A-A-1	13:30	MERCURY	T	ng/l	50	4.3			A	20	7.58	3.93	Incoming High Tide (Flood)	14.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-03-SW-U-A-1	13:50	MERCURY	T	ng/l	50	7.3			U	32	10.05	4.11	Incoming High Tide (Flood)	14.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-04-SW-B-A-1	12:50	AROCLOR-1242	T	ug/l	0.2	0.055	J		B	14	8.72	3.45	Incoming High Tide (Flood)	16	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
082919-04-SW-B-A-1	12:50	MERCURY	T	ng/l	50	6.2			B	14	8.72	3.45	Incoming High Tide (Flood)	16	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
083019-01-SW-U-A-1	07:20	COPPER	D	mg/l	0.01	0.006			U	16	5.52	1.98	Outgoing High (Ebb)	11.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-01-SW-U-A-1	07:20	MERCURY	T	ng/l	50	5			U	16	5.52	1.98	Outgoing High (Ebb)	11.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-01-SW-U-A-2	07:35	COPPER	D	mg/l	0.01	0.005	J		U	16	5.42	1.81	Outgoing High (Ebb)	13.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-01-SW-U-A-2	07:35	MERCURY	T	ng/l	50	2.3			U	16	5.42	1.81	Outgoing High (Ebb)	13.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-02-SW-A-A-1	07:50	COPPER	D	mg/l	0.01	0.006			A	20	5.82	1.61	Outgoing High (Ebb)	12.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-02-SW-A-A-1	07:50	MERCURY	T	ng/l	50	2.7			A	20	5.82	1.61	Outgoing High (Ebb)	12.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-03-SW-D-A-1	08:10	AROCLOR-1242	T	ug/l	0.2	0.057	J		D	31	5.40	1.19	Outgoing High (Ebb)	13.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-03-SW-D-A-1	08:10	COPPER	D	mg/l	0.01	0.004	J		D	31	5.40	1.19	Outgoing High (Ebb)	13.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-03-SW-D-A-1	08:10	MERCURY	T	ng/l	50	4			D	31	5.40	1.19	Outgoing High (Ebb)	13.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-04-SW-B-A-1	06:50	COPPER	D	mg/l	0.01	0.004	J		B	16	5.83	2.46	Outgoing High (Ebb)	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
083019-04-SW-B-A-1	06:50	MERCURY	T	ng/l	50	3.6			B	16	5.83	2.46	Outgoing High (Ebb)	11.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

August 29, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190827054
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/27/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*29-Aug-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190827054		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 7:23:49 PM
Surr: Decachlorobiphenyl	**87.8**	57.1-135		%REC	1	8/27/2019 7:23:49 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**2.1**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Total Hardness (As CaCO3)	**103**	5		mg/L CaCO3	1	8/28/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/28/2019 2:39:00 PM
Barium	**0.026**	0.010		mg/L	1	8/28/2019 2:39:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/28/2019 2:39:00 PM
Chromium	**ND**	0.005		mg/L	1	8/28/2019 2:39:00 PM
Copper	**0.006**	0.005		mg/L	1	8/28/2019 2:39:00 PM
Lead	**ND**	0.005		mg/L	1	8/28/2019 2:39:00 PM
Selenium	**ND**	0.005		mg/L	1	8/28/2019 2:39:00 PM
Silver	**ND**	0.010		mg/L	1	8/28/2019 2:39:00 PM
Zinc	**ND**	0.010		mg/L	1	8/28/2019 2:39:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:45:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/28/2019 3:45:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/28/2019 3:45:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:45:00 PM
Copper, Dissolved	**0.005**	0.005		mg/L	1	8/28/2019 3:45:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:45:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/28/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:45:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 3:45:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 3:45:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 2:49:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 2:49:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 2:49:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 2:49:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	8/28/2019 2:49:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 2:49:00 PM
Surr: 1,2-Dichloroethane-d4	**95.5**	80.9-122		%REC	1	8/28/2019 2:49:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	8/28/2019 2:49:00 PM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	8/28/2019 2:49:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**9.2**	1.1		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-02-SW-A-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 7:37:09 PM
Surr: Decachlorobiphenyl	**88.8**	57.1-135		%REC	1	8/27/2019 7:37:09 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**1.8**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Total Hardness (As CaCO3)	**102**	5		mg/L CaCO3	1	8/28/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/28/2019 2:45:00 PM
Barium	**0.027**	0.010		mg/L	1	8/28/2019 2:45:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/28/2019 2:45:00 PM
Chromium	**ND**	0.005		mg/L	1	8/28/2019 2:45:00 PM
Copper	**0.008**	0.005		mg/L	1	8/28/2019 2:45:00 PM
Lead	**ND**	0.005		mg/L	1	8/28/2019 2:45:00 PM
Selenium	**ND**	0.005		mg/L	1	8/28/2019 2:45:00 PM
Silver	**ND**	0.010		mg/L	1	8/28/2019 2:45:00 PM
Zinc	**ND**	0.010		mg/L	1	8/28/2019 2:45:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:51:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/28/2019 3:51:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/28/2019 3:51:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:51:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	8/28/2019 3:51:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:51:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-02-SW-A-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/28/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:51:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 3:51:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 3:51:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 3:11:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 3:11:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 3:11:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 3:11:00 PM
Surr: 1,2-Dichloroethane-d4	**99.3**	80.9-122		%REC	1	8/28/2019 3:11:00 PM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	8/28/2019 3:11:00 PM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/28/2019 3:11:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-02-SW-A-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**12.3**	1.0		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-03-SW-D-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1242	**0.044**	0.065	J	µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 7:50:28 PM
PCB, Total	**0.044**	0.065	J	µg/L	1	8/27/2019 7:50:28 PM
Surr: Decachlorobiphenyl	**89.2**	57.1-135		%REC	1	8/27/2019 7:50:28 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**8.5**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Total Hardness (As CaCO3)	**103**	5		mg/L CaCO3	1	8/28/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/28/2019 2:57:00 PM
Barium	**0.028**	0.010		mg/L	1	8/28/2019 2:57:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/28/2019 2:57:00 PM
Chromium	**ND**	0.005		mg/L	1	8/28/2019 2:57:00 PM
Copper	**0.005**	0.005	J	mg/L	1	8/28/2019 2:57:00 PM
Lead	**ND**	0.005		mg/L	1	8/28/2019 2:57:00 PM
Selenium	**ND**	0.005		mg/L	1	8/28/2019 2:57:00 PM
Silver	**ND**	0.010		mg/L	1	8/28/2019 2:57:00 PM
Zinc	**0.006**	0.010	J	mg/L	1	8/28/2019 2:57:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:58:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/28/2019 3:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/28/2019 3:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:58:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:58:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-03-SW-D-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/28/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 3:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 3:58:00 PM
Zinc, Dissolved	**0.005**	0.010	J	mg/L	1	8/28/2019 3:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 3:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	8/28/2019 3:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 3:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 3:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 3:32:00 PM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	8/28/2019 3:32:00 PM
Surr: 4-Bromofluorobenzene	**115**	76.5-125		%REC	1	8/28/2019 3:32:00 PM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	8/28/2019 3:32:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-03-SW-D-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**14.1**	1.0		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-04-SW-B-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 8:03:48 PM
Surr: Decachlorobiphenyl	**92.6**	57.1-135		%REC	1	8/27/2019 8:03:48 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**2.0**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Total Hardness (As CaCO3)	**105**	5		mg/L CaCO3	1	8/28/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/28/2019 3:03:00 PM
Barium	**0.027**	0.010		mg/L	1	8/28/2019 3:03:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/28/2019 3:03:00 PM
Chromium	**ND**	0.005		mg/L	1	8/28/2019 3:03:00 PM
Copper	**0.006**	0.005		mg/L	1	8/28/2019 3:03:00 PM
Lead	**ND**	0.005		mg/L	1	8/28/2019 3:03:00 PM
Selenium	**ND**	0.005		mg/L	1	8/28/2019 3:03:00 PM
Silver	**ND**	0.010		mg/L	1	8/28/2019 3:03:00 PM
Zinc	**ND**	0.010		mg/L	1	8/28/2019 3:03:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:05:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/28/2019 4:05:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/28/2019 4:05:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:05:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	8/28/2019 4:05:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:05:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-04-SW-B-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/28/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:05:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 4:05:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 4:05:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 3:54:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 3:54:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 3:54:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 3:54:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 3:54:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	8/28/2019 3:54:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	8/28/2019 3:54:00 PM
Surr: Toluene-d8	**98.0**	80.4-121		%REC	1	8/28/2019 3:54:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-04-SW-B-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**13.0**	1.0		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-05-SW-B-A-1
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**13.8**	1.1		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-2
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
PCB, Total	**ND**	0.065		µg/L	1	8/27/2019 8:30:33 PM
Surr: Decachlorobiphenyl	**95.6**	57.1-135		%REC	1	8/27/2019 8:30:33 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/27/2019)						
Mercury	**2.7**	0.5		ng/L	1	8/28/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Total Hardness (As CaCO3)	**104**	5		mg/L CaCO3	1	8/28/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/28/2019 3:10:00 PM
Barium	**0.026**	0.010		mg/L	1	8/28/2019 3:10:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/28/2019 3:10:00 PM
Chromium	**ND**	0.005		mg/L	1	8/28/2019 3:10:00 PM
Copper	**0.008**	0.005		mg/L	1	8/28/2019 3:10:00 PM
Lead	**ND**	0.005		mg/L	1	8/28/2019 3:10:00 PM
Selenium	**ND**	0.005		mg/L	1	8/28/2019 3:10:00 PM
Silver	**ND**	0.010	N	mg/L	1	8/28/2019 3:10:00 PM
Zinc	**ND**	0.010		mg/L	1	8/28/2019 3:10:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:10:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	8/28/2019 4:10:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/28/2019 4:10:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:10:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:10:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:10:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-2
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/28/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/28/2019 4:10:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 4:10:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/28/2019 4:10:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 4:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 4:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 4:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 4:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 4:37:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	8/28/2019 4:37:00 PM
Surr: 4-Bromofluorobenzene	**113**	76.5-125		%REC	1	8/28/2019 4:37:00 PM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	8/28/2019 4:37:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-01-SW-U-A-2
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/28/2019)						
TSS (Residue, Non-Filterable)	**9.8**	1.0		mg/L	1	8/28/2019

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-TB01
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Methylene chloride	**2.2**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Acetone	**8.0**	5.0		µg/L	1	8/28/2019 4:59:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/28/2019 4:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 4:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 4:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 4:59:00 PM
Surr: 1,2-Dichloroethane-d4	**95.6**	80.9-122		%REC	1	8/28/2019 4:59:00 PM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	8/28/2019 4:59:00 PM
Surr: Toluene-d8	**98.9**	80.4-121		%REC	1	8/28/2019 4:59:00 PM

Adirondack Environmental Services, Inc

Date: *29-Aug-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082719-TB02
Work Order:	**190827054**	**Collection Date:**	8/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190827054-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/28/2019 5:20:00 PM
Acetone	**ND**	5.0		µg/L	1	8/28/2019 5:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/28/2019 5:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Benzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/28/2019 5:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Toluene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/28/2019 5:20:00 PM
Surr: 1,2-Dichloroethane-d4	**98.2**	80.9-122		%REC	1	8/28/2019 5:20:00 PM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	8/28/2019 5:20:00 PM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/28/2019 5:20:00 PM

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75270

mblk

SeqNo: **2688305** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **mb-75270** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0756	0	0.1	0	75.6	57.1	135	0	0		

lcs

SeqNo: **2688311** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **lcs-75270** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3488	0.0650	0.5	0	69.8	60	140	0	0		
PCB, Total	0.3488	0.0650	0.5	0	69.8	60	140	0	0		
Surr: Decachlorobiphenyl	0.11	0.0100	0.1	0	110	57.1	135	0	0		

lcs

SeqNo: **2688317** PrepDate:**8/27/2019** TestNo: **SW8082A** RunNo: **174741**
Samp ID: **lcsredo** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.382	0.0650	0.5	0	76.4	60	140	0	0		
PCB, Total	0.382	0.0650	0.5	0	76.4	60	140	0	0		
Surr: Decachlorobiphenyl	0.0832	0.0100	0.1	0	83.2	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75278

MBLK

SeqNo: **2689039** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **MB-75278** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2689040** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **LCS-75278** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	10	0	113	77	123	0	0		

MS

SeqNo: **2688874** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190826046-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.9	0.500	12.5	1.68	97.8	71	125	0	0		

MS

SeqNo: **2689224** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190827054-006 (082719-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15.7	0.500	12.5	2.66	104	71	125	0	0		

MSD

SeqNo: **2688875** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190826046-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	14.3	0.500	12.5	1.68	101	71	125	13.9	2.84	24	

MSD

SeqNo: **2689225** PrepDate:**8/27/2019** TestNo: **E1631** RunNo: **174771**
Samp ID: **190827054-006 (082719-01-SW-U-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	15.7	0.500	12.5	2.66	104	71	125	15.7	0	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75281

MBLK

SeqNo: **2688979** PrepDate:**8/28/2019** TestNo: **E200.7F** RunNo: **174777**
Samp ID: **MB-75281** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2688980** PrepDate:**8/28/2019** TestNo: **E200.7F** RunNo: **174777**
Samp ID: **LCS-75281** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.023	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	1.996	0.0100	2	0	99.8	89	112	0	0		
Cadmium, Dissolved	2.014	0.00500	2	0	101	85.3	112	0	0		
Chromium, Dissolved	2.002	0.00500	2	0	100	89.1	109	0	0		
Copper, Dissolved	2.09	0.00500	2	0	105	86.8	115	0	0		
Lead, Dissolved	2.082	0.00500	2	0	104	86.8	114	0	0		
Selenium, Dissolved	1.941	0.00500	2	0	97.1	85	115	0	0		
Silver, Dissolved	0.5225	0.0100	0.5	0	105	85	115	0	0		
Zinc, Dissolved	1.971	0.0100	2	0	98.6	85	115	0	0		

MS

SeqNo: **2689563** PrepDate:**8/28/2019** TestNo: **E200.7F** RunNo: **174777**
Samp ID: **190827054-006 (082719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04762	0.00500	0.04	0	119	75	123	0	0		
Barium, Dissolved	2.287	0.0100	2	0.02463	113	75	124	0	0		
Cadmium, Dissolved	0.05622	0.00500	0.05	0	112	75	125	0	0		
Chromium, Dissolved	0.2334	0.00500	0.2	0	117	77.2	117	0	0		
Copper, Dissolved	0.2971	0.00500	0.25	0	119	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75281

MS

SeqNo: **2689563** PrepDate:**8/28/2019** TestNo: **E200.7F** RunNo: **174777**
Samp ID: **190827054-006 (082719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02254	0.00500	0.02	0	113	75	125	0	0		
Selenium, Dissolved	0.009263	0.00500	0.01	0	92.6	75	125	0	0		
Silver, Dissolved	0.04484	0.0100	0.05	0	89.7	75	125	0	0		
Zinc, Dissolved	0.5846	0.0100	0.5	0	117	75	121	0	0		

DUP

SeqNo: **2689562** PrepDate:**8/28/2019** TestNo: **E200.7F** RunNo: **174777**
Samp ID: **190827054-006** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001198	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02441	0.0100	0	0	0	0	0	0.02463	0.885	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.002183	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0003606	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002864	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75282

MBLK

SeqNo: **2688972** PrepDate:**8/28/2019** TestNo: **E200.7** RunNo: **174777**
Samp ID: **MB-75282** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2688973** PrepDate:**8/28/2019** TestNo: **E200.7** RunNo: **174777**
Samp ID: **LCS-75282** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.004	0.00500	2	0	100	89.1	111	0	0		
Barium	1.999	0.0100	2	0	100	85	115	0	0		
Cadmium	2.003	0.00500	2	0	100	85	115	0	0		
Chromium	2.005	0.00500	2	0	100	89.7	109	0	0		
Copper	2.08	0.00500	2	0	104	85	115	0	0		
Lead	2.072	0.00500	2	0	104	88.1	112	0	0		
Selenium	2.05	0.00500	2	0	103	87.5	112	0	0		
Silver	0.5196	0.0100	0.5	0	104	85.2	115	0	0		
Zinc	1.96	0.0100	2	0	98	88.3	113	0	0		

MS

SeqNo: **2689552** PrepDate:**8/28/2019** TestNo: **E200.7** RunNo: **174777**
Samp ID: **190827054-006 (082719-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04846	0.00500	0.04	0	121	75	125	0	0		
Barium	2.299	0.0100	2	0.02638	114	75	119	0	0		
Cadmium	0.05692	0.00500	0.05	0	114	75	118	0	0		
Chromium	0.2282	0.00500	0.2	0	114	75	124	0	0		
Copper	0.2999	0.00500	0.25	0.007757	117	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75282

MS

SeqNo: **2689552** **PrepDate:8/28/2019** TestNo: **E200.7** RunNo: **174777**
Samp ID: **190827054-006 (082719-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02398	0.00500	0.02	0	120	75	125	0	0		
Selenium	0.01014	0.00500	0.01	0	101	75	125	0	0		
Silver	0.03732	0.0100	0.05	0	74.6	75	125	0	0		S
Zinc	0.5955	0.0100	0.5	0	119	76.9	125	0	0		

DUP

SeqNo: **2689551** **PrepDate:8/28/2019** TestNo: **E200.7** RunNo: **174777**
Samp ID: **190827054-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001864	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02822	0.0100	0	0	0	0	0	0.02638	6.73	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.008524	0.00500	0	0	0	0	0	0.007757	9.42	20	
Lead	0.0002882	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.004238	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75288

LCS

SeqNo: **2689815** PrepDate:**8/28/2019** TestNo: **SM2540D** RunNo: **174819**
Samp ID: **LCS-75288** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	483	0	97.7	86.5	114	0	0		

DUP

SeqNo: **2689818** PrepDate:**8/28/2019** TestNo: **SM2540D** RunNo: **174819**
Samp ID: **190822065-001** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	206	20.0	0	0	0	0	0	196	4.98	10	

DUP

SeqNo: **2689827** PrepDate:**8/28/2019** TestNo: **SM2540D** RunNo: **174819**
Samp ID: **190822076-001** PrepRef: Units: **mg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	26.4	4.00	0	0	0	0	0	24.4	7.87	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174774

mblk

SeqNo: **2688937** TestNo: **SW8260C** RunNo: **174774**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.46	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.33	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.49	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.43	5.0	50	0	96.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	53.39	5.0	50	0	107	76.5	125	0	0		
Surr: Toluene-d8	49.33	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174774

lcs

SeqNo: **2688935** TestNo: **SW8260C** RunNo: **174774**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.41	1.0	10	0	84.1	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.36	1.0	10	0	83.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.1	1.0	10	0	91	73.1	123	0	0		
1,1-Dichloroethane	9.43	1.0	10	0	94.3	73.2	127	0	0		
1,1-Dichloroethene	9.62	1.0	10	0	96.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.05	1.0	5	0	81	68.4	115	0	0		
1,2-Dichlorobenzene	8.32	1.0	10	0	83.2	71	124	0	0		
1,2-Dichloroethane	8.39	1.0	10	0	83.9	72.5	127	0	0		
1,3-Dichlorobenzene	8.06	1.0	10	0	80.6	72.2	121	0	0		
1,3-Dichloropropane	4.47	1.0	5	0	89.4	76	122	0	0		
1,4-Dichlorobenzene	8.83	1.0	10	0	88.3	71.7	127	0	0		
2-Butanone	8.48	5.0	10	0	84.8	65.1	132	0	0		
4-Methyl-2-pentanone	8.46	5.0	10	0	84.6	68.7	118	0	0		
Acetone	10.74	5.0	10	0	107	69.2	133	0	0		
Benzene	8.8	1.0	10	0	88	71.2	122	0	0		
Carbon disulfide	4.35	1.0	5	0	87	67.8	134	0	0		
Carbon tetrachloride	8.37	1.0	10	0	83.7	74.5	122	0	0		
Chlorobenzene	8.78	1.0	10	0	87.8	72.7	124	0	0		
Chloroethane	7.5	1.0	10	0	75	72.3	136	0	0		
Chloroform	8.57	1.0	10	0	85.7	71.6	133	0	0		
Dibromochloromethane	8.53	1.0	10	0	85.3	70.6	124	0	0		
Ethylbenzene	8.98	1.0	10	0	89.8	70.9	126	0	0		
Methylene chloride	9.25	1.0	10	0	92.5	66.3	130	0	0		
Tetrachloroethene	8.78	1.0	10	0	87.8	72.4	119	0	0		
Toluene	8.28	1.0	10	0	82.8	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.17	1.0	10	0	81.7	73	127	0	0		
Vinyl chloride	7.85	1.0	10	0	78.5	65.2	134	0	0		
Xylenes, Total	26.64	1.0	30	0	88.8	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	46.98	5.0	50	0	94	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.78	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	49.32	5.0	50	0	98.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190827054
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174774

dup	SeqNo: **2689622**	TestNo: **SW8260C**	RunNo: **174774**
	Samp ID: **190827054-004b**	Units: **µg/L**	Analysis Date: **8/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2,2-Tetrachloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1,2-Trichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethane	ND	1.0	0	0	0	0	0	0	0	25	
1,1-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
1,2,3-Trichloropropane	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,2-Dichloroethane	0.12	1.0	0	0	0	0	0	0.12	0	25	
1,3-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
1,3-Dichloropropane	ND	1.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	0.12	1.0	0	0	0	0	0	0	0	25	
2-Butanone	ND	5.0	0	0	0	0	0	0	0	25	
4-Methyl-2-pentanone	ND	5.0	0	0	0	0	0	0	0	25	
Acetone	ND	5.0	0	0	0	0	0	0	0	25	
Benzene	ND	1.0	0	0	0	0	0	0	0	25	
Carbon disulfide	ND	1.0	0	0	0	0	0	0	0	25	
Carbon tetrachloride	ND	1.0	0	0	0	0	0	0	0	25	
Chlorobenzene	ND	1.0	0	0	0	0	0	0	0	25	
Chloroethane	ND	1.0	0	0	0	0	0	0	0	25	
Chloroform	0.15	1.0	0	0	0	0	0	0	0	25	
Dibromochloromethane	ND	1.0	0	0	0	0	0	0	0	25	
Ethylbenzene	ND	1.0	0	0	0	0	0	0	0	25	
Methylene chloride	ND	1.0	0	0	0	0	0	0	0	25	
Tetrachloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Toluene	ND	1.0	0	0	0	0	0	0	0	25	
trans-1,2-Dichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Trichloroethene	ND	1.0	0	0	0	0	0	0	0	25	
Vinyl chloride	ND	1.0	0	0	0	0	0	0	0	25	
Xylenes, Total	ND	1.0	0	0	0	0	0	0	0	0	
Surr: 1,2-Dichloroethane-d4	47.51	5.0	50	0	95	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	53.69	5.0	50	0	107	76.5	125	0	0	25	
Surr: Toluene-d8	49.16	5.0	50	0	98.3	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

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Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190827054

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleier@aecom.com	229608

Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082719-01-SW-U-A-1	8/27/19	0845	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
	↓	↓	↓	A	↓		↓	1	metals (filtered)
002	082719-02-SW-A-A-1	8/27/19	0910	P	W		✓	2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
	↓	↓	↓	A	↓		↓	1	metals (filtered)
003	082719-03-SW-D-A-1	8/27/19	0940	P	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓		
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		8/27/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/27/19 4:24pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190827054

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190827054

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082719-03-SW-D-A-1	8/27/19	0940	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
004	082719-04-SW-B-A-1	8/27/19	0825	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
005	082719-05-SW-B-A-1	8/27/19	1005	A/P	W		✓	1	TSS
006	082719-01-SW-U-A-2	8/27/19	0900	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/27/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/27/19 4:24P

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 4°C	Y ☒ N ☐	(Y) N	(Y) N
Notes:_____		Notes:_____	Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190827054

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	082719-01-SW-U-A-2	8/27/19	0900	A	W		✓	1	metals/hardness
				P				3	mercury
				A				1	TSS
				P					
007	082719-TB01-VOA-F45.1			A	TB				trip blank
				P					
008	082719-TB02-VOA-F45.2			A	TB				trip blank
				P					
	J.M. 8/27/19			A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/29/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
	J.M.	8/27/19 4:24

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	Y N	Y N
Notes: 4°C	☐	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190827054

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190827054

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 8/29/2019

8/27/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E1631W	E8082W	E8260W	HARDNESS	CP METALS	P_SCAN_W_DI	TSS_W
190827054-001	082719-01-SW-U-A-1	Water	8/27/2019	8/29/2019	E	C	B	D	D	A	F
190827054-002	082719-02-SW-A-A-1	Water	8/27/2019	8/29/2019	E	C	B	D	D	A	F
190827054-003	082719-03-SW-D-A-1	Water	8/27/2019	8/29/2019	E	C	B	D	D	A	F
190827054-004	082719-04-SW-B-A-1	Water	8/27/2019	8/29/2019	E	C	B	D	D	A	F
190827054-005	082719-05-SW-B-A-1	Water	8/27/2019	8/29/2019							A
190827054-006	082719-01-SW-U-A-2	Water	8/27/2019	8/29/2019	E	C	B	D	D	A	F
190827054-007	082719-TB01	Trip Blank	8/27/2019	8/29/2019			A				
190827054-008	082719-TB02	Trip Blank	8/27/2019	8/29/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 03, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190828068
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/28/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *03-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190828068	

Sample containers were supplied by Adirondack Environmental Services.

This is an updated report to correct the matrix spike for Volatile Organics and the corresponding flags for the data.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-01-SW-U-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1242	**0.148**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 12:15:50 PM
PCB, Total	**0.148**	0.065		µg/L	1	8/29/2019 12:15:50 PM
Surr: Decachlorobiphenyl	**83.8**	57.1-135		%REC	1	8/29/2019 12:15:50 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**10.7**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Total Hardness (As CaCO3)	**103**	5		mg/L CaCO3	1	8/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/29/2019 12:42:00 PM
Barium	**0.028**	0.010		mg/L	1	8/29/2019 12:42:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/29/2019 12:42:00 PM
Chromium	**ND**	0.005		mg/L	1	8/29/2019 12:42:00 PM
Copper	**ND**	0.005		mg/L	1	8/29/2019 12:42:00 PM
Lead	**ND**	0.005		mg/L	1	8/29/2019 12:42:00 PM
Selenium	**ND**	0.005		mg/L	1	8/29/2019 12:42:00 PM
Silver	**ND**	0.010		mg/L	1	8/29/2019 12:42:00 PM
Zinc	**0.007**	0.010	J	mg/L	1	8/29/2019 12:42:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:19:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/29/2019 2:19:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/29/2019 2:19:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:19:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/29/2019 2:19:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:19:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-01-SW-U-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:19:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:19:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:19:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Chloroethane	**ND**	1.0	N	µg/L	1	8/29/2019 5:36:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 5:36:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
2-Butanone	**ND**	5.0	N	µg/L	1	8/29/2019 5:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Benzene	**0.3**	1.0	J	µg/L	1	8/29/2019 5:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 5:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Chlorobenzene	**1.6**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 5:36:00 PM
Surr: 1,2-Dichloroethane-d4	**94.6**	80.9-122		%REC	1	8/29/2019 5:36:00 PM
Surr: 4-Bromofluorobenzene	**117**	76.5-125		%REC	1	8/29/2019 5:36:00 PM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	8/29/2019 5:36:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-01-SW-U-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**11.8**	1.1		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-02-SW-A-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1242	**0.051**	0.065	J	µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 1:08:25 PM
PCB, Total	**0.051**	0.065	J	µg/L	1	8/29/2019 1:08:25 PM
Surr: Decachlorobiphenyl	**85.2**	57.1-135		%REC	1	8/29/2019 1:08:25 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**4.4**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Total Hardness (As CaCO3)	**100**	5		mg/L CaCO3	1	8/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/29/2019 12:59:00 PM
Barium	**0.027**	0.010		mg/L	1	8/29/2019 12:59:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/29/2019 12:59:00 PM
Chromium	**ND**	0.005		mg/L	1	8/29/2019 12:59:00 PM
Copper	**ND**	0.005		mg/L	1	8/29/2019 12:59:00 PM
Lead	**ND**	0.005		mg/L	1	8/29/2019 12:59:00 PM
Selenium	**ND**	0.005		mg/L	1	8/29/2019 12:59:00 PM
Silver	**ND**	0.010		mg/L	1	8/29/2019 12:59:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	8/29/2019 12:59:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:26:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/29/2019 2:26:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/29/2019 2:26:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:26:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:26:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:26:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-02-SW-A-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:26:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:26:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:26:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 5:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 5:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Benzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 5:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 5:58:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	8/29/2019 5:58:00 PM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/29/2019 5:58:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	8/29/2019 5:58:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-02-SW-A-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**12.2**	1.1		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-03-SW-D-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1242	**0.037**	0.065	J	µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 1:21:46 PM
PCB, Total	**0.037**	0.065	J	µg/L	1	8/29/2019 1:21:46 PM
Surr: Decachlorobiphenyl	**85.4**	57.1-135		%REC	1	8/29/2019 1:21:46 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**2.4**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	8/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/29/2019 1:05:00 PM
Barium	**0.027**	0.010		mg/L	1	8/29/2019 1:05:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/29/2019 1:05:00 PM
Chromium	**ND**	0.005		mg/L	1	8/29/2019 1:05:00 PM
Copper	**ND**	0.005		mg/L	1	8/29/2019 1:05:00 PM
Lead	**ND**	0.005		mg/L	1	8/29/2019 1:05:00 PM
Selenium	**ND**	0.005		mg/L	1	8/29/2019 1:05:00 PM
Silver	**ND**	0.010		mg/L	1	8/29/2019 1:05:00 PM
Zinc	**ND**	0.010		mg/L	1	8/29/2019 1:05:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:31:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/29/2019 2:31:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/29/2019 2:31:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:31:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:31:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:31:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-03-SW-D-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:31:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:31:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:31:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 6:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 6:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Benzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 6:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 6:19:00 PM
Surr: 1,2-Dichloroethane-d4	**96.3**	80.9-122		%REC	1	8/29/2019 6:19:00 PM
Surr: 4-Bromofluorobenzene	**117**	76.5-125		%REC	1	8/29/2019 6:19:00 PM
Surr: Toluene-d8	**97.0**	80.4-121		%REC	1	8/29/2019 6:19:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-03-SW-D-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**12.9**	1.0		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-04-SW-B-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1242	**0.235**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 1:35:04 PM
PCB, Total	**0.235**	0.065		µg/L	1	8/29/2019 1:35:04 PM
Surr: Decachlorobiphenyl	**94.6**	57.1-135		%REC	1	8/29/2019 1:35:04 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**14.9**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Total Hardness (As CaCO3)	**101**	5		mg/L CaCO3	1	8/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/29/2019 1:14:00 PM
Barium	**0.029**	0.010		mg/L	1	8/29/2019 1:14:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/29/2019 1:14:00 PM
Chromium	**ND**	0.005		mg/L	1	8/29/2019 1:14:00 PM
Copper	**0.007**	0.005		mg/L	1	8/29/2019 1:14:00 PM
Lead	**0.003**	0.005	J	mg/L	1	8/29/2019 1:14:00 PM
Selenium	**ND**	0.005		mg/L	1	8/29/2019 1:14:00 PM
Silver	**ND**	0.010		mg/L	1	8/29/2019 1:14:00 PM
Zinc	**0.007**	0.010	J	mg/L	1	8/29/2019 1:14:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:35:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/29/2019 2:35:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/29/2019 2:35:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:35:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	8/29/2019 2:35:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:35:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-04-SW-B-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 2:35:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:35:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 2:35:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 6:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 6:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Benzene	**0.4**	1.0	J	µg/L	1	8/29/2019 6:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 6:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Chlorobenzene	**2.2**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 6:41:00 PM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	8/29/2019 6:41:00 PM
Surr: 4-Bromofluorobenzene	**118**	76.5-125		%REC	1	8/29/2019 6:41:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/29/2019 6:41:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-04-SW-B-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**13.1**	1.0		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-05-SW-B-A-1
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**15.5**	1.1		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	08281-01-SW-U-A-3
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
PCB, Total	**ND**	0.065		µg/L	1	8/29/2019 1:48:24 PM
Surr: Decachlorobiphenyl	**54.2**	57.1-135	S	%REC	1	8/29/2019 1:48:24 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**ND**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	8/29/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/29/2019 1:19:00 PM
Barium	**ND**	0.010		mg/L	1	8/29/2019 1:19:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/29/2019 1:19:00 PM
Chromium	**ND**	0.005		mg/L	1	8/29/2019 1:19:00 PM
Copper	**ND**	0.005		mg/L	1	8/29/2019 1:19:00 PM
Lead	**ND**	0.005		mg/L	1	8/29/2019 1:19:00 PM
Selenium	**ND**	0.005		mg/L	1	8/29/2019 1:19:00 PM
Silver	**ND**	0.010		mg/L	1	8/29/2019 1:19:00 PM
Zinc	**ND**	0.010		mg/L	1	8/29/2019 1:19:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 8/29/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 3:11:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 3:11:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/29/2019 3:11:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 3:11:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 3:11:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 3:11:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	08281-01-SW-U-A-3
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/29/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/29/2019 3:11:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 3:11:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/29/2019 3:11:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 7:02:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 7:02:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Benzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 7:02:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 7:02:00 PM
Surr: 1,2-Dichloroethane-d4	**99.2**	80.9-122		%REC	1	8/29/2019 7:02:00 PM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	8/29/2019 7:02:00 PM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	8/29/2019 7:02:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	08281-01-SW-U-A-3
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 8/29/2019)						
TSS (Residue, Non-Filterable)	**1.8**	1.0		mg/L	1	8/29/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT: AECOM Environment
Work Order: **190828068**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082819-TB01
Collection Date: 8/28/2019
Lab Sample ID: 190828068-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/29/2019 7:23:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 7:23:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 7:23:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Benzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 7:23:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 7:23:00 PM
Surr: 1,2-Dichloroethane-d4	**96.3**	80.9-122		%REC	1	8/29/2019 7:23:00 PM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/29/2019 7:23:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	8/29/2019 7:23:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082819-TB02
Work Order:	**190828068**	**Collection Date:**	8/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190828068-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Chloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Acetone	**ND**	5.0		µg/L	1	8/29/2019 7:45:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Chloroform	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/29/2019 7:45:00 PM
2-Butanone	**ND**	5.0		µg/L	1	8/29/2019 7:45:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Benzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/29/2019 7:45:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Toluene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	8/29/2019 7:45:00 PM
Surr: 1,2-Dichloroethane-d4	**97.4**	80.9-122		%REC	1	8/29/2019 7:45:00 PM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	8/29/2019 7:45:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	8/29/2019 7:45:00 PM

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75300

LCS

SeqNo: **2690720** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **LCS-75300** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	424	40.0	483	0	87.8	86.5	114	0	0		

DUP

SeqNo: **2690724** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **190826016-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	94	6.70	0	0	0	0	0	101.3	7.51	10	

DUP

SeqNo: **2690729** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **190826021-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	195	10.0	0	0	0	0	0	203	4.02	10	

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75302

MBLK

SeqNo: **2690152** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **MB-75302** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2690153** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **LCS-75302** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.17	0.00500	2	0	108	85	115	0	0		
Barium, Dissolved	2.035	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	1.881	0.00500	2	0	94	85.3	112	0	0		
Chromium, Dissolved	1.996	0.00500	2	0	99.8	89.1	109	0	0		
Copper, Dissolved	2.135	0.00500	2	0	107	86.8	115	0	0		
Lead, Dissolved	2.19	0.00500	2	0	109	86.8	114	0	0		
Selenium, Dissolved	2.175	0.00500	2	0	109	85	115	0	0		
Silver, Dissolved	0.5406	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	2.075	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2690165** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0487	0.00500	0.04	0	122	75	123	0	0		
Barium, Dissolved	2.201	0.0100	2	0	110	75	124	0	0		
Cadmium, Dissolved	0.0509	0.00500	0.05	0	102	75	125	0	0		
Chromium, Dissolved	0.2114	0.00500	0.2	0	106	77.2	117	0	0		
Copper, Dissolved	0.2821	0.00500	0.25	0	113	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75302

MS

SeqNo: **2690165** **PrepDate:8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02406	0.00500	0.02	0	120	75	125	0	0		
Selenium, Dissolved	0.01146	0.00500	0.01	0	115	75	125	0	0		
Silver, Dissolved	0.05614	0.0100	0.05	0	112	75	125	0	0		
Zinc, Dissolved	0.5922	0.0100	0.5	0	118	75	121	0	0		

DUP

SeqNo: **2690164** **PrepDate:8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001187	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.0009924	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	0.00001076	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.001439	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0002557	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	0.0002569	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002773	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75305

mblk

SeqNo: **2689800** PrepDate:**8/29/2019** TestNo: **E608** RunNo: **174817**
Samp ID: **mb-75305** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0758	0	0.1	0	75.8	48.8	140	0	0		

lcs

SeqNo: **2689811** PrepDate:**8/29/2019** TestNo: **SW8082A** RunNo: **174817**
Samp ID: **lcs-75305** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.476	0.0650	0.5	0	95.2	60	140	0	0		
PCB, Total	0.476	0.0650	0.5	0	95.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0784	0.0100	0.1	0	78.4	57.1	135	0	0		

dup

SeqNo: **2690116** PrepDate:**8/29/2019** TestNo: **SW8082A** RunNo: **174817**
Samp ID: **190828068-001c** PrepRef: Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1242	0.1667	0.0720	0	0	0	0	0	0.1476	12.1	25	
Aroclor 1248	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0720	0	0	0	0	0	0	0	25	
PCB, Total	0.1667	0.0720	0	0	0	0	0	0.1476	12.1	25	
Surr: Decachlorobiphenyl	0.1078	0.0110	0.1111	0	97	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75305

dup	SeqNo: **2690117**	**PrepDate:8/29/2019**	TestNo: **SW8082A**	RunNo: **174817**
	Samp ID: **190828068-004c**	**PrepRef:**	Units: **µg/L**	Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1242	0.2056	0.0730	0	0	0	0	0	0.2354	13.5	25	
Aroclor 1248	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0730	0	0	0	0	0	0	0	25	
PCB, Total	0.2056	0.0730	0	0	0	0	0	0.2354	13.5	25	
Surr: Decachlorobiphenyl	0.09034	0.0110	0.1124	0	80.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75307

MBLK

SeqNo: **2690136** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **MB-75307** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2690137** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **LCS-75307** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.948	0.00500	2	0	97.4	89.1	111	0	0		
Barium	1.981	0.0100	2	0	99.1	85	115	0	0		
Cadmium	1.986	0.00500	2	0	99.3	85	115	0	0		
Chromium	1.973	0.00500	2	0	98.6	89.7	109	0	0		
Copper	2.068	0.00500	2	0	103	85	115	0	0		
Lead	2.063	0.00500	2	0	103	88.1	112	0	0		
Selenium	1.989	0.00500	2	0	99.4	87.5	112	0	0		
Silver	0.5427	0.0100	0.5	0	109	85.2	115	0	0		
Zinc	1.898	0.0100	2	0	94.9	88.3	113	0	0		

MS

SeqNo: **2690149** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04268	0.00500	0.04	0	107	75	125	0	0		
Barium	2.228	0.0100	2	0	111	75	119	0	0		
Cadmium	0.0519	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.2118	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2851	0.00500	0.25	0	114	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75307

MS

SeqNo: **2690149** **PrepDate:8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02491	0.00500	0.02	0	125	75	125	0	0		
Selenium	0.01122	0.00500	0.01	0	112	75	125	0	0		
Silver	0.05376	0.0100	0.05	0	108	75	125	0	0		
Zinc	0.6022	0.0100	0.5	0	120	76.9	125	0	0		

DUP

SeqNo: **2690148** **PrepDate:8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001874	0.00500	0	0	0	0	0	0	0	20	
Barium	0.000976	0.0100	0	0	0	0	0	0	0	20	
Cadmium	0.00000639	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.002273	0.00500	0	0	0	0	0	0	0	20	
Copper	0.0008891	0.00500	0	0	0	0	0	0	0	20	
Lead	0.000218	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002545	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MBLK

SeqNo: **2690857** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2690869** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2690994** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2690858** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11	0.500	10	0	110	77	123	0	0		

LCS

SeqNo: **2690870** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.2	0.500	10	0	102	77	123	0	0		

LCS

SeqNo: **2690995** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.4	0.500	10	0	104	77	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MS SeqNo: **2690860** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190829025-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.7	0.500	12.5	7.66	96.3	71	125	0	0		

MS SeqNo: **2690866** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190828068-004 (082819-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	24.3	0.500	12.5	14.9	75.2	71	125	0	0		

MS SeqNo: **2690983** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190829068-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	17.2	0.500	12.5	4.44	102	71	125	0	0		

MS SeqNo: **2690992** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190828049-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.1	0.500	12.5	0.643	83.7	71	125	0	0		

MS SeqNo: **2690999** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190829007-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.2	0.500	12.5	2.35	86.8	71	125	0	0		

MSD SeqNo: **2690861** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190829025-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.7	0.500	12.5	7.66	96.3	71	125	19.7	0	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MSD SeqNo: **2690867** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190828068-004 (082819-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	23.4	0.500	12.5	14.9	68	71	125	24.3	3.77	24	S

MSD SeqNo: **2690984** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190829068-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.3	0.500	12.5	4.44	94.9	71	125	17.2	5.37	24	

MSD SeqNo: **2690993** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190828049-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.9	0.500	12.5	0.643	82.1	71	125	11.1	1.82	24	

MSD SeqNo: **2691000** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190829007-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.3	0.500	12.5	2.35	87.6	71	125	13.2	0.755	24	

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

mblk

SeqNo: **2690357** TestNo: **SW8260C** RunNo: **174855**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.28	1.0									J
1,2-Dichloroethane	0.11	1.0									J
1,3-Dichlorobenzene	0.16	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	1.17	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.01	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.3	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	49.85	5.0	50	0	99.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

lcs

SeqNo: **2690355** TestNo: **SW8260C** RunNo: **174855**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.79	1.0	10	0	87.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.39	1.0	10	0	73.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.1	1.0	10	0	91	73.1	123	0	0		
1,1-Dichloroethane	9.19	1.0	10	0	91.9	73.2	127	0	0		
1,1-Dichloroethene	9.06	1.0	10	0	90.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.38	1.0	5	0	87.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.31	1.0	10	0	83.1	71	124	0	0		
1,2-Dichloroethane	8	1.0	10	0	80	72.5	127	0	0		
1,3-Dichlorobenzene	8.31	1.0	10	0	83.1	72.2	121	0	0		
1,3-Dichloropropane	4.59	1.0	5	0	91.8	76	122	0	0		
1,4-Dichlorobenzene	8.82	1.0	10	0	88.2	71.7	127	0	0		
2-Butanone	9.52	5.0	10	0	95.2	65.1	132	0	0		
4-Methyl-2-pentanone	8.23	5.0	10	0	82.3	68.7	118	0	0		
Acetone	11.06	5.0	10	0	111	69.2	133	0	0		
Benzene	9.31	1.0	10	0	93.1	71.2	122	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	67.8	134	0	0		
Carbon tetrachloride	8.62	1.0	10	0	86.2	74.5	122	0	0		
Chlorobenzene	9.33	1.0	10	0	93.3	72.7	124	0	0		
Chloroethane	7.91	1.0	10	0	79.1	72.3	136	0	0		
Chloroform	8.65	1.0	10	0	86.5	71.6	133	0	0		
Dibromochloromethane	8.1	1.0	10	0	81	70.6	124	0	0		
Ethylbenzene	9.46	1.0	10	0	94.6	70.9	126	0	0		
Methylene chloride	10.23	1.0	10	0	102	66.3	130	0	0		B
Tetrachloroethene	8.55	1.0	10	0	85.5	72.4	119	0	0		
Toluene	8.66	1.0	10	0	86.6	71.8	116	0	0		
trans-1,2-Dichloroethene	9.42	1.0	10	0	94.2	70.3	120	0	0		
Trichloroethene	9.05	1.0	10	0	90.5	73	127	0	0		
Vinyl chloride	7.54	1.0	10	0	75.4	65.2	134	0	0		
Xylenes, Total	28.39	1.0	30	0	94.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.33	5.0	50	0	96.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	54.29	5.0	50	0	109	76.5	125	0	0		
Surr: Toluene-d8	52.15	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

ms	SeqNo: **2690365**	TestNo: **SW8260C**	RunNo: **174855**
	Samp ID: **190828068-001b (082819-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.32	1.0	10	0	83.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.78	1.0	10	0	77.8	70.1	123	0	0		
1,1,2-Trichloroethane	7.67	1.0	10	0	76.7	72.1	119	0	0		
1,1-Dichloroethane	8.66	1.0	10	0	86.6	70.4	126	0	0		
1,1-Dichloroethene	8.52	1.0	10	0	85.2	70.2	125	0	0		
1,2,3-Trichloropropane	3.88	1.0	5	0	77.6	53.7	101	0	0		
1,2-Dichlorobenzene	7.08	1.0	10	0	70.8	70.2	123	0	0		
1,2-Dichloroethane	7.91	1.0	10	0	79.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.96	1.0	10	0	79.6	70.4	124	0	0		
1,3-Dichloropropane	3.97	1.0	5	0	79.4	64	125	0	0		
1,4-Dichlorobenzene	7.52	1.0	10	0	75.2	70.8	127	0	0		
2-Butanone	4.95	5.0	10	0	49.5	60.5	123	0	0		JS
4-Methyl-2-pentanone	8.33	5.0	10	0	83.3	52.8	133	0	0		
Acetone	9.85	5.0	10	0	98.5	56.3	135	0	0		
Benzene	8.94	1.0	10	0.33	86.1	70.2	127	0	0		
Carbon disulfide	4.17	1.0	5	0	83.4	62.2	130	0	0		
Carbon tetrachloride	8.24	1.0	10	0	82.4	56.4	137	0	0		
Chlorobenzene	10.38	1.0	10	1.57	88.1	72.7	128	0	0		
Chloroethane	5.8	1.0	10	0	58	71.3	135	0	0		S
Chloroform	8.25	1.0	10	0	82.5	70.2	125	0	0		
Dibromochloromethane	7.56	1.0	10	0	75.6	69.5	123	0	0		
Ethylbenzene	9.41	1.0	10	0	94.1	71.9	129	0	0		
Methylene chloride	8.8	1.0	10	0	88	65.3	123	0	0		B
Tetrachloroethene	8.14	1.0	10	0	81.4	74.5	121	0	0		
Toluene	8.19	1.0	10	0	81.9	73	122	0	0		
trans-1,2-Dichloroethene	8.84	1.0	10	0	88.4	69.1	133	0	0		
Trichloroethene	8.11	1.0	10	0	81.1	71.1	126	0	0		
Vinyl chloride	7.62	1.0	10	0	76.2	65	137	0	0		
Xylenes, Total	27.83	1.0	30	0	92.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.19	5.0	50	0	98.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	55.42	5.0	50	0	111	76.5	125	0	0		
Surr: Toluene-d8	50.08	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190828068

Experience is the solution

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		
Patrick Gehan		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082819-01-SW-U-A-1	8/28/19	1335	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	082819-02-SW-A-A-1	8/28/19	1400	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	082819-03-SW-D-A-1	8/28/19	1415	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		8/28/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/28/19 @ 4:13pm

Temperature
Ambient or (Chilled)
Notes: 18°C

AES Bottles
Y ☑ N ☐

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

Demo
190828068

Adirondack Environmental Services

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190828068

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082819-03-SW-D-A-1	8/28/19	1415	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
004	082819-04-SW-B-A-1	8/28/19	1315	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
005	082819-05-SW-B-A-1	8/28/19	1435	A/P	W		✓	1	TSS
006	082819-01-SW-U-A-3	8/28/19	0745	A/P	W		✓	1	metals (filtered)
	↓	↓	↓	A/P	↓		↓	2	PCBs
				A/P				2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/28/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/28/19 @ 9:13pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19082868

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Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	082819-01-SW-U-A-3	8/28/19	0745	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
				A				1	TSS
				P					
007	082819-TB01			A	TB				trip blank Lot #45.2
				P					
008	082819-TB02			A	TB				trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/28/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/28/19@4:15pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or ~~Chilled~~	Y ☑ N ☐	(Y) N	(Y) N
Notes: 18°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 03, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190829068
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 8/29/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*03-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190829068		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-01-SW-D-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
PCB, Total	**ND**	0.065		µg/L	1	8/29/2019 6:58:31 PM
Surr: Decachlorobiphenyl	**72.0**	57.1-135		%REC	1	8/29/2019 6:58:31 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**4.4**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Total Hardness (As CaCO3)	**95**	5		mg/L CaCO3	1	8/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic	**0.004**	0.005	J	mg/L	1	8/30/2019 1:23:00 PM
Barium	**0.026**	0.010		mg/L	1	8/30/2019 1:23:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/30/2019 1:23:00 PM
Chromium	**0.005**	0.005		mg/L	1	8/30/2019 1:23:00 PM
Copper	**ND**	0.005		mg/L	1	8/30/2019 1:23:00 PM
Lead	**ND**	0.005		mg/L	1	8/30/2019 1:23:00 PM
Selenium	**ND**	0.005		mg/L	1	8/30/2019 1:23:00 PM
Silver	**ND**	0.010		mg/L	1	8/30/2019 1:23:00 PM
Zinc	**ND**	0.010		mg/L	1	8/30/2019 1:23:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:47:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	8/30/2019 2:47:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/30/2019 2:47:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:47:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:47:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:47:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT: AECOM Environment
Work Order: **190829068**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082919-01-SW-D-A-1
Collection Date: 8/29/2019
Lab Sample ID: 190829068-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/30/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:47:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 2:47:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 2:47:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 12:04:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 12:04:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 12:04:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 12:04:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/31/2019 12:04:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 12:04:00 AM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	8/31/2019 12:04:00 AM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	8/31/2019 12:04:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/31/2019 12:04:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-01-SW-D-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**15.5**	1.1		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-02-SW-A-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
PCB, Total	**ND**	0.065		µg/L	1	8/29/2019 7:11:50 PM
Surr: Decachlorobiphenyl	**73.6**	57.1-135		%REC	1	8/29/2019 7:11:50 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**4.3**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Total Hardness (As CaCO3)	**94**	5		mg/L CaCO3	1	8/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/30/2019 1:31:00 PM
Barium	**0.026**	0.010		mg/L	1	8/30/2019 1:31:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/30/2019 1:31:00 PM
Chromium	**ND**	0.005		mg/L	1	8/30/2019 1:31:00 PM
Copper	**ND**	0.005		mg/L	1	8/30/2019 1:31:00 PM
Lead	**ND**	0.005		mg/L	1	8/30/2019 1:31:00 PM
Selenium	**ND**	0.005		mg/L	1	8/30/2019 1:31:00 PM
Silver	**ND**	0.010		mg/L	1	8/30/2019 1:31:00 PM
Zinc	**ND**	0.010		mg/L	1	8/30/2019 1:31:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:53:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/30/2019 2:53:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/30/2019 2:53:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:53:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:53:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:53:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT: AECOM Environment
Work Order: **190829068**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082919-02-SW-A-A-1
Collection Date: 8/29/2019
Lab Sample ID: 190829068-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/30/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:53:00 PM
Silver, Dissolved	**0.004**	0.010	J	mg/L	1	8/30/2019 2:53:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 2:53:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 12:26:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Acetone	**3.7**	5.0	J	µg/L	1	8/31/2019 12:26:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 12:26:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 12:26:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	8/31/2019 12:26:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 12:26:00 AM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	8/31/2019 12:26:00 AM
Surr: 4-Bromofluorobenzene	**115**	76.5-125		%REC	1	8/31/2019 12:26:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/31/2019 12:26:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-02-SW-A-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**14.6**	1.0		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-03-SW-U-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
PCB, Total	**ND**	0.065		µg/L	1	8/29/2019 7:27:06 PM
Surr: Decachlorobiphenyl	**73.6**	57.1-135		%REC	1	8/29/2019 7:27:06 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**7.3**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Total Hardness (As CaCO3)	**97**	5		mg/L CaCO3	1	8/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic	**0.003**	0.005	J	mg/L	1	8/30/2019 1:42:00 PM
Barium	**0.027**	0.010		mg/L	1	8/30/2019 1:42:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/30/2019 1:42:00 PM
Chromium	**0.005**	0.005		mg/L	1	8/30/2019 1:42:00 PM
Copper	**0.005**	0.005	J	mg/L	1	8/30/2019 1:42:00 PM
Lead	**ND**	0.005		mg/L	1	8/30/2019 1:42:00 PM
Selenium	**ND**	0.005		mg/L	1	8/30/2019 1:42:00 PM
Silver	**ND**	0.010		mg/L	1	8/30/2019 1:42:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	8/30/2019 1:42:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:58:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/30/2019 2:58:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/30/2019 2:58:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:58:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:58:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:58:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-03-SW-U-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 8/30/2019**)						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 2:58:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 2:58:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 2:58:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 12:48:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 12:48:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 12:48:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 12:48:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 12:48:00 AM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	8/31/2019 12:48:00 AM
Surr: 4-Bromofluorobenzene	**113**	76.5-125		%REC	1	8/31/2019 12:48:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	8/31/2019 12:48:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-03-SW-U-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**14.8**	1.3		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-04-SW-B-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/29/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1242	**0.055**	0.065	J	µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/29/2019 7:40:26 PM
PCB, Total	**0.055**	0.065	J	µg/L	1	8/29/2019 7:40:26 PM
Surr: Decachlorobiphenyl	**86.0**	57.1-135		%REC	1	8/29/2019 7:40:26 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/29/2019)						
Mercury	**6.2**	0.5		ng/L	1	8/30/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Total Hardness (As CaCO3)	**96**	5		mg/L CaCO3	1	8/30/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic	**ND**	0.005		mg/L	1	8/30/2019 1:48:00 PM
Barium	**0.027**	0.010		mg/L	1	8/30/2019 1:48:00 PM
Cadmium	**ND**	0.001		mg/L	1	8/30/2019 1:48:00 PM
Chromium	**0.005**	0.005	J	mg/L	1	8/30/2019 1:48:00 PM
Copper	**ND**	0.005		mg/L	1	8/30/2019 1:48:00 PM
Lead	**ND**	0.005		mg/L	1	8/30/2019 1:48:00 PM
Selenium	**ND**	0.005		mg/L	1	8/30/2019 1:48:00 PM
Silver	**ND**	0.010		mg/L	1	8/30/2019 1:48:00 PM
Zinc	**ND**	0.010		mg/L	1	8/30/2019 1:48:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: - 8/30/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 3:04:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	8/30/2019 3:04:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	8/30/2019 3:04:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 3:04:00 PM
Copper, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 3:04:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	8/30/2019 3:04:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT: AECOM Environment
Work Order: **190829068**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 082919-04-SW-B-A-1
Collection Date: 8/29/2019
Lab Sample ID: 190829068-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 8/30/2019)**						Analyst: **SM**
Selenium, Dissolved	**ND**	0.005	N	mg/L	1	8/30/2019 3:04:00 PM
Silver, Dissolved	**0.005**	0.010	J	mg/L	1	8/30/2019 3:04:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	8/30/2019 3:04:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 1:09:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Acetone	**4.2**	5.0	J	µg/L	1	8/31/2019 1:09:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 1:09:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 1:09:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 1:09:00 AM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	8/31/2019 1:09:00 AM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	8/31/2019 1:09:00 AM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	8/31/2019 1:09:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-04-SW-B-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**16.0**	1.3		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-05-SW-B-A-1
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**16.0**	1.1		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	082919-TB01
Work Order:	**190829068**	**Collection Date:**	8/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190829068-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 1:31:00 AM
Methylene chloride	**0.5**	1.0	J	µg/L	1	8/31/2019 1:31:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 1:31:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/31/2019 1:31:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 1:31:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 1:31:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 1:31:00 AM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	8/31/2019 1:31:00 AM
Surr: 4-Bromofluorobenzene	**121**	76.5-125		%REC	1	8/31/2019 1:31:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	8/31/2019 1:31:00 AM

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75300

LCS

SeqNo: **2690720** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **LCS-75300** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	424	40.0	483	0	87.8	86.5	114	0	0		

DUP

SeqNo: **2690724** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **190826016-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	94	6.70	0	0	0	0	0	101.3	7.51	10	

DUP

SeqNo: **2690729** **PrepDate:8/29/2019** TestNo: **SM2540D** RunNo: **174875**
Samp ID: **190826021-001** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	195	10.0	0	0	0	0	0	203	4.02	10	

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75302

MBLK

SeqNo: **2690152** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **MB-75302** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2690153** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **LCS-75302** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.17	0.00500	2	0	108	85	115	0	0		
Barium, Dissolved	2.035	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	1.881	0.00500	2	0	94	85.3	112	0	0		
Chromium, Dissolved	1.996	0.00500	2	0	99.8	89.1	109	0	0		
Copper, Dissolved	2.135	0.00500	2	0	107	86.8	115	0	0		
Lead, Dissolved	2.19	0.00500	2	0	109	86.8	114	0	0		
Selenium, Dissolved	2.175	0.00500	2	0	109	85	115	0	0		
Silver, Dissolved	0.5406	0.0100	0.5	0	108	85	115	0	0		
Zinc, Dissolved	2.075	0.0100	2	0	104	85	115	0	0		

MS

SeqNo: **2690165** PrepDate:**8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0487	0.00500	0.04	0	122	75	123	0	0		
Barium, Dissolved	2.201	0.0100	2	0	110	75	124	0	0		
Cadmium, Dissolved	0.0509	0.00500	0.05	0	102	75	125	0	0		
Chromium, Dissolved	0.2114	0.00500	0.2	0	106	77.2	117	0	0		
Copper, Dissolved	0.2821	0.00500	0.25	0	113	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75302

MS

SeqNo: **2690165** **PrepDate:8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02406	0.00500	0.02	0	120	75	125	0	0		
Selenium, Dissolved	0.01146	0.00500	0.01	0	115	75	125	0	0		
Silver, Dissolved	0.05614	0.0100	0.05	0	112	75	125	0	0		
Zinc, Dissolved	0.5922	0.0100	0.5	0	118	75	121	0	0		

DUP

SeqNo: **2690164** **PrepDate:8/29/2019** TestNo: **E200.7F** RunNo: **174844**
Samp ID: **190828068-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.001187	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.0009924	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	0.00001076	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.001439	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20.1	
Lead, Dissolved	0.0002557	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	0.0002569	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.002773	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75305

mblk

SeqNo: **2689800** PrepDate:**8/29/2019** TestNo: **E608** RunNo: **174817**
Samp ID: **mb-75305** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0758	0	0.1	0	75.8	48.8	140	0	0		

lcs

SeqNo: **2689811** PrepDate:**8/29/2019** TestNo: **SW8082A** RunNo: **174817**
Samp ID: **lcs-75305** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.476	0.0650	0.5	0	95.2	60	140	0	0		
PCB, Total	0.476	0.0650	0.5	0	95.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0784	0.0100	0.1	0	78.4	57.1	135	0	0		

dup

SeqNo: **2690116** PrepDate:**8/29/2019** TestNo: **SW8082A** RunNo: **174817**
Samp ID: **190828068-001c** PrepRef: Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1242	0.1667	0.0720	0	0	0	0	0	0.1476	12.1	25	
Aroclor 1248	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0720	0	0	0	0	0	0	0	25	
PCB, Total	0.1667	0.0720	0	0	0	0	0	0.1476	12.1	25	
Surr: Decachlorobiphenyl	0.1078	0.0110	0.1111	0	97	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75305

dup	SeqNo: **2690117**	**PrepDate:8/29/2019**	TestNo: **SW8082A**	RunNo: **174817**
	Samp ID: **190828068-004c**	**PrepRef:**	Units: **µg/L**	Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1242	0.2056	0.0730	0	0	0	0	0	0.2354	13.5	25	
Aroclor 1248	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0730	0	0	0	0	0	0	0	25	
Aroclor 1268	ND	0.0730	0	0	0	0	0	0	0	25	
PCB, Total	0.2056	0.0730	0	0	0	0	0	0.2354	13.5	25	
Surr: Decachlorobiphenyl	0.09034	0.0110	0.1124	0	80.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75307

MBLK

SeqNo: **2690136** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **MB-75307** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2690137** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **LCS-75307** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	1.948	0.00500	2	0	97.4	89.1	111	0	0		
Barium	1.981	0.0100	2	0	99.1	85	115	0	0		
Cadmium	1.986	0.00500	2	0	99.3	85	115	0	0		
Chromium	1.973	0.00500	2	0	98.6	89.7	109	0	0		
Copper	2.068	0.00500	2	0	103	85	115	0	0		
Lead	2.063	0.00500	2	0	103	88.1	112	0	0		
Selenium	1.989	0.00500	2	0	99.4	87.5	112	0	0		
Silver	0.5427	0.0100	0.5	0	109	85.2	115	0	0		
Zinc	1.898	0.0100	2	0	94.9	88.3	113	0	0		

MS

SeqNo: **2690149** PrepDate:**8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04268	0.00500	0.04	0	107	75	125	0	0		
Barium	2.228	0.0100	2	0	111	75	119	0	0		
Cadmium	0.0519	0.00500	0.05	0	104	75	118	0	0		
Chromium	0.2118	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2851	0.00500	0.25	0	114	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75307

MS

SeqNo: **2690149** **PrepDate:8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006 (08281-01-SW-U-** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02491	0.00500	0.02	0	125	75	125	0	0		
Selenium	0.01122	0.00500	0.01	0	112	75	125	0	0		
Silver	0.05376	0.0100	0.05	0	108	75	125	0	0		
Zinc	0.6022	0.0100	0.5	0	120	76.9	125	0	0		

DUP

SeqNo: **2690148** **PrepDate:8/29/2019** TestNo: **E200.7** RunNo: **174844**
Samp ID: **190828068-006** **PrepRef:** Units: **mg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001874	0.00500	0	0	0	0	0	0	0	20	
Barium	0.000976	0.0100	0	0	0	0	0	0	0	20	
Cadmium	0.00000639	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.002273	0.00500	0	0	0	0	0	0	0	20	
Copper	0.0008891	0.00500	0	0	0	0	0	0	0	20	
Lead	0.000218	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	ND	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.002545	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MBLK

SeqNo: **2690857** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2690869** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2690994** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **MB-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2690858** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11	0.500	10	0	110	77	123	0	0		

LCS

SeqNo: **2690870** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.2	0.500	10	0	102	77	123	0	0		

LCS

SeqNo: **2690995** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **LCS-75318** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.4	0.500	10	0	104	77	123	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MS SeqNo: **2690860** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190829025-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.7	0.500	12.5	7.66	96.3	71	125	0	0		

MS SeqNo: **2690866** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190828068-004 (082819-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	24.3	0.500	12.5	14.9	75.2	71	125	0	0		

MS SeqNo: **2690983** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190829068-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	17.2	0.500	12.5	4.44	102	71	125	0	0		

MS SeqNo: **2690992** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190828049-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.1	0.500	12.5	0.643	83.7	71	125	0	0		

MS SeqNo: **2690999** PrepDate:8/29/2019 TestNo: **E1631** RunNo: **174883**
Samp ID: **190829007-001** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.2	0.500	12.5	2.35	86.8	71	125	0	0		

MSD SeqNo: **2690861** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190829025-002** PrepRef:(1631E) Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	19.7	0.500	12.5	7.66	96.3	71	125	19.7	0	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

ANALYTICAL QC SUMMARY REPORT

BatchID: 75318

MSD SeqNo: **2690867** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190828068-004 (082819-04-SW-B-** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	23.4	0.500	12.5	14.9	68	71	125	24.3	3.77	24	S

MSD SeqNo: **2690984** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190829068-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	16.3	0.500	12.5	4.44	94.9	71	125	17.2	5.37	24	

MSD SeqNo: **2690993** PrepDate: TestNo: **E1631** RunNo: **174883**
Samp ID: **190828049-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.9	0.500	12.5	0.643	82.1	71	125	11.1	1.82	24	

MSD SeqNo: **2691000** PrepDate:**8/29/2019** TestNo: **E1631** RunNo: **174883**
Samp ID: **190829007-001** PrepRef:**(1631E)** Units: **ng/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.3	0.500	12.5	2.35	87.6	71	125	13.2	0.755	24	

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

mblk

SeqNo: **2690357** TestNo: **SW8260C** RunNo: **174855**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.28	1.0									J
1,2-Dichloroethane	0.11	1.0									J
1,3-Dichlorobenzene	0.16	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	1.17	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.01	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.3	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	49.85	5.0	50	0	99.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

lcs

SeqNo: **2690355** TestNo: **SW8260C** RunNo: **174855**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.79	1.0	10	0	87.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.39	1.0	10	0	73.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.1	1.0	10	0	91	73.1	123	0	0		
1,1-Dichloroethane	9.19	1.0	10	0	91.9	73.2	127	0	0		
1,1-Dichloroethene	9.06	1.0	10	0	90.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.38	1.0	5	0	87.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.31	1.0	10	0	83.1	71	124	0	0		
1,2-Dichloroethane	8	1.0	10	0	80	72.5	127	0	0		
1,3-Dichlorobenzene	8.31	1.0	10	0	83.1	72.2	121	0	0		
1,3-Dichloropropane	4.59	1.0	5	0	91.8	76	122	0	0		
1,4-Dichlorobenzene	8.82	1.0	10	0	88.2	71.7	127	0	0		
2-Butanone	9.52	5.0	10	0	95.2	65.1	132	0	0		
4-Methyl-2-pentanone	8.23	5.0	10	0	82.3	68.7	118	0	0		
Acetone	11.06	5.0	10	0	111	69.2	133	0	0		
Benzene	9.31	1.0	10	0	93.1	71.2	122	0	0		
Carbon disulfide	4.21	1.0	5	0	84.2	67.8	134	0	0		
Carbon tetrachloride	8.62	1.0	10	0	86.2	74.5	122	0	0		
Chlorobenzene	9.33	1.0	10	0	93.3	72.7	124	0	0		
Chloroethane	7.91	1.0	10	0	79.1	72.3	136	0	0		
Chloroform	8.65	1.0	10	0	86.5	71.6	133	0	0		
Dibromochloromethane	8.1	1.0	10	0	81	70.6	124	0	0		
Ethylbenzene	9.46	1.0	10	0	94.6	70.9	126	0	0		
Methylene chloride	10.23	1.0	10	0	102	66.3	130	0	0		B
Tetrachloroethene	8.55	1.0	10	0	85.5	72.4	119	0	0		
Toluene	8.66	1.0	10	0	86.6	71.8	116	0	0		
trans-1,2-Dichloroethene	9.42	1.0	10	0	94.2	70.3	120	0	0		
Trichloroethene	9.05	1.0	10	0	90.5	73	127	0	0		
Vinyl chloride	7.54	1.0	10	0	75.4	65.2	134	0	0		
Xylenes, Total	28.39	1.0	30	0	94.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.33	5.0	50	0	96.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	54.29	5.0	50	0	109	76.5	125	0	0		
Surr: Toluene-d8	52.15	5.0	50	0	104	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190828068
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174855

ms	SeqNo: **2690365**	TestNo: **SW8260C**	RunNo: **174855**
	Samp ID: **190828068-001b (082819-01-SW-U-**	Units: **µg/L**	Analysis Date: **8/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.32	1.0	10	0	83.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.78	1.0	10	0	77.8	70.1	123	0	0		
1,1,2-Trichloroethane	7.67	1.0	10	0	76.7	72.1	119	0	0		
1,1-Dichloroethane	8.66	1.0	10	0	86.6	70.4	126	0	0		
1,1-Dichloroethene	8.52	1.0	10	0	85.2	70.2	125	0	0		
1,2,3-Trichloropropane	3.88	1.0	5	0	77.6	53.7	101	0	0		
1,2-Dichlorobenzene	7.08	1.0	10	0	70.8	70.2	123	0	0		
1,2-Dichloroethane	7.91	1.0	10	0	79.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.96	1.0	10	0	79.6	70.4	124	0	0		
1,3-Dichloropropane	3.97	1.0	5	0	79.4	64	125	0	0		
1,4-Dichlorobenzene	7.52	1.0	10	0	75.2	70.8	127	0	0		
2-Butanone	4.95	5.0	10	0	49.5	60.5	123	0	0		JS
4-Methyl-2-pentanone	8.33	5.0	10	0	83.3	52.8	133	0	0		
Acetone	9.85	5.0	10	0	98.5	56.3	135	0	0		
Benzene	8.94	1.0	10	0.33	86.1	70.2	127	0	0		
Carbon disulfide	4.17	1.0	5	0	83.4	62.2	130	0	0		
Carbon tetrachloride	8.24	1.0	10	0	82.4	56.4	137	0	0		
Chlorobenzene	10.38	1.0	10	1.57	88.1	72.7	128	0	0		
Chloroethane	5.8	1.0	10	0	58	71.3	135	0	0		S
Chloroform	8.25	1.0	10	0	82.5	70.2	125	0	0		
Dibromochloromethane	7.56	1.0	10	0	75.6	69.5	123	0	0		
Ethylbenzene	9.41	1.0	10	0	94.1	71.9	129	0	0		
Methylene chloride	8.8	1.0	10	0	88	65.3	123	0	0		B
Tetrachloroethene	8.14	1.0	10	0	81.4	74.5	121	0	0		
Toluene	8.19	1.0	10	0	81.9	73	122	0	0		
trans-1,2-Dichloroethene	8.84	1.0	10	0	88.4	69.1	133	0	0		
Trichloroethene	8.11	1.0	10	0	81.1	71.1	126	0	0		
Vinyl chloride	7.62	1.0	10	0	76.2	65	137	0	0		
Xylenes, Total	27.83	1.0	30	0	92.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.19	5.0	50	0	98.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	55.42	5.0	50	0	111	76.5	125	0	0		
Surr: Toluene-d8	50.08	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190829068

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleile@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	082919-01-SW-D-A-1	8/29/19	1310	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
002	082919-02-SW-A-A-1	8/29/19	1330	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs
				A/P				2	VOCs
				A/P				1	metals/hardness
				A/P				3	mercury
				A/P				1	TSS
003	082919-03-SW-U-A-1	8/29/19	1350	A/P	W		✓	1	metals (filtered)
				A/P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/29/19 4:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/29/19 5:07pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 12°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy



Adirondack Environmental Services, Inc.

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 1905 29065

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	082919-03-SW-U-A-1	8/29/19	1350	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	082919-04-SW-B-A-1	8/29/19	1250	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	082919-05-SW-B-A-1	8/29/19	1410	A	W		✓	1	TSS
006	082919-TB01			P	TB			1	trip blank
	LOT# WA-R45.2			A					
	3 m.	8/29/19		P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/29/19 4:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/29/19 5:07 PM

Temperature
Ambient or (Chilled)
Notes: 12°C

AES Bottles
Y (☒) N (☐)

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc

190829068

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



190829068

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/2/2019

8/29/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190829068-001	082919-01-SW-D-A-1	Water	8/29/2019	9/2/2019	E	C	B	D	D	A	F
190829068-002	082919-02-SW-A-A-1	Water	8/29/2019	9/2/2019	E	C	B	D	D	A	F
190829068-003	082919-03-SW-U-A-1	Water	8/29/2019	9/2/2019	E	C	B	D	D	A	F
190829068-004	082919-04-SW-B-A-1	Water	8/29/2019	9/2/2019	E	C	B	D	D	A	F
190829068-005	082919-05-SW-B-A-1	Water	8/29/2019	9/2/2019							A
190829068-006	082919-TB01	Trip Blank	8/29/2019	9/2/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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September 03, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190830047
PO#: 115954
Project# /Task# : 60323713 / 3300

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 8/30/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*03-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190830047		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-001
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
PCB, Total	**ND**	0.065		µg/L	1	8/30/2019 5:48:47 PM
Surr: Decachlorobiphenyl	**64.4**	57.1-135		%REC	1	8/30/2019 5:48:47 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/30/2019)						
Mercury	**5.0**	0.5		ng/L	1	9/3/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	9/3/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/3/2019 12:43:00 PM
Barium	**0.028**	0.010		mg/L	1	9/3/2019 12:43:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/3/2019 12:43:00 PM
Chromium	**ND**	0.005		mg/L	1	9/3/2019 12:43:00 PM
Copper	**0.007**	0.005		mg/L	1	9/3/2019 12:43:00 PM
Lead	**ND**	0.005		mg/L	1	9/3/2019 12:43:00 PM
Selenium	**ND**	0.005		mg/L	1	9/3/2019 12:43:00 PM
Silver	**ND**	0.010		mg/L	1	9/3/2019 12:43:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	9/3/2019 12:43:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:09:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	9/3/2019 2:09:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/3/2019 2:09:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:09:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	9/3/2019 2:09:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:09:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-001
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/3/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:09:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:09:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:09:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 1:52:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 1:52:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 1:52:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 1:52:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 1:52:00 AM
Surr: 1,2-Dichloroethane-d4	**96.7**	80.9-122		%REC	1	8/31/2019 1:52:00 AM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	8/31/2019 1:52:00 AM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	8/31/2019 1:52:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-001
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**11.6**	1.1		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-02-SW-A-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
PCB, Total	**ND**	0.065		µg/L	1	8/30/2019 6:02:07 PM
Surr: Decachlorobiphenyl	**83.2**	57.1-135		%REC	1	8/30/2019 6:02:07 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/30/2019)						
Mercury	**2.7**	0.5		ng/L	1	9/3/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	9/3/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/3/2019 12:50:00 PM
Barium	**0.028**	0.010		mg/L	1	9/3/2019 12:50:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/3/2019 12:50:00 PM
Chromium	**ND**	0.005		mg/L	1	9/3/2019 12:50:00 PM
Copper	**0.007**	0.005		mg/L	1	9/3/2019 12:50:00 PM
Lead	**ND**	0.005		mg/L	1	9/3/2019 12:50:00 PM
Selenium	**ND**	0.005		mg/L	1	9/3/2019 12:50:00 PM
Silver	**0.005**	0.010	J	mg/L	1	9/3/2019 12:50:00 PM
Zinc	**ND**	0.010		mg/L	1	9/3/2019 12:50:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:12:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	9/3/2019 2:12:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/3/2019 2:12:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:12:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	9/3/2019 2:12:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:12:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-02-SW-A-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/3/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:12:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:12:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:12:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 2:14:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 2:14:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 2:14:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 2:14:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 2:14:00 AM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	8/31/2019 2:14:00 AM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	8/31/2019 2:14:00 AM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	8/31/2019 2:14:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-02-SW-A-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-002
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**12.6**	1.0		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-03-SW-D-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-003
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1242	**0.057**	0.065	J	µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/30/2019 6:15:26 PM
PCB, Total	**0.057**	0.065	J	µg/L	1	8/30/2019 6:15:26 PM
Surr: Decachlorobiphenyl	**82.0**	57.1-135		%REC	1	8/30/2019 6:15:26 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/30/2019)						
Mercury	**4.0**	0.5		ng/L	1	9/3/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Total Hardness (As CaCO3)	**100**	5		mg/L CaCO3	1	9/3/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/3/2019 1:00:00 PM
Barium	**0.029**	0.010		mg/L	1	9/3/2019 1:00:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/3/2019 1:00:00 PM
Chromium	**ND**	0.005		mg/L	1	9/3/2019 1:00:00 PM
Copper	**0.005**	0.005	J	mg/L	1	9/3/2019 1:00:00 PM
Lead	**ND**	0.005		mg/L	1	9/3/2019 1:00:00 PM
Selenium	**ND**	0.005		mg/L	1	9/3/2019 1:00:00 PM
Silver	**ND**	0.010		mg/L	1	9/3/2019 1:00:00 PM
Zinc	**0.005**	0.010	J	mg/L	1	9/3/2019 1:00:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:22:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	9/3/2019 2:22:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/3/2019 2:22:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:22:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	9/3/2019 2:22:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:22:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-03-SW-D-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/3/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:22:00 PM
Silver, Dissolved	**0.006**	0.010	J	mg/L	1	9/3/2019 2:22:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:22:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 2:35:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 2:35:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/31/2019 2:35:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 2:35:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 2:35:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 2:35:00 AM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	8/31/2019 2:35:00 AM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	8/31/2019 2:35:00 AM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	8/31/2019 2:35:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-03-SW-D-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-003
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**13.7**	1.0		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-04-SW-B-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
PCB, Total	**ND**	0.065		µg/L	1	8/30/2019 6:28:46 PM
Surr: Decachlorobiphenyl	**89.8**	57.1-135		%REC	1	8/30/2019 6:28:46 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/30/2019)						
Mercury	**3.6**	0.5		ng/L	1	9/3/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Total Hardness (As CaCO3)	**98**	5		mg/L CaCO3	1	9/3/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/3/2019 1:08:00 PM
Barium	**0.028**	0.010		mg/L	1	9/3/2019 1:08:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/3/2019 1:08:00 PM
Chromium	**ND**	0.005		mg/L	1	9/3/2019 1:08:00 PM
Copper	**0.005**	0.005	J	mg/L	1	9/3/2019 1:08:00 PM
Lead	**ND**	0.005		mg/L	1	9/3/2019 1:08:00 PM
Selenium	**ND**	0.005		mg/L	1	9/3/2019 1:08:00 PM
Silver	**ND**	0.010		mg/L	1	9/3/2019 1:08:00 PM
Zinc	**ND**	0.010		mg/L	1	9/3/2019 1:08:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:26:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	9/3/2019 2:26:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/3/2019 2:26:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:26:00 PM
Copper, Dissolved	**0.004**	0.005	J	mg/L	1	9/3/2019 2:26:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:26:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-04-SW-B-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/3/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 2:26:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:26:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 2:26:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Chloroethane	**ND**	1.0	SN	µg/L	1	8/31/2019 2:57:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 2:57:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	8/31/2019 2:57:00 AM
2-Butanone	**ND**	5.0	N	µg/L	1	8/31/2019 2:57:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 2:57:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 2:57:00 AM
Surr: 1,2-Dichloroethane-d4	**98.8**	80.9-122		%REC	1	8/31/2019 2:57:00 AM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	8/31/2019 2:57:00 AM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	8/31/2019 2:57:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-04-SW-B-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-004
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**11.1**	1.0		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-05-SW-B-A-1
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-005
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**11.6**	1.0		mg/L	1	9/2/2019

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-2
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-006
PO#:	115954	**Matrix:**	WATER

Project# /Task# : 60323713 / 3300

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 8/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1221	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1232	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1242	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1248	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1254	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1260	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1262	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Aroclor 1268	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
PCB, Total	**ND**	0.065		µg/L	1	8/30/2019 6:55:29 PM
Surr: Decachlorobiphenyl	**79.8**	57.1-135		%REC	1	8/30/2019 6:55:29 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 8/30/2019)						
Mercury	**2.3**	0.5		ng/L	1	9/3/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Total Hardness (As CaCO3)	**99**	5		mg/L CaCO3	1	9/3/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/3/2019 1:54:00 PM
Barium	**0.029**	0.010		mg/L	1	9/3/2019 1:54:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/3/2019 1:54:00 PM
Chromium	**ND**	0.005		mg/L	1	9/3/2019 1:54:00 PM
Copper	**ND**	0.005		mg/L	1	9/3/2019 1:54:00 PM
Lead	**ND**	0.005		mg/L	1	9/3/2019 1:54:00 PM
Selenium	**ND**	0.005		mg/L	1	9/3/2019 1:54:00 PM
Silver	**0.005**	0.010	J	mg/L	1	9/3/2019 1:54:00 PM
Zinc	**ND**	0.010		mg/L	1	9/3/2019 1:54:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/3/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 3:47:00 PM
Barium, Dissolved	**0.026**	0.010		mg/L	1	9/3/2019 3:47:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/3/2019 3:47:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 3:47:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	9/3/2019 3:47:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 3:47:00 PM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-2
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 9/3/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/3/2019 3:47:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 3:47:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/3/2019 3:47:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	8/31/2019 3:19:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Acetone	**ND**	5.0		µg/L	1	8/31/2019 3:19:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Chloroform	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
2-Butanone	**ND**	5.0		µg/L	1	8/31/2019 3:19:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Benzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	8/31/2019 3:19:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Toluene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	8/31/2019 3:19:00 AM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	8/31/2019 3:19:00 AM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	8/31/2019 3:19:00 AM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	8/31/2019 3:19:00 AM

Adirondack Environmental Services, Inc

Date: *03-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	083019-01-SW-U-A-2
Work Order:	**190830047**	**Collection Date:**	8/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190830047-006
PO#:	115954	**Matrix:**	WATER
	Project# /Task# : 60323713 / 3300		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/2/2019)						
TSS (Residue, Non-Filterable)	**13.7**	1.0		mg/L	1	9/2/2019

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75348

mblk

SeqNo: **2691153** PrepDate:**8/30/2019** TestNo: **SW8082A** RunNo: **174898**
Samp ID: **mb-75348** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0822	0.0100	0.1	0	82.2	57.1	135	0	0		

lcs

SeqNo: **2691154** PrepDate:**8/30/2019** TestNo: **SW8082A** RunNo: **174898**
Samp ID: **lcs-75348** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5258	0.0650	0.5	0	105	60	140	0	0		
PCB, Total	0.5258	0.0650	0.5	0	105	60	140	0	0		
Surr: Decachlorobiphenyl	0.0778	0.0100	0.1	0	77.8	57.1	135	0	0		

ms

SeqNo: **2691160** PrepDate:**8/30/2019** TestNo: **SW8082A** RunNo: **174898**
Samp ID: **190830047-004c (083019-04-SW-B-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5574	0.0650	0.5	0	111	46.7	130	0	0		
PCB, Total	0.5574	0.0650	0.5	0	111	51	150	0	0		
Surr: Decachlorobiphenyl	0.0936	0.0100	0.1	0	93.6	57.1	135	0	0		

msd

SeqNo: **2691189** PrepDate:**8/30/2019** TestNo: **SW8082A** RunNo: **174898**
Samp ID: **190830047-004c (083019-04-SW-B-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75348

msd	SeqNo: **2691189**	**PrepDate:8/30/2019**	TestNo: **SW8082A**	RunNo: **174898**
	Samp ID: **190830047-004c (083019-04-SW-B-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5042	0.0650	0.5	0	101	46.7	130	0.5574	10.0	30	
PCB, Total	0.5042	0.0650	0.5	0	101	51	150	0.5574	10.0	30	
Surr: Decachlorobiphenyl	0.0784	0.0100	0.1	0	78.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75350

MBLK

SeqNo: **2691550** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **MB-75350** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

MBLK

SeqNo: **2691559** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **MB-75350** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2691551** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **LCS-75350** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.56	0.500	10	0	95.6	77	123	0	0		

LCS

SeqNo: **2691560** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **LCS-75350** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	9.59	0.500	10	0	95.9	77	123	0	0		

MS

SeqNo: **2691556** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.6	0.500	12.5	3.62	79.8	71	125	0	0		

MSD

SeqNo: **2691557** PrepDate:8/30/2019 TestNo: **E1631** RunNo: **174921**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	13.7	0.500	12.5	3.62	80.6	71	125	13.6	0.733	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75353

LCS

SeqNo: **2691753** PrepDate:**9/2/2019 1** TestNo: **SM2540D** RunNo: **174932**
Samp ID: **LCS-75353** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **9/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	540	40.0	483	0	112	86.5	114	0	0		

DUP

SeqNo: **2691763** PrepDate:**9/2/2019 1** TestNo: **SM2540D** RunNo: **174932**
Samp ID: **190830047-004F** PrepRef: Units: **mg/L** Analysis Date: **9/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	11.5	1.00	0	0	0	0	0	11.1	3.54	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75354

MBLK

SeqNo: **2692033** PrepDate:9/3/2019 8: TestNo: **E200.7F** RunNo: **174944**
Samp ID: **MB-75354** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2692034** PrepDate:9/3/2019 8: TestNo: **E200.7F** RunNo: **174944**
Samp ID: **LCS-75354** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.036	0.00500	2	0	102	85	115	0	0		
Barium, Dissolved	2.046	0.0100	2	0	102	89	112	0	0		
Cadmium, Dissolved	1.971	0.00500	2	0	98.5	85.3	112	0	0		
Chromium, Dissolved	2.053	0.00500	2	0	103	89.1	109	0	0		
Copper, Dissolved	2.163	0.00500	2	0	108	86.8	115	0	0		
Lead, Dissolved	2.004	0.00500	2	0	100	86.8	114	0	0		
Selenium, Dissolved	2.055	0.00500	2	0	103	85	115	0	0		
Silver, Dissolved	0.473	0.0100	0.5	0	94.6	85	115	0	0		
Zinc, Dissolved	1.95	0.0100	2	0	97.5	85	115	0	0		

MS

SeqNo: **2692040** PrepDate:9/3/2019 8: TestNo: **E200.7F** RunNo: **174944**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04441	0.00500	0.04	0	111	75	123	0	0		
Barium, Dissolved	2.278	0.0100	2	0.02639	113	75	124	0	0		
Cadmium, Dissolved	0.05287	0.00500	0.05	0	106	75	125	0	0		
Chromium, Dissolved	0.2338	0.00500	0.2	0	117	77.2	117	0	0		
Copper, Dissolved	0.3028	0.00500	0.25	0.004195	119	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75354

MS

SeqNo: **2692040** PrepDate:**9/3/2019 8:** TestNo: **E200.7F** RunNo: **174944**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02124	0.00500	0.02	0	106	75	125	0	0		
Selenium, Dissolved	0.00839	0.00500	0.01	0	83.9	75	125	0	0		
Silver, Dissolved	0.05726	0.0100	0.05	0	115	75	125	0	0		
Zinc, Dissolved	0.5563	0.0100	0.5	0	111	75	121	0	0		

DUP

SeqNo: **2692039** PrepDate:**9/3/2019 8:** TestNo: **E200.7F** RunNo: **174944**
Samp ID: **190830047-004** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.0001866	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.02603	0.0100	0	0	0	0	0	0.02639	1.38	15.4	
Cadmium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.00517	0.00500	0	0	0	0	0	0.004195	20.8	20.1	Z
Lead, Dissolved	0.001104	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0033	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.00289	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75355

MBLK

SeqNo: **2692020** PrepDate:9/3/2019 8: TestNo: **E200.7** RunNo: **174944**
Samp ID: **MB-75355** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	0.005536	0.0100									J
Zinc	ND	0.0100									

LCS

SeqNo: **2692021** PrepDate:9/3/2019 8: TestNo: **E200.7** RunNo: **174944**
Samp ID: **LCS-75355** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.046	0.00500	2	0	102	89.1	111	0	0		
Barium	2.064	0.0100	2	0	103	85	115	0	0		
Cadmium	1.98	0.00500	2	0	99	85	115	0	0		
Chromium	2.065	0.00500	2	0	103	89.7	109	0	0		
Copper	2.185	0.00500	2	0	109	85	115	0	0		
Lead	2.014	0.00500	2	0	101	88.1	112	0	0		
Selenium	2.064	0.00500	2	0	103	87.5	112	0	0		
Silver	0.4738	0.0100	0.5	0	94.8	85.2	115	0	0		
Zinc	1.96	0.0100	2	0	98	88.3	113	0	0		

MS

SeqNo: **2692027** PrepDate:9/3/2019 8: TestNo: **E200.7** RunNo: **174944**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04394	0.00500	0.04	0	110	75	125	0	0		
Barium	2.306	0.0100	2	0.02794	114	75	119	0	0		
Cadmium	0.0539	0.00500	0.05	0	108	75	118	0	0		
Chromium	0.2276	0.00500	0.2	0	114	75	124	0	0		
Copper	0.3061	0.00500	0.25	0.004682	121	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75355

MS

SeqNo: **2692027** PrepDate:**9/3/2019 8:** TestNo: **E200.7** RunNo: **174944**
Samp ID: **190830047-004 (083019-04-SW-B-** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02305	0.00500	0.02	0	115	75	125	0	0		
Selenium	0.01088	0.00500	0.01	0	109	75	125	0	0		
Silver	0.0523	0.0100	0.05	0	105	75	125	0	0		
Zinc	0.5656	0.0100	0.5	0	113	76.9	125	0	0		

DUP

SeqNo: **2692026** PrepDate:**9/3/2019 8:** TestNo: **E200.7** RunNo: **174944**
Samp ID: **190830047-004** PrepRef: Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.001211	0.00500	0	0	0	0	0	0	0	20	
Barium	0.02794	0.0100	0	0	0	0	0	0.02794	0	20	
Cadmium	ND	0.00500	0	0	0	0	0	0	0	20	
Chromium	ND	0.00500	0	0	0	0	0	0	0	20	
Copper	0.004699	0.00500	0	0	0	0	0	0.004682	0	20	
Lead	0.001341	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.002102	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.005257	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174908

mblk

SeqNo: **2691333** TestNo: **SW8260C** RunNo: **174908**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.17	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.27	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.5	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	56.39	5.0	50	0	113	76.5	125	0	0		
Surr: Toluene-d8	48.79	5.0	50	0	97.6	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174908

lcs

SeqNo: **2691331** TestNo: **SW8260C** RunNo: **174908**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **8/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.83	1.0	10	0	78.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.76	1.0	10	0	87.6	72.3	118	0	0		
1,1,2-Trichloroethane	8.66	1.0	10	0	86.6	73.1	123	0	0		
1,1-Dichloroethane	8.67	1.0	10	0	86.7	73.2	127	0	0		
1,1-Dichloroethene	8.17	1.0	10	0	81.7	70.3	128	0	0		
1,2,3-Trichloropropane	4	1.0	5	0	80	68.4	115	0	0		
1,2-Dichlorobenzene	7.44	1.0	10	0	74.4	71	124	0	0		
1,2-Dichloroethane	7.84	1.0	10	0	78.4	72.5	127	0	0		
1,3-Dichlorobenzene	7.31	1.0	10	0	73.1	72.2	121	0	0		
1,3-Dichloropropane	4.34	1.0	5	0	86.8	76	122	0	0		
1,4-Dichlorobenzene	7.37	1.0	10	0	73.7	71.7	127	0	0		
2-Butanone	6.55	5.0	10	0	65.5	65.1	132	0	0		
4-Methyl-2-pentanone	8.97	5.0	10	0	89.7	68.7	118	0	0		
Acetone	11.36	5.0	10	0	114	69.2	133	0	0		
Benzene	8.3	1.0	10	0	83	71.2	122	0	0		
Carbon disulfide	4.16	1.0	5	0	83.2	67.8	134	0	0		
Carbon tetrachloride	7.72	1.0	10	0	77.2	74.5	122	0	0		
Chlorobenzene	8.14	1.0	10	0	81.4	72.7	124	0	0		
Chloroethane	5.92	1.0	10	0	59.2	72.3	136	0	0		S
Chloroform	8.57	1.0	10	0	85.7	71.6	133	0	0		
Dibromochloromethane	7.86	1.0	10	0	78.6	70.6	124	0	0		
Ethylbenzene	8.45	1.0	10	0	84.5	70.9	126	0	0		
Methylene chloride	9.63	1.0	10	0	96.3	66.3	130	0	0		
Tetrachloroethene	7.69	1.0	10	0	76.9	72.4	119	0	0		
Toluene	7.98	1.0	10	0	79.8	71.8	116	0	0		
trans-1,2-Dichloroethene	9.08	1.0	10	0	90.8	70.3	120	0	0		
Trichloroethene	7.41	1.0	10	0	74.1	73	127	0	0		
Vinyl chloride	6.93	1.0	10	0	69.3	65.2	134	0	0		
Xylenes, Total	24.81	1.0	30	0	82.7	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.06	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.39	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	48.92	5.0	50	0	97.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174908

ms	SeqNo: **2691346**	TestNo: **SW8260C**	RunNo: **174908**
	Samp ID: **190830047-004b (083019-04-SW-B-**	Units: **µg/L**	Analysis Date: **8/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.99	1.0	10	0	79.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.3	1.0	10	0	83	70.1	123	0	0		
1,1,2-Trichloroethane	7.99	1.0	10	0	79.9	72.1	119	0	0		
1,1-Dichloroethane	8.61	1.0	10	0	86.1	70.4	126	0	0		
1,1-Dichloroethene	7.69	1.0	10	0	76.9	70.2	125	0	0		
1,2,3-Trichloropropane	3.89	1.0	5	0	77.8	53.7	101	0	0		
1,2-Dichlorobenzene	7.4	1.0	10	0	74	70.2	123	0	0		
1,2-Dichloroethane	6.98	1.0	10	0.11	68.7	73.5	126	0	0		S
1,3-Dichlorobenzene	7.2	1.0	10	0	72	70.4	124	0	0		
1,3-Dichloropropane	4.09	1.0	5	0	81.8	64	125	0	0		
1,4-Dichlorobenzene	7.48	1.0	10	0	74.8	70.8	127	0	0		
2-Butanone	3.53	5.0	10	0	35.3	60.5	123	0	0		JS
4-Methyl-2-pentanone	8.21	5.0	10	0	82.1	52.8	133	0	0		
Acetone	9.25	5.0	10	0	92.5	56.3	135	0	0		
Benzene	8.11	1.0	10	0	81.1	70.2	127	0	0		
Carbon disulfide	3.98	1.0	5	0	79.6	62.2	130	0	0		
Carbon tetrachloride	8.19	1.0	10	0	81.9	56.4	137	0	0		
Chlorobenzene	8.35	1.0	10	0	83.5	72.7	128	0	0		
Chloroethane	6.05	1.0	10	0	60.5	71.3	135	0	0		S
Chloroform	7.97	1.0	10	0	79.7	70.2	125	0	0		
Dibromochloromethane	7.68	1.0	10	0	76.8	69.5	123	0	0		
Ethylbenzene	8.54	1.0	10	0	85.4	71.9	129	0	0		
Methylene chloride	8.5	1.0	10	0	85	65.3	123	0	0		
Tetrachloroethene	7.4	1.0	10	0	74	74.5	121	0	0		S
Toluene	7.46	1.0	10	0	74.6	73	122	0	0		
trans-1,2-Dichloroethene	8.29	1.0	10	0	82.9	69.1	133	0	0		
Trichloroethene	8.4	1.0	10	0	84	71.1	126	0	0		
Vinyl chloride	6.69	1.0	10	0	66.9	65	137	0	0		
Xylenes, Total	25.01	1.0	30	0	83.4	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.18	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	54.23	5.0	50	0	108	76.5	125	0	0		
Surr: Toluene-d8	48.92	5.0	50	0	97.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190830047
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R174908

msd

SeqNo: **2691349** TestNo: **SW8260C** RunNo: **174908**
Samp ID: **190830047-004b (083019-04-SW-B-** Units: **µg/L** Analysis Date: **8/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.28	1.0	10	0	82.8	71.6	126	7.99	3.56	20.4	
1,1,2,2-Tetrachloroethane	9.34	1.0	10	0	93.4	70.1	123	8.3	11.8	18.6	
1,1,2-Trichloroethane	8.22	1.0	10	0	82.2	72.1	119	7.99	2.84	20	
1,1-Dichloroethane	9.21	1.0	10	0	92.1	70.4	126	8.61	6.73	19.2	
1,1-Dichloroethene	4.15	1.0	10	0	41.5	70.2	125	7.69	59.8	16.1	SZ
1,2,3-Trichloropropane	4.49	1.0	5	0	89.8	53.7	101	3.89	14.3	20	
1,2-Dichlorobenzene	8.19	1.0	10	0	81.9	70.2	123	7.4	10.1	17.9	
1,2-Dichloroethane	8.12	1.0	10	0.11	80.1	73.5	126	6.98	15.1	15.6	
1,3-Dichlorobenzene	8.06	1.0	10	0	80.6	70.4	124	7.2	11.3	14.3	
1,3-Dichloropropane	4.47	1.0	5	0	89.4	64	125	4.09	8.88	0	
1,4-Dichlorobenzene	8.46	1.0	10	0	84.6	70.8	127	7.48	12.3	14.4	
2-Butanone	4.71	5.0	10	0	47.1	60.5	123	3.53	0	15	JS
4-Methyl-2-pentanone	9.24	5.0	10	0	92.4	52.8	133	8.21	11.8	11.9	
Acetone	9.08	5.0	10	0	90.8	56.3	135	9.25	1.85	10.6	
Benzene	8.79	1.0	10	0	87.9	70.2	127	8.11	8.05	18.4	
Carbon disulfide	4.34	1.0	5	0	86.8	62.2	130	3.98	8.65	13.1	
Carbon tetrachloride	8.39	1.0	10	0	83.9	56.4	137	8.19	2.41	20.3	
Chlorobenzene	8.91	1.0	10	0	89.1	72.7	128	8.35	6.49	19.6	
Chloroethane	6.1	1.0	10	0	61	71.3	135	6.05	0.823	27.8	S
Chloroform	8.5	1.0	10	0	85	70.2	125	7.97	6.44	20.3	
Dibromochloromethane	8.5	1.0	10	0	85	69.5	123	7.68	10.1	18.8	
Ethylbenzene	9.41	1.0	10	0	94.1	71.9	129	8.54	9.69	16.3	
Methylene chloride	9.27	1.0	10	0	92.7	65.3	123	8.5	8.67	21.4	
Tetrachloroethene	8	1.0	10	0	80	74.5	121	7.4	7.79	20.9	
Toluene	8.61	1.0	10	0	86.1	73	122	7.46	14.3	19.4	
trans-1,2-Dichloroethene	9.45	1.0	10	0	94.5	69.1	133	8.29	13.1	16.1	
Trichloroethene	8.3	1.0	10	0	83	71.1	126	8.4	1.20	16.6	
Vinyl chloride	6.87	1.0	10	0	68.7	65	137	6.69	2.65	20.5	
Xylenes, Total	27.17	1.0	30	0	90.6	72	130	25.01	8.28	16.1	
Surr: 1,2-Dichloroethane-d4	50.03	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	54.64	5.0	50	0	109	76.5	125	0	0	0	
Surr: Toluene-d8	49.86	5.0	50	0	99.7	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190830047

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bluhm@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	083019-01-SW-U-A-1	8/30/19	0720	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
002	083019-02-SW-A-A-1	8/30/19	0750	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
003	083019-03-SW-D-A-1	8/30/19	0810	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/30/19 1035
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/30/19 2:46 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

190830047

Adirondack Environmental Services, Inc.

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19083004?

Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Gehan	
Client Phone No: 978-905-2124	**Client Email:** john.heiler@aecom.com	**PO Number:** 229608	**Samplers: (Signature)**

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	083019-03-SW-D-A-1	8/30/19	0810	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	083019-04-SW-B-A-1	8/30/19	0650	A	W		✓	3	metals (filtered)
				P				6	PCBs
				A				6	VOCs
				P				3	metals/hardness
				A				9	mercury
				P				3	TSS
005	083019-05-SW-B-A-1	8/30/19	0825	A	W		✓	1	TSS
				P					
006	083019-01-SW-U-A-2	8/30/19	0735	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 8/30/19 1035
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 8/30/19 2:46pm

Temperature Ambient or (Chilled) 6°C
Notes:_____

AES Bottles Y (☒) N (☐)

Properly Preserved (Y) N
Notes:_____

Received Within Holding Times (Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.
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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190830042

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	083019-01-SW-U-A-2	8/30/19	0735	A	W		✓	1	metals/hardness
	↓	↓	↓	P	↓		↓	3	mercury
	↓	↓	↓	A	↓		↓	1	TSS
007	083019-TB01			A	TB			1	trip blank
008	083019-TB02			A	TB			1	trip blank
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					
				A					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

-007 } missing from cooler. MDH 8-30-19
-008 } ok to proceed per kit. MDH 8-30-19

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		8/30/19 1055
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		8/30/19 1946

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/3/19 – 9/9/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. River water samples were not collected on 9/6/19. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors, VOCs, hardness and dissolved/ total metals (metals will no longer be collected per NYSDEC 9/4/19);
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 9/3/19 through 9/9/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), and hardness (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were two low level exceedances of the water quality criteria (mercury and chlorobenzene). The mercury exceedance (0.06 µg/l vs threshold of 0.05 µg/l) on 9/4/19 was at the upstream (Buoy 1) location. The sample was collected approximately 1 hour after high tide. The data received for the next day's sample set (9/4/19) samples came back without any exceedances. The chlorobenzene exceedance (5.6 µg/l vs threshold of 5 µg/l) on 9/9/19 was at the downstream (Buoy 3) location. The sample was collected approximately 1 hour after low tide. The data received for the next day's sample set (9/10/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU, with isolated observations to 31 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically in the low teens and never higher than 16.0 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/4/19 call with Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
090319-01-SW-U-A-1	09:40	COPPER	D	mg/l	0.01	0.005	J		U	18	6.58	2.97	High Tide	12.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-01-SW-U-A-1	09:40	MERCURY	T	ng/l	50	61.8		X	U	18	6.58	2.97	High Tide	12.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-02-SW-A-A-1	10:00	COPPER	D	mg/l	0.01	0.007			A	21	7.53	2.71	Outgoing Tide (Ebb)	13.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-02-SW-A-A-1	10:00	MERCURY	T	ng/l	50	3.8			A	21	7.53	2.71	Outgoing Tide (Ebb)	13.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-03-SW-D-A-1	10:20	AROCLOR-1242	T	ug/l	0.2	0.056	J		D	32	7.11	2.47	Outgoing Tide (Ebb)	14.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-03-SW-D-A-1	10:20	COPPER	D	mg/l	0.01	0.005	J		D	32	7.11	2.47	Outgoing Tide (Ebb)	14.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-03-SW-D-A-1	10:20	MERCURY	T	ng/l	50	6.2			D	32	7.11	2.47	Outgoing Tide (Ebb)	14.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-04-SW-B-B-1	09:25	CHROMIUM, TOTAL	D	mg/l	0.17	0.007			B	10.5	5.42	3.24	High Tide	14.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-04-SW-B-B-1	09:25	COPPER	D	mg/l	0.01	0.006			B	10.5	5.42	3.24	High Tide	14.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090319-04-SW-B-B-1	09:25	MERCURY	T	ng/l	50	2.7			B	10.5	5.42	3.24	High Tide	14.3	Moon Pool, Double Silt Curtain, Bubble Curtain	8:50
090419-01-SW-U-A-1	10:25	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	18	4.36	3.25	High Tide	10	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
090419-03-SW-D-B-1	11:20	AROCLOR-1242	T	ug/l	0.2	0.036	J		D	18.5	4.67	2.63	Outgoing Tide (Ebb)	10.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
090519-01-SW-U-A-2	08:15	AROCLOR-1242	T	ug/l	0.2	0.033	J		U	17	5.89	4.2	Incoming Tide (Flood)	10.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090519-04-SW-B-A-1	07:40	AROCLOR-1242	T	ug/l	0.2	0.041	J		B	16	6.09	3.93	Incoming Tide (Flood)	9.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-01-SW-U-B-1	08:50	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	1			U	7.5	4.52	-0.99	Low Tide	7.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-02-SW-A-B-1	09:10	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	1			A	8	20.87	-0.26	Low Tide	5.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-03-SW-D-B-1	09:20	AROCLOR-1242	T	ug/l	0.2	0.079	Z		D	10	30.49	-0.26	Low Tide	6.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-03-SW-D-B-1	09:20	BENZENE	T	ug/l	10	0.4	J		D	10	30.49	-0.26	Low Tide	6.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-03-SW-D-B-1	09:20	CHLOROBENZENE	T	ug/l	5	5.6		X	D	10	30.49	-0.26	Low Tide	6.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-03-SW-D-B-1	09:20	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	1			D	10	30.49	-0.26	Low Tide	6.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
090919-04-SW-B-A-1	08:30	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.8			B	12	2.47	-1.28	Low Tide	6.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25

J: Analyte detected below quantitation limit
Z: Duplication outside acceptable limits

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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September 05, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190903071
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 9/3/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*05-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190903071		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-01-SW-U-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 4:16:04 PM
Surr: Decachlorobiphenyl	**72.2**	57.1-135		%REC	1	9/4/2019 4:16:04 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 9/4/2019)						
Mercury	**61.8**	0.5		ng/L	1	9/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	9/4/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/4/2019 12:13:00 PM
Barium	**0.026**	0.010		mg/L	1	9/4/2019 12:13:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/4/2019 12:13:00 PM
Chromium	**ND**	0.005		mg/L	1	9/4/2019 12:13:00 PM
Copper	**0.006**	0.005		mg/L	1	9/4/2019 12:13:00 PM
Lead	**ND**	0.005		mg/L	1	9/4/2019 12:13:00 PM
Selenium	**ND**	0.005		mg/L	1	9/4/2019 12:13:00 PM
Silver	**ND**	0.010		mg/L	1	9/4/2019 12:13:00 PM
Zinc	**ND**	0.010		mg/L	1	9/4/2019 12:13:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:03:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	9/4/2019 3:03:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/4/2019 3:03:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:03:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	9/4/2019 3:03:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:03:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-01-SW-U-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 **(Prep: - 9/4/2019)**						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:03:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:03:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:03:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 7:06:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 7:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 7:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 7:06:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/4/2019 7:06:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/4/2019 7:06:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/4/2019 7:06:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-01-SW-U-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**12.9**	1.0		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-02-SW-A-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 4:29:24 PM
Surr: Decachlorobiphenyl	**86.2**	57.1-135		%REC	1	9/4/2019 4:29:24 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 9/4/2019)						
Mercury	**3.8**	0.5		ng/L	1	9/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	9/4/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/4/2019 12:18:00 PM
Barium	**0.026**	0.010		mg/L	1	9/4/2019 12:18:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/4/2019 12:18:00 PM
Chromium	**ND**	0.005		mg/L	1	9/4/2019 12:18:00 PM
Copper	**0.006**	0.005		mg/L	1	9/4/2019 12:18:00 PM
Lead	**ND**	0.005		mg/L	1	9/4/2019 12:18:00 PM
Selenium	**ND**	0.005		mg/L	1	9/4/2019 12:18:00 PM
Silver	**ND**	0.010		mg/L	1	9/4/2019 12:18:00 PM
Zinc	**ND**	0.010		mg/L	1	9/4/2019 12:18:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:07:00 PM
Barium, Dissolved	**0.025**	0.010		mg/L	1	9/4/2019 3:07:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/4/2019 3:07:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:07:00 PM
Copper, Dissolved	**0.007**	0.005		mg/L	1	9/4/2019 3:07:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:07:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-02-SW-A-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/4/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:07:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:07:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:07:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Chloroethane	**0.4**	1.0	J	µg/L	1	9/4/2019 7:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 7:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 7:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 7:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 7:27:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	9/4/2019 7:27:00 PM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	9/4/2019 7:27:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	9/4/2019 7:27:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-02-SW-A-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**13.2**	1.3		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-03-SW-D-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1242	**0.056**	0.065	J	µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 4:42:43 PM
PCB, Total	**0.056**	0.065	J	µg/L	1	9/4/2019 4:42:43 PM
Surr: Decachlorobiphenyl	**70.8**	57.1-135		%REC	1	9/4/2019 4:42:43 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 9/4/2019)						
Mercury	**6.2**	0.5		ng/L	1	9/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Total Hardness (As CaCO3)	**92**	5		mg/L CaCO3	1	9/4/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/4/2019 12:23:00 PM
Barium	**0.027**	0.010		mg/L	1	9/4/2019 12:23:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/4/2019 12:23:00 PM
Chromium	**ND**	0.005		mg/L	1	9/4/2019 12:23:00 PM
Copper	**0.006**	0.005		mg/L	1	9/4/2019 12:23:00 PM
Lead	**ND**	0.005		mg/L	1	9/4/2019 12:23:00 PM
Selenium	**ND**	0.005		mg/L	1	9/4/2019 12:23:00 PM
Silver	**ND**	0.010		mg/L	1	9/4/2019 12:23:00 PM
Zinc	**ND**	0.010		mg/L	1	9/4/2019 12:23:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:12:00 PM
Barium, Dissolved	**0.023**	0.010		mg/L	1	9/4/2019 3:12:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/4/2019 3:12:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:12:00 PM
Copper, Dissolved	**0.005**	0.005	J	mg/L	1	9/4/2019 3:12:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:12:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-03-SW-D-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/4/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:12:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:12:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:12:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Chloroethane	**0.2**	1.0	J	µg/L	1	9/4/2019 7:49:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 7:49:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 7:49:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 7:49:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 7:49:00 PM
Surr: 1,2-Dichloroethane-d4	**93.1**	80.9-122		%REC	1	9/4/2019 7:49:00 PM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	9/4/2019 7:49:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/4/2019 7:49:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-03-SW-D-A-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**14.4**	1.3		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-04-SW-B-B-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 4:56:05 PM
Surr: Decachlorobiphenyl	**75.2**	57.1-135		%REC	1	9/4/2019 4:56:05 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 9/4/2019)						
Mercury	**2.7**	0.5		ng/L	1	9/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Total Hardness (As CaCO3)	**93**	5		mg/L CaCO3	1	9/4/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/4/2019 12:44:00 PM
Barium	**0.026**	0.010		mg/L	1	9/4/2019 12:44:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/4/2019 12:44:00 PM
Chromium	**ND**	0.005		mg/L	1	9/4/2019 12:44:00 PM
Copper	**ND**	0.005		mg/L	1	9/4/2019 12:44:00 PM
Lead	**ND**	0.005		mg/L	1	9/4/2019 12:44:00 PM
Selenium	**ND**	0.005		mg/L	1	9/4/2019 12:44:00 PM
Silver	**ND**	0.010		mg/L	1	9/4/2019 12:44:00 PM
Zinc	**ND**	0.010		mg/L	1	9/4/2019 12:44:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:17:00 PM
Barium, Dissolved	**0.024**	0.010		mg/L	1	9/4/2019 3:17:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/4/2019 3:17:00 PM
Chromium, Dissolved	**0.007**	0.005		mg/L	1	9/4/2019 3:17:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	9/4/2019 3:17:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:17:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-04-SW-B-B-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/4/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:17:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:17:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:17:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 8:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 8:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 8:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 8:10:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	9/4/2019 8:10:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	9/4/2019 8:10:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/4/2019 8:10:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-04-SW-B-B-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**14.3**	1.0		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-05-SW-B-B-1
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**11.6**	1.3		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090309-01-SW-U-A-3
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 5:09:26 PM
Surr: Decachlorobiphenyl	**39.2**	57.1-135	S	%REC	1	9/4/2019 5:09:26 PM
LOW LEVEL MERCURY - EPA 1631E						Analyst: **WB**
(Prep: 1631E - 9/4/2019)						
Mercury	**0.2**	0.5	J	ng/L	1	9/5/2019
HARDNESS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Total Hardness (As CaCO3)	**ND**	5		mg/L CaCO3	1	9/4/2019
ICP METALS - EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic	**ND**	0.005		mg/L	1	9/4/2019 12:48:00 PM
Barium	**ND**	0.010		mg/L	1	9/4/2019 12:48:00 PM
Cadmium	**ND**	0.001		mg/L	1	9/4/2019 12:48:00 PM
Chromium	**ND**	0.005		mg/L	1	9/4/2019 12:48:00 PM
Copper	**0.005**	0.005	J	mg/L	1	9/4/2019 12:48:00 PM
Lead	**ND**	0.005		mg/L	1	9/4/2019 12:48:00 PM
Selenium	**ND**	0.005		mg/L	1	9/4/2019 12:48:00 PM
Silver	**ND**	0.010		mg/L	1	9/4/2019 12:48:00 PM
Zinc	**ND**	0.010		mg/L	1	9/4/2019 12:48:00 PM
ICP DISSOLVED META L- EPA 200.7 REV 4.4						Analyst: **KH**
(Prep: - 9/4/2019)						
Arsenic, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:22:00 PM
Barium, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:22:00 PM
Cadmium, Dissolved	**ND**	0.001		mg/L	1	9/4/2019 3:22:00 PM
Chromium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:22:00 PM
Copper, Dissolved	**0.006**	0.005		mg/L	1	9/4/2019 3:22:00 PM
Lead, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:22:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090309-01-SW-U-A-3
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4.4 (**Prep: - 9/4/2019**)						Analyst: **KH**
Selenium, Dissolved	**ND**	0.005		mg/L	1	9/4/2019 3:22:00 PM
Silver, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:22:00 PM
Zinc, Dissolved	**ND**	0.010		mg/L	1	9/4/2019 3:22:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 8:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/4/2019 8:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 8:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 8:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 8:32:00 PM
Surr: 1,2-Dichloroethane-d4	**94.8**	80.9-122		%REC	1	9/4/2019 8:32:00 PM
Surr: 4-Bromofluorobenzene	**118**	76.5-125		%REC	1	9/4/2019 8:32:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/4/2019 8:32:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090309-01-SW-U-A-3
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/3/2019)						
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	9/3/2019

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-TB01
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	9/4/2019 8:53:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 8:53:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 8:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 8:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 8:53:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	9/4/2019 8:53:00 PM
Surr: 4-Bromofluorobenzene	**117**	76.5-125		%REC	1	9/4/2019 8:53:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	9/4/2019 8:53:00 PM

Adirondack Environmental Services, Inc

Date: *05-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090319-TB02
Work Order:	**190903071**	**Collection Date:**	9/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190903071-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	9/4/2019 9:14:00 PM
Acetone	**ND**	5.0		µg/L	1	9/4/2019 9:14:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/4/2019 9:14:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Benzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/4/2019 9:14:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Toluene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/4/2019 9:14:00 PM
Surr: 1,2-Dichloroethane-d4	**94.1**	80.9-122		%REC	1	9/4/2019 9:14:00 PM
Surr: 4-Bromofluorobenzene	**114**	76.5-125		%REC	1	9/4/2019 9:14:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	9/4/2019 9:14:00 PM

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75380

LCS

SeqNo: **2692707** **PrepDate:9/3/2019 4:** TestNo: **SM2540D** RunNo: **174972**
Samp ID: **LCS-75380** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	544	40.0	483	0	113	86.5	114	0	0		

DUP

SeqNo: **2692709** **PrepDate:9/3/2019 4:** TestNo: **SM2540D** RunNo: **174972**
Samp ID: **190903003-002** **PrepRef:** Units: **mg/L** Analysis Date: **9/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	116.7	6.70	0	0	0	0	0	108.7	7.10	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75382

MBLK

SeqNo: **2693101** PrepDate:9/4/2019 8: TestNo: **E200.7F** RunNo: **174977**
Samp ID: **MB-75382** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500									
Barium, Dissolved	ND	0.0100									
Cadmium, Dissolved	ND	0.00500									
Chromium, Dissolved	ND	0.00500									
Copper, Dissolved	ND	0.00500									
Lead, Dissolved	ND	0.00500									
Selenium, Dissolved	ND	0.00500									
Silver, Dissolved	ND	0.0100									
Zinc, Dissolved	ND	0.0100									

LCS

SeqNo: **2693102** PrepDate:9/4/2019 8: TestNo: **E200.7F** RunNo: **174977**
Samp ID: **LCS-75382** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	2.021	0.00500	2	0	101	85	115	0	0		
Barium, Dissolved	1.985	0.0100	2	0	99.3	89	112	0	0		
Cadmium, Dissolved	1.903	0.00500	2	0	95.2	85.3	112	0	0		
Chromium, Dissolved	1.982	0.00500	2	0	99.1	89.1	109	0	0		
Copper, Dissolved	2.074	0.00500	2	0	104	86.8	115	0	0		
Lead, Dissolved	1.964	0.00500	2	0	98.2	86.8	114	0	0		
Selenium, Dissolved	2.01	0.00500	2	0	101	85	115	0	0		
Silver, Dissolved	0.4623	0.0100	0.5	0	92.5	85	115	0	0		
Zinc, Dissolved	1.913	0.0100	2	0	95.7	85	115	0	0		

MS

SeqNo: **2693114** PrepDate:9/4/2019 8: TestNo: **E200.7F** RunNo: **174977**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	0.04459	0.00500	0.04	0	111	75	123	0	0		
Barium, Dissolved	2.171	0.0100	2	0	109	75	124	0	0		
Cadmium, Dissolved	0.05241	0.00500	0.05	0	105	75	125	0	0		
Chromium, Dissolved	0.2107	0.00500	0.2	0	105	77.2	117	0	0		
Copper, Dissolved	0.2805	0.00500	0.25	0.006199	110	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75382

MS

SeqNo: **2693114** PrepDate:**9/4/2019 8:** TestNo: **E200.7F** RunNo: **174977**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead, Dissolved	0.02151	0.00500	0.02	0	108	75	125	0	0		
Selenium, Dissolved	0.01158	0.00500	0.01	0	116	75	125	0	0		
Silver, Dissolved	0.05932	0.0100	0.05	0	119	75	125	0	0		
Zinc, Dissolved	0.5506	0.0100	0.5	0	110	75	121	0	0		

DUP

SeqNo: **2693113** PrepDate:**9/4/2019 8:** TestNo: **E200.7F** RunNo: **174977**
Samp ID: **190903071-006** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, Dissolved	ND	0.00500	0	0	0	0	0	0	0	17.3	
Barium, Dissolved	0.0005544	0.0100	0	0	0	0	0	0	0	15.4	
Cadmium, Dissolved	0.00004595	0.00500	0	0	0	0	0	0	0	20	
Chromium, Dissolved	0.003055	0.00500	0	0	0	0	0	0	0	20	
Copper, Dissolved	0.004304	0.00500	0	0	0	0	0	0.006199	0	20.1	
Lead, Dissolved	0.00001764	0.00500	0	0	0	0	0	0	0	22	
Selenium, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
Silver, Dissolved	0.0003138	0.0100	0	0	0	0	0	0	0	17.6	
Zinc, Dissolved	0.001418	0.0100	0	0	0	0	0	0	0	15.4	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75383

MBLK

SeqNo: **2692814** PrepDate:9/4/2019 8: TestNo: **E200.7** RunNo: **174977**
Samp ID: **MB-75383** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.00500									
Barium	ND	0.0100									
Cadmium	ND	0.00500									
Chromium	ND	0.00500									
Copper	ND	0.00500									
Lead	ND	0.00500									
Selenium	ND	0.00500									
Silver	ND	0.0100									
Zinc	ND	0.0100									

LCS

SeqNo: **2692815** PrepDate:9/4/2019 8: TestNo: **E200.7** RunNo: **174977**
Samp ID: **LCS-75383** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	2.016	0.00500	2	0	101	89.1	111	0	0		
Barium	1.992	0.0100	2	0	99.6	85	115	0	0		
Cadmium	1.906	0.00500	2	0	95.3	85	115	0	0		
Chromium	2.004	0.00500	2	0	100	89.7	109	0	0		
Copper	2.085	0.00500	2	0	104	85	115	0	0		
Lead	1.969	0.00500	2	0	98.5	88.1	112	0	0		
Selenium	2.02	0.00500	2	0	101	87.5	112	0	0		
Silver	0.4865	0.0100	0.5	0	97.3	85.2	115	0	0		
Zinc	1.919	0.0100	2	0	96	88.3	113	0	0		

MS

SeqNo: **2693098** PrepDate:9/4/2019 8: TestNo: **E200.7** RunNo: **174977**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.04275	0.00500	0.04	0	107	75	125	0	0		
Barium	2.173	0.0100	2	0	109	75	119	0	0		
Cadmium	0.05236	0.00500	0.05	0	105	75	118	0	0		
Chromium	0.212	0.00500	0.2	0	106	75	124	0	0		
Copper	0.2808	0.00500	0.25	0.004737	110	75	125	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75383

MS

SeqNo: **2693098** PrepDate:**9/4/2019 8:** TestNo: **E200.7** RunNo: **174977**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02127	0.00500	0.02	0	106	75	125	0	0		
Selenium	0.01086	0.00500	0.01	0	109	75	125	0	0		
Silver	0.05725	0.0100	0.05	0	114	75	125	0	0		
Zinc	0.5505	0.0100	0.5	0	110	76.9	125	0	0		

DUP

SeqNo: **2693097** PrepDate:**9/4/2019 8:** TestNo: **E200.7** RunNo: **174977**
Samp ID: **190903071-006** PrepRef: Units: **mg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.0003312	0.00500	0	0	0	0	0	0	0	20	
Barium	ND	0.0100	0	0	0	0	0	0	0	20	
Cadmium	0.00007021	0.00500	0	0	0	0	0	0	0	20	
Chromium	0.004736	0.00500	0	0	0	0	0	0	0	20	
Copper	0.003533	0.00500	0	0	0	0	0	0.004737	0	20	
Lead	0.000156	0.00500	0	0	0	0	0	0	0	18.9	
Selenium	ND	0.00500	0	0	0	0	0	0	0	15	
Silver	0.003644	0.0100	0	0	0	0	0	0	0	10.8	
Zinc	0.001601	0.0100	0	0	0	0	0	0	0	16.2	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75398

mblk SeqNo: **2693180** PrepDate:**9/4/2019** TestNo: **E608** RunNo: **174994**
Samp ID: **mb-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0924	0	0.1	0	92.4	48.8	140	0	0		

lcs SeqNo: **2693181** PrepDate:**9/4/2019** TestNo: **E608** RunNo: **174994**
Samp ID: **lcs-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5766	0.0650	0.5	0	115	59	141	0	0		
Surr: Decachlorobiphenyl	0.1046	0	0.1	0	105	48.8	140	0	0		

mblk SeqNo: **2693212** PrepDate:**9/4/2019** TestNo: **SW8082A** RunNo: **174994**
Samp ID: **mb-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.017	0.0650									J
Surr: Decachlorobiphenyl	0.0924	0.0100	0.1	0	92.4	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75398

lcs	SeqNo: **2693213**	**PrepDate:9/4/2019**	TestNo: **SW8082A**	RunNo: **174994**
	Samp ID: **lcs-75398**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5766	0.0650	0.5	0	115	60	140	0	0		
PCB, Total	0.5766	0.0650	0.5	0	115	60	140	0	0		
Surr: Decachlorobiphenyl	0.1046	0.0100	0.1	0	105	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75424

MBLK

SeqNo: **2693676** PrepDate:9/4/2019 2: TestNo: **E1631** RunNo: **175029**
Samp ID: **MB-75424** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.500									

LCS

SeqNo: **2693677** PrepDate:9/4/2019 2: TestNo: **E1631** RunNo: **175029**
Samp ID: **LCS-75424** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	10.4	0.500	10	0	104	77	123	0	0		

MS

SeqNo: **2693683** PrepDate:9/4/2019 2: TestNo: **E1631** RunNo: **175029**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	12.2	0.500	12.5	0.201	96	71	125	0	0		

MSD

SeqNo: **2693684** PrepDate:9/4/2019 2: TestNo: **E1631** RunNo: **175029**
Samp ID: **190903071-006 (090309-01-SW-U-** PrepRef:(1631E) Units: **ng/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	11.3	0.500	12.5	0.201	88.8	71	125	12.2	7.66	24	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175016

mblk	SeqNo: **2693466**	TestNo: **SW8260C**	RunNo: **175016**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.31	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.17	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.34	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.73	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.17	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.87	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.33	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.42	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	59.17	5.0	50	0	118	76.5	125	0	0		
Surr: Toluene-d8	49.82	5.0	50	0	99.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175016

lcs

SeqNo: **2693465** TestNo: **SW8260C** RunNo: **175016**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.5	1.0	10	0	75	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.97	1.0	10	0	79.7	72.3	118	0	0		
1,1,2-Trichloroethane	7.76	1.0	10	0	77.6	73.1	123	0	0		
1,1-Dichloroethane	8.61	1.0	10	0	86.1	73.2	127	0	0		
1,1-Dichloroethene	8.11	1.0	10	0	81.1	70.3	128	0	0		
1,2,3-Trichloropropane	3.99	1.0	5	0	79.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.4	1.0	10	0	74	71	124	0	0		
1,2-Dichloroethane	7.63	1.0	10	0	76.3	72.5	127	0	0		
1,3-Dichlorobenzene	8	1.0	10	0	80	72.2	121	0	0		
1,3-Dichloropropane	4.11	1.0	5	0	82.2	76	122	0	0		
1,4-Dichlorobenzene	7.64	1.0	10	0	76.4	71.7	127	0	0		
2-Butanone	7.77	5.0	10	0	77.7	65.1	132	0	0		
4-Methyl-2-pentanone	7.06	5.0	10	0	70.6	68.7	118	0	0		
Acetone	7.22	5.0	10	0	72.2	69.2	133	0	0		
Benzene	7.95	1.0	10	0	79.5	71.2	122	0	0		
Carbon disulfide	3.83	1.0	5	0	76.6	67.8	134	0	0		
Carbon tetrachloride	7.58	1.0	10	0	75.8	74.5	122	0	0		
Chlorobenzene	9.05	1.0	10	0	90.5	72.7	124	0	0		
Chloroethane	7.28	1.0	10	0	72.8	72.3	136	0	0		
Chloroform	7.8	1.0	10	0	78	71.6	133	0	0		
Dibromochloromethane	7.35	1.0	10	0	73.5	70.6	124	0	0		
Ethylbenzene	9.47	1.0	10	0	94.7	70.9	126	0	0		
Methylene chloride	8.73	1.0	10	0	87.3	66.3	130	0	0		
Tetrachloroethene	7.46	1.0	10	0	74.6	72.4	119	0	0		
Toluene	7.8	1.0	10	0	78	71.8	116	0	0		
trans-1,2-Dichloroethene	8.83	1.0	10	0	88.3	70.3	120	0	0		
Trichloroethene	7.75	1.0	10	0	77.5	73	127	0	0		
Vinyl chloride	10.86	1.0	10	0	109	65.2	134	0	0		
Xylenes, Total	28.24	1.0	30	0	94.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.18	5.0	50	0	98.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	58.57	5.0	50	0	117	76.5	125	0	0		
Surr: Toluene-d8	49.79	5.0	50	0	99.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190903071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175016

ms

SeqNo: **2693475** TestNo: **SW8260C** RunNo: **175016**
Samp ID: **190903046-001i** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	10.47	10	10	1.7	87.7	56.3	135	0	0		
Benzene	7.82	5.0	10	0	78.2	70.2	127	0	0		
Ethylbenzene	9.11	5.0	10	0	91.1	71.9	129	0	0		
Toluene	7.73	5.0	10	0	77.3	73	122	0	0		
Surr: 1,2-Dichloroethane-d4	49.89	5.0	50	0	99.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	54.03	5.0	50	0	108	76.5	125	0	0		
Surr: Toluene-d8	50.52	5.0	50	0	101	80.4	121	0	0		

msd

SeqNo: **2693476** TestNo: **SW8260C** RunNo: **175016**
Samp ID: **190903046-001i** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	10.41	10	10	1.7	87.1	56.3	135	10.47	0.575	10.6	
Benzene	7.54	5.0	10	0	75.4	70.2	127	7.82	3.65	18.4	
Ethylbenzene	7.66	5.0	10	0	76.6	71.9	129	9.11	17.3	16.3	Z
Toluene	7.53	5.0	10	0	75.3	73	122	7.73	2.62	19.4	
Surr: 1,2-Dichloroethane-d4	50.03	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	52.86	5.0	50	0	106	76.5	125	0	0	0	
Surr: Toluene-d8	49.25	5.0	50	0	98.5	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 190903021

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleyler@aecom.com	224608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	090319-01-SW-U-A-1	9/3/19	0940	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
				P					
002	090319-02-SW-A-A-1	9/3/19	1000	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
				A					
				P					
003	090319-03-SW-D-A-1	9/3/19	1020	A	W		✓	1	metals (filtered)
				P				2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

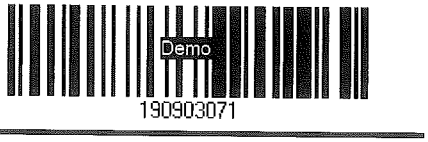
CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/3/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/3/19 4:28P

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	Y N	Y N
Notes: 6°C	☒	☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy



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CHAIN OF CUSTODY RECORD

AES Work Order # 190903021

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	090319-03-SW-D-A-1	9/3/19	1020	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	090319-04-SW-B-B-1	9/3/19	0920	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	090319-05-SW-B-B-1	9/3/19	1045	A	W		✓	1	TSS
				P					
006	090309-01-SW-U-A-3	9/3/19	1145	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					

Shipment Arrived Via:

FedEx UPS Client AES Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/3/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/3/19 4:28

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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CHAIN OF CUSTODY RECORD

AES Work Order # 19D3021

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	090319-01-SW-U-A-3	9/3/19	1145	A/P	W		✓	1	metals/hardness
	↓	↓	↓	A/P	↓		↓	3	mercury
	↓	↓	↓	A/P	↓		↓	1	TSS
007	090319-TB01 Lot# VOA-E45.2			A/P					trip blank
008	090319-TB02			A/P					trip blank
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/3/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/3/19 9:28p

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 06, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190904087
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/4/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *06-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190904087	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT: AECOM Environment
Work Order: **190904087**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 090419-01-SW-U-A-1
Collection Date: 9/4/2019
Lab Sample ID: 190904087-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 7:36:08 PM
Surr: Decachlorobiphenyl	**91.8**	57.1-135		%REC	1	9/4/2019 7:36:08 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Acetone	**ND**	5.0		µg/L	1	9/5/2019 11:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/5/2019 11:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Benzene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/5/2019 11:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Toluene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-01-SW-U-A-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/5/2019 11:04:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/5/2019 11:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/5/2019 11:04:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	9/5/2019 11:04:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	9/5/2019 11:04:00 PM
Surr: Toluene-d8	**104**	80.4-121		%REC	1	9/5/2019 11:04:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.0**	1.0		mg/L	1	9/5/2019

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT: AECOM Environment
Work Order: **190904087**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 090419-02-SW-A-A-1
Collection Date: 9/4/2019
Lab Sample ID: 190904087-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 7:49:27 PM
Surr: Decachlorobiphenyl	**90.2**	57.1-135		%REC	1	9/4/2019 7:49:27 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Acetone	**ND**	5.0		µg/L	1	9/5/2019 11:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/5/2019 11:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Benzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/5/2019 11:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Toluene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-02-SW-A-A-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/5/2019 11:26:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	9/5/2019 11:26:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/5/2019 11:26:00 PM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	9/5/2019 11:26:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/5/2019)						
TSS (Residue, Non-Filterable)	**9.8**	1.1		mg/L	1	9/5/2019

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT: AECOM Environment
Work Order: **190904087**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 090419-03-SW-D-B-1
Collection Date: 9/4/2019
Lab Sample ID: 190904087-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1242	**0.036**	0.065	J	µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 8:02:45 PM
PCB, Total	**0.036**	0.065	J	µg/L	1	9/4/2019 8:02:45 PM
Surr: Decachlorobiphenyl	**74.6**	57.1-135		%REC	1	9/4/2019 8:02:45 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Acetone	**ND**	5.0		µg/L	1	9/5/2019 11:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/5/2019 11:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Benzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/5/2019 11:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Toluene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-03-SW-D-B-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/5/2019 11:47:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	9/5/2019 11:47:00 PM
Surr: 4-Bromofluorobenzene	**113**	76.5-125		%REC	1	9/5/2019 11:47:00 PM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	9/5/2019 11:47:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.7**	1.0		mg/L	1	9/5/2019

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-04-SW-B-A-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
PCB, Total	**ND**	0.065		µg/L	1	9/4/2019 8:16:03 PM
Surr: Decachlorobiphenyl	**71.6**	57.1-135		%REC	1	9/4/2019 8:16:03 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 12:09:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 12:09:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 12:09:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 12:09:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-04-SW-B-A-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 12:09:00 AM
Surr: 1,2-Dichloroethane-d4	**99.6**	80.9-122		%REC	1	9/6/2019 12:09:00 AM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	9/6/2019 12:09:00 AM
Surr: Toluene-d8	**93.3**	80.4-121		%REC	1	9/6/2019 12:09:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.2**	1.0		mg/L	1	9/5/2019

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090419-05-SW-B-A-1
Work Order:	**190904087**	**Collection Date:**	9/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190904087-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/5/2019)						
TSS (Residue, Non-Filterable)	**10.2**	1.1		mg/L	1	9/5/2019

Adirondack Environmental Services, Inc

Date: *06-Sep-19*

CLIENT: AECOM Environment
Work Order: **190904087**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 090419-TB01
Collection Date: 9/4/2019
Lab Sample ID: 190904087-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	9/6/2019 12:30:00 AM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 12:30:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 12:30:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 12:30:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 12:30:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 12:30:00 AM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	9/6/2019 12:30:00 AM
Surr: 4-Bromofluorobenzene	**123**	76.5-125		%REC	1	9/6/2019 12:30:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	9/6/2019 12:30:00 AM

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75398

mblk

SeqNo: **2693180** PrepDate:**9/4/2019** TestNo: **E608** RunNo: **174994**
Samp ID: **mb-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0924	0	0.1	0	92.4	48.8	140	0	0		

lcs

SeqNo: **2693181** PrepDate:**9/4/2019** TestNo: **E608** RunNo: **174994**
Samp ID: **lcs-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5766	0.0650	0.5	0	115	59	141	0	0		
Surr: Decachlorobiphenyl	0.1046	0	0.1	0	105	48.8	140	0	0		

mblk

SeqNo: **2693212** PrepDate:**9/4/2019** TestNo: **SW8082A** RunNo: **174994**
Samp ID: **mb-75398** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.017	0.0650									J
Surr: Decachlorobiphenyl	0.0924	0.0100	0.1	0	92.4	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75398

lcs				
SeqNo: **2693213**	**PrepDate:9/4/2019**	TestNo: **SW8082A**	RunNo: **174994**
Samp ID: **lcs-75398**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **9/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5766	0.0650	0.5	0	115	60	140	0	0		
PCB, Total	0.5766	0.0650	0.5	0	115	60	140	0	0		
Surr: Decachlorobiphenyl	0.1046	0.0100	0.1	0	105	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75403

LCS

SeqNo: **2693780** PrepDate:9/5/2019 8: TestNo: **SM2540D** RunNo: **175039**
Samp ID: **LCS-75403** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	448	40.0	497	0	90.1	86.5	114	0	0		

LCS

SeqNo: **2694342** PrepDate:9/5/2019 8: TestNo: **SM2540D** RunNo: **175071**
Samp ID: **LCS-75403** PrepRef:(Gen Prep) Units: **mg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	436	40.0	497	0	87.7	86.5	114	0	0		

DUP

SeqNo: **2694349** PrepDate:9/5/2019 8: TestNo: **SM2540D** RunNo: **175071**
Samp ID: **190830059-003** PrepRef: Units: **mg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	109	10.0	0	0	0	0	0	103	5.66	10	

DUP

SeqNo: **2694353** PrepDate:9/5/2019 8: TestNo: **SM2540D** RunNo: **175071**
Samp ID: **190830062-001** PrepRef: Units: **mg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	735	50.0	0	0	0	0	0	720	2.06	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175056

ms

SeqNo: **2694151** TestNo: **E601** RunNo: **175056**
Samp ID: **190905035-001b** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.26	1.0	10	0	82.6	70.5	123	0	0		
1,1,2,2-Tetrachloroethane	7.95	1.0	10	0	79.5	69.2	115	0	0		
1,1,2-Trichloroethane	8.63	1.0	10	0	86.3	70	120	0	0		
1,1-Dichloroethane	9.17	1.0	10	0	91.7	71.3	134	0	0		
1,1-Dichloroethene	8.57	1.0	10	0	85.7	70.2	134	0	0		
1,2-Dichlorobenzene	8.61	1.0	10	0	86.1	67.1	125	0	0		
1,2-Dichloroethane	8.11	1.0	10	0	81.1	70.5	117	0	0		
1,3-Dichlorobenzene	8	1.0	10	0	80	69.8	116	0	0		
1,4-Dichlorobenzene	8.44	1.0	10	0	84.4	69.5	117	0	0		
Benzene	8.67	0.50	10	0	86.7	74.2	130	0	0		
Carbon tetrachloride	8.15	1.0	10	0	81.5	70.4	130	0	0		
Chlorobenzene	8.82	1.0	10	0	88.2	71.2	130	0	0		
Chloroethane	7.83	1.0	10	0	78.3	67.4	134	0	0		
Chloroform	8.57	1.0	10	0	85.7	70.3	125	0	0		
Dibromochloromethane	7.29	1.0	10	0	72.9	72.8	117	0	0		
Ethylbenzene	9.35	1.0	10	0	93.5	72.3	127	0	0		
Methylene chloride	8.99	1.0	10	0	89.9	70.4	129	0	0		
Tetrachloroethene	7.8	1.0	10	0	78	72.7	132	0	0		
Toluene	8.44	1.0	10	0.1	83.4	71.7	130	0	0		
trans-1,2-Dichloroethene	9.59	1.0	10	0	95.9	71.2	134	0	0		
Trichloroethene	8.44	1.0	10	0	84.4	71.7	129	0	0		
Vinyl chloride	9.61	1.0	10	0	96.1	68.4	135	0	0		
Surr: 4-Bromofluorobenzene	55.66	1.0	50	0	111	76.1	125	0	0		

msd

SeqNo: **2694152** TestNo: **E601** RunNo: **175056**
Samp ID: **190905035-001b** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.38	1.0	10	0	83.8	70.5	123	8.26	1.44	20	
1,1,2,2-Tetrachloroethane	7.65	1.0	10	0	76.5	69.2	115	7.95	3.85	20	
1,1,2-Trichloroethane	8.5	1.0	10	0	85	70	120	8.63	1.52	20	
1,1-Dichloroethane	8.91	1.0	10	0	89.1	71.3	134	9.17	2.88	20	
1,1-Dichloroethene	8.34	1.0	10	0	83.4	70.2	134	8.57	2.72	20	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175056

msd

SeqNo: **2694152** TestNo: **E601** RunNo: **175056**
Samp ID: **190905035-001b** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	8.27	1.0	10	0	82.7	67.1	125	8.61	4.03	20	
1,2-Dichloroethane	7.9	1.0	10	0	79	70.5	117	8.11	2.62	20	
1,3-Dichlorobenzene	8.21	1.0	10	0	82.1	69.8	116	8	2.59	20	
1,4-Dichlorobenzene	8.69	1.0	10	0	86.9	69.5	117	8.44	2.92	20	
Benzene	8.54	0.50	10	0	85.4	74.2	130	8.67	1.51	20	
Carbon tetrachloride	8.15	1.0	10	0	81.5	70.4	130	8.15	0	20	
Chlorobenzene	8.3	1.0	10	0	83	71.2	130	8.82	6.07	20	
Chloroethane	7.95	1.0	10	0	79.5	67.4	134	7.83	1.52	26.5	
Chloroform	8.63	1.0	10	0	86.3	70.3	125	8.57	0.698	20	
Dibromochloromethane	7.89	1.0	10	0	78.9	72.8	117	7.29	7.91	20	
Ethylbenzene	8.72	1.0	10	0	87.2	72.3	127	9.35	6.97	20	
Methylene chloride	8.85	1.0	10	0	88.5	70.4	129	8.99	1.57	20	
Tetrachloroethene	8.16	1.0	10	0	81.6	72.7	132	7.8	4.51	20	
Toluene	8.27	1.0	10	0.1	81.7	71.7	130	8.44	2.03	20	
trans-1,2-Dichloroethene	9.25	1.0	10	0	92.5	71.2	134	9.59	3.61	20	
Trichloroethene	8.35	1.0	10	0	83.5	71.7	129	8.44	1.07	20	
Vinyl chloride	9.44	1.0	10	0	94.4	68.4	135	9.61	1.78	22	
Surr: 4-Bromofluorobenzene	52.11	1.0	50	0	104	76.1	125	0	0	20	

mblk

SeqNo: **2694144** TestNo: **SW8260C** RunNo: **175056**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.29	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.2	1.0									J
1,3-Dichloropropane	ND	1.0									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175056

mblk

SeqNo: **2694144** TestNo: **SW8260C** RunNo: **175056**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	0.31	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.6	5.0	50	0	99.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	56.64	5.0	50	0	113	76.5	125	0	0		
Surr: Toluene-d8	50.25	5.0	50	0	101	80.4	121	0	0		

lcs

SeqNo: **2694143** TestNo: **SW8260C** RunNo: **175056**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.54	1.0	10	0	85.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.61	1.0	10	0	106	72.3	118	0	0		
1,1,2-Trichloroethane	9.11	1.0	10	0	91.1	73.1	123	0	0		
1,1-Dichloroethane	9.48	1.0	10	0	94.8	73.2	127	0	0		
1,1-Dichloroethene	8.56	1.0	10	0	85.6	70.3	128	0	0		
1,2,3-Trichloropropane	5.43	1.0	5	0	109	68.4	115	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190904087
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175056

lcs

SeqNo: **2694143** TestNo: **SW8260C** RunNo: **175056**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	9.02	1.0	10	0	90.2	71	124	0	0		
1,2-Dichloroethane	8.71	1.0	10	0	87.1	72.5	127	0	0		
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	72.2	121	0	0		
1,3-Dichloropropane	4.8	1.0	5	0	96	76	122	0	0		
1,4-Dichlorobenzene	9.59	1.0	10	0	95.9	71.7	127	0	0		
2-Butanone	7.79	5.0	10	0	77.9	65.1	132	0	0		
4-Methyl-2-pentanone	9.18	5.0	10	0	91.8	68.7	118	0	0		
Acetone	8.58	5.0	10	0	85.8	69.2	133	0	0		
Benzene	9.17	1.0	10	0	91.7	71.2	122	0	0		
Carbon disulfide	4.26	1.0	5	0	85.2	67.8	134	0	0		
Carbon tetrachloride	8.09	1.0	10	0	80.9	74.5	122	0	0		
Chlorobenzene	10.28	1.0	10	0	103	72.7	124	0	0		
Chloroethane	9.23	1.0	10	0	92.3	72.3	136	0	0		
Chloroform	12.07	1.0	10	0	121	71.6	133	0	0		
Dibromochloromethane	8	1.0	10	0	80	70.6	124	0	0		
Ethylbenzene	10.74	1.0	10	0	107	70.9	126	0	0		
Methylene chloride	9.7	1.0	10	0	97	66.3	130	0	0		
Tetrachloroethene	7.48	1.0	10	0	74.8	72.4	119	0	0		
Toluene	8.88	1.0	10	0	88.8	71.8	116	0	0		
trans-1,2-Dichloroethene	9.48	1.0	10	0	94.8	70.3	120	0	0		
Trichloroethene	8.65	1.0	10	0	86.5	73	127	0	0		
Vinyl chloride	9.63	1.0	10	0	96.3	65.2	134	0	0		
Xylenes, Total	31.84	1.0	30	0	106	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.5	5.0	50	0	97	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	61.66	5.0	50	0	123	76.5	125	0	0		
Surr: Toluene-d8	48.33	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 190904087

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	090419-01-SW-U-A-1	9/4/19	1025	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
002	090419-02-SW-A-A-1	9/4/19	1050	A	W		✓	1	metals (filtered)
				P					
				A				2	PCBs
				P					
				A				2	VOCs
				P					
				A				1	metals/hardness
				P					
				A				3	mercury
				P					
				A				1	TSS
				P					
003	090419-03-SW-D-B-1	9/4/19	1120	A	W		✓	1	metals (filtered)
				P					
				A				2	PCBs
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:
cancel metals, mercury and hardness as per Kristen Williams 9-4-19

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/4/19 4:10pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	K. Miller	9/4/19 4:55pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☑ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Se

190904087

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190904057

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
003	090419-03-SW-D-B-1	9/4/19	1120	A	W		✓	2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
004	090419-04-SW-B-A-1	9/4/19	1000	A	W		✓	1	metals (filtered)
				P				2	PCBs
				A				2	VOCs
				P				1	metals/hardness
				A				3	mercury
				P				1	TSS
005	090419-05-SW-B-A-1	9/4/19	1135	A	W		✓	1	TSS
006	090419-TB01 Lot#45.2 10AM9/4			A	TB			1	trip blank
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:
Cancel metals, mercury and hardness as per K Williams. 9-4-19

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		9/4/19 4:01pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	K. Miller	9/4/19 4:55pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 4°C	Y ☑ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190904087

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/6/2019

9/4/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**HARDNESS**	**CP METALS**	**P_SCAN_W_DI**	**TSS_W**
190904087-001	090419-01-SW-U-A-1	Water	9/4/2019	9/6/2019	E	C	B	D	D	A	F
190904087-002	090419-02-SW-A-A-1	Water	9/4/2019	9/6/2019	E	C	B	D	D	A	F
190904087-003	090419-03-SW-D-B-1	Water	9/4/2019	9/6/2019	E	C	B	D	D	A	F
190904087-004	090419-04-SW-B-A-1	Water	9/4/2019	9/6/2019	E	C	B	D	D	A	F
190904087-005	090419-05-SW-B-A-1	Water	9/4/2019	9/6/2019							A
190904087-006	090419-TB01	Trip Blank	9/4/2019	9/6/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 09, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190905082
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 9/5/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*09-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190905082		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-01-SW-U-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
PCB, Total	**ND**	0.065		µg/L	1	9/6/2019 1:07:03 PM
Surr: Decachlorobiphenyl	**84.8**	57.1-135		%REC	1	9/6/2019 1:07:03 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 2:11:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 2:11:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 2:11:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 2:11:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-01-SW-U-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 2:11:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	9/6/2019 2:11:00 PM
Surr: 4-Bromofluorobenzene	**130**	76.5-125	S	%REC	1	9/6/2019 2:11:00 PM
Surr: Toluene-d8	**97.2**	80.4-121		%REC	1	9/6/2019 2:11:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.0**	1.0		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-02-SW-A-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
PCB, Total	**ND**	0.065		µg/L	1	9/6/2019 1:20:23 PM
Surr: Decachlorobiphenyl	**80.4**	57.1-135		%REC	1	9/6/2019 1:20:23 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 2:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 2:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 2:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-02-SW-A-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 2:32:00 PM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	9/6/2019 2:32:00 PM
Surr: 4-Bromofluorobenzene	**126**	76.5-125	S	%REC	1	9/6/2019 2:32:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	9/6/2019 2:32:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/6/2019)						
TSS (Residue, Non-Filterable)	**9.8**	1.0		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-03-SW-D-B-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
PCB, Total	**ND**	0.065		µg/L	1	9/6/2019 1:33:50 PM
Surr: Decachlorobiphenyl	**71.6**	57.1-135		%REC	1	9/6/2019 1:33:50 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 2:54:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 2:54:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 2:54:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-03-SW-D-B-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 2:54:00 PM
Surr: 1,2-Dichloroethane-d4	**99.6**	80.9-122		%REC	1	9/6/2019 2:54:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/6/2019 2:54:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	9/6/2019 2:54:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/6/2019)						
TSS (Residue, Non-Filterable)	**11.7**	1.1		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-04-SW-B-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1242	**0.041**	0.065	J	µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/6/2019 1:47:09 PM
PCB, Total	**0.041**	0.065	J	µg/L	1	9/6/2019 1:47:09 PM
Surr: Decachlorobiphenyl	**87.8**	57.1-135		%REC	1	9/6/2019 1:47:09 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 3:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 3:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 3:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-04-SW-B-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 3:15:00 PM
Surr: 1,2-Dichloroethane-d4	**99.3**	80.9-122		%REC	1	9/6/2019 3:15:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	9/6/2019 3:15:00 PM
Surr: Toluene-d8	**95.5**	80.4-121		%REC	1	9/6/2019 3:15:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.6**	1.0		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-05-SW-B-A-1
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/6/2019)						
TSS (Residue, Non-Filterable)	**7.2**	1.0		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-01-SW-U-A-2
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1242	**0.033**	0.065	J	µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/6/2019 2:00:28 PM
PCB, Total	**0.033**	0.065	J	µg/L	1	9/6/2019 2:00:28 PM
Surr: Decachlorobiphenyl	**69.4**	57.1-135		%REC	1	9/6/2019 2:00:28 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 3:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 3:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 3:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 3:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-01-SW-U-A-2
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 3:37:00 PM
Surr: 1,2-Dichloroethane-d4	**96.8**	80.9-122		%REC	1	9/6/2019 3:37:00 PM
Surr: 4-Bromofluorobenzene	**130**	76.5-125	S	%REC	1	9/6/2019 3:37:00 PM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	9/6/2019 3:37:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.3**	1.1		mg/L	1	9/6/2019

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-TB01
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	9/6/2019 3:58:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 3:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 3:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 3:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 3:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 3:58:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/6/2019 3:58:00 PM
Surr: 4-Bromofluorobenzene	**117**	76.5-125		%REC	1	9/6/2019 3:58:00 PM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	9/6/2019 3:58:00 PM

Adirondack Environmental Services, Inc

Date: *09-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090519-TB02
Work Order:	**190905082**	**Collection Date:**	9/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190905082-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Methylene chloride	**2.0**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Acetone	**ND**	5.0		µg/L	1	9/6/2019 4:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/6/2019 4:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/6/2019 4:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Benzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/6/2019 4:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Toluene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/6/2019 4:20:00 PM
Surr: 1,2-Dichloroethane-d4	**97.9**	80.9-122		%REC	1	9/6/2019 4:20:00 PM
Surr: 4-Bromofluorobenzene	**124**	76.5-125		%REC	1	9/6/2019 4:20:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/6/2019 4:20:00 PM

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75433

mblk

SeqNo: **2694770** **PrepDate:9/6/2019** TestNo: **SW8082A** RunNo: **175088**
Samp ID: **mb-75433** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0676	0	0.1	0	67.6	57.1	135	0	0		

lcs

SeqNo: **2694771** **PrepDate:9/6/2019** TestNo: **SW8082A** RunNo: **175088**
Samp ID: **lcs-75433** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4374	0.0650	0.5	0	87.5	60	140	0	0		
PCB, Total	0.4374	0.0650	0.5	0	87.5	60	140	0	0		
Surr: Decachlorobiphenyl	0.0618	0	0.1	0	61.8	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75436

LCS

SeqNo: **2695085** **PrepDate:9/6/2019 8:** TestNo: **SM2540D** RunNo: **175108**
Samp ID: **LCS-75436** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	560	40.0	497	0	113	86.5	114	0	0		

LCS

SeqNo: **2695401** **PrepDate:9/6/2019 8:** TestNo: **SM2540D** RunNo: **175122**
Samp ID: **LCS-75436** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	560	40.0	497	0	113	86.5	114	0	0		

DUP

SeqNo: **2695408** **PrepDate:9/6/2019 8:** TestNo: **SM2540D** RunNo: **175122**
Samp ID: **190903037-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	228	20.0	0	0	0	0	0	220	3.57	10	

DUP

SeqNo: **2695415** **PrepDate:9/6/2019 8:** TestNo: **SM2540D** RunNo: **175122**
Samp ID: **190903064-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	130	20.0	0	0	0	0	0	138	5.97	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175113

mblk

SeqNo: **2695236** TestNo: **SW8260C** RunNo: **175113**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.12	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.2	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.67	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	59.37	5.0	50	0	119	76.5	125	0	0		
Surr: Toluene-d8	48.94	5.0	50	0	97.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175113

lcs

SeqNo: **2695234** TestNo: **SW8260C** RunNo: **175113**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.83	1.0	10	0	98.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.33	1.0	10	0	103	72.3	118	0	0		
1,1,2-Trichloroethane	9.39	1.0	10	0	93.9	73.1	123	0	0		
1,1-Dichloroethane	10.32	1.0	10	0	103	73.2	127	0	0		
1,1-Dichloroethene	10.47	1.0	10	0	105	70.3	128	0	0		
1,2,3-Trichloropropane	5.13	1.0	5	0	103	68.4	115	0	0		
1,2-Dichlorobenzene	9.13	1.0	10	0	91.3	71	124	0	0		
1,2-Dichloroethane	9.07	1.0	10	0	90.7	72.5	127	0	0		
1,3-Dichlorobenzene	9.12	1.0	10	0	91.2	72.2	121	0	0		
1,3-Dichloropropane	5.17	1.0	5	0	103	76	122	0	0		
1,4-Dichlorobenzene	9.32	1.0	10	0	93.2	71.7	127	0	0		
2-Butanone	10.74	5.0	10	0	107	65.1	132	0	0		
4-Methyl-2-pentanone	9.37	5.0	10	0	93.7	68.7	118	0	0		
Acetone	11.43	5.0	10	0	114	69.2	133	0	0		
Benzene	10.02	1.0	10	0	100	71.2	122	0	0		
Carbon disulfide	5.13	1.0	5	0	103	67.8	134	0	0		
Carbon tetrachloride	9.81	1.0	10	0	98.1	74.5	122	0	0		
Chlorobenzene	10.39	1.0	10	0	104	72.7	124	0	0		
Chloroethane	8.58	1.0	10	0	85.8	72.3	136	0	0		
Chloroform	9.74	1.0	10	0	97.4	71.6	133	0	0		
Dibromochloromethane	8.29	1.0	10	0	82.9	70.6	124	0	0		
Ethylbenzene	10.94	1.0	10	0	109	70.9	126	0	0		
Methylene chloride	10.76	1.0	10	0	108	66.3	130	0	0		
Tetrachloroethene	7.99	1.0	10	0	79.9	72.4	119	0	0		
Toluene	9.43	1.0	10	0	94.3	71.8	116	0	0		
trans-1,2-Dichloroethene	10.72	1.0	10	0	107	70.3	120	0	0		
Trichloroethene	9.69	1.0	10	0	96.9	73	127	0	0		
Vinyl chloride	9.79	1.0	10	0	97.9	65.2	134	0	0		
Xylenes, Total	32.44	1.0	30	0	108	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.61	5.0	50	0	97.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	60.36	5.0	50	0	121	76.5	125	0	0		
Surr: Toluene-d8	50.67	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175113

ms	SeqNo: **2695246**	TestNo: **SW8260C**	RunNo: **175113**
	Samp ID: **190905082-001b (090519-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.66	1.0	10	0	96.6	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.32	1.0	10	0	93.2	70.1	123	0	0		
1,1,2-Trichloroethane	8.73	1.0	10	0	87.3	72.1	119	0	0		
1,1-Dichloroethane	9.81	1.0	10	0	98.1	70.4	126	0	0		
1,1-Dichloroethene	9.68	1.0	10	0	96.8	70.2	125	0	0		
1,2,3-Trichloropropane	4.63	1.0	5	0	92.6	53.7	101	0	0		
1,2-Dichlorobenzene	7.76	1.0	10	0	77.6	70.2	123	0	0		
1,2-Dichloroethane	8.73	1.0	10	0.11	86.2	73.5	126	0	0		
1,3-Dichlorobenzene	7.72	1.0	10	0	77.2	70.4	124	0	0		
1,3-Dichloropropane	4.67	1.0	5	0	93.4	64	125	0	0		
1,4-Dichlorobenzene	8.25	1.0	10	0	82.5	70.8	127	0	0		
2-Butanone	6.49	5.0	10	0	64.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.77	5.0	10	0	87.7	52.8	133	0	0		
Acetone	11.67	5.0	10	0	117	56.3	135	0	0		
Benzene	9.67	1.0	10	0	96.7	70.2	127	0	0		
Carbon disulfide	4.78	1.0	5	0	95.6	62.2	130	0	0		
Carbon tetrachloride	9.19	1.0	10	0	91.9	56.4	137	0	0		
Chlorobenzene	9.53	1.0	10	0	95.3	72.7	128	0	0		
Chloroethane	9.25	1.0	10	0	92.5	71.3	135	0	0		
Chloroform	9.22	1.0	10	0	92.2	70.2	125	0	0		
Dibromochloromethane	8.17	1.0	10	0	81.7	69.5	123	0	0		
Ethylbenzene	9.91	1.0	10	0	99.1	71.9	129	0	0		
Methylene chloride	10.1	1.0	10	0	101	65.3	123	0	0		
Tetrachloroethene	7.55	1.0	10	0	75.5	74.5	121	0	0		
Toluene	7.88	1.0	10	0	78.8	73	122	0	0		
trans-1,2-Dichloroethene	10.68	1.0	10	0	107	69.1	133	0	0		
Trichloroethene	9.04	1.0	10	0	90.4	71.1	126	0	0		
Vinyl chloride	9.3	1.0	10	0	93	65	137	0	0		
Xylenes, Total	29.64	1.0	30	0	98.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.46	5.0	50	0	103	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	60.95	5.0	50	0	122	76.5	125	0	0		
Surr: Toluene-d8	47.12	5.0	50	0	94.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190905082
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175113

msd	SeqNo: **2695247**	TestNo: **SW8260C**	RunNo: **175113**
	Samp ID: **190905082-001b (090519-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.8	1.0	10	0	88	71.6	126	9.66	9.32	20.4	
1,1,2,2-Tetrachloroethane	9.85	1.0	10	0	98.5	70.1	123	9.32	5.53	18.6	
1,1,2-Trichloroethane	8.47	1.0	10	0	84.7	72.1	119	8.73	3.02	20	
1,1-Dichloroethane	9.46	1.0	10	0	94.6	70.4	126	9.81	3.63	19.2	
1,1-Dichloroethene	8.42	1.0	10	0	84.2	70.2	125	9.68	13.9	16.1	
1,2,3-Trichloropropane	5.19	1.0	5	0	104	53.7	101	4.63	11.4	20	S
1,2-Dichlorobenzene	8.4	1.0	10	0	84	70.2	123	7.76	7.92	17.9	
1,2-Dichloroethane	8.27	1.0	10	0.11	81.6	73.5	126	8.73	5.41	15.6	
1,3-Dichlorobenzene	7.99	1.0	10	0	79.9	70.4	124	7.72	3.44	14.3	
1,3-Dichloropropane	4.48	1.0	5	0	89.6	64	125	4.67	4.15	0	
1,4-Dichlorobenzene	7.99	1.0	10	0	79.9	70.8	127	8.25	3.20	14.4	
2-Butanone	9.24	5.0	10	0	92.4	60.5	123	6.49	35.0	15	Z
4-Methyl-2-pentanone	8.62	5.0	10	0	86.2	52.8	133	8.77	1.73	11.9	
Acetone	11.45	5.0	10	0	114	56.3	135	11.67	1.90	10.6	
Benzene	8.83	1.0	10	0	88.3	70.2	127	9.67	9.08	18.4	
Carbon disulfide	4.53	1.0	5	0	90.6	62.2	130	4.78	5.37	13.1	
Carbon tetrachloride	8.59	1.0	10	0	85.9	56.4	137	9.19	6.75	20.3	
Chlorobenzene	9.06	1.0	10	0	90.6	72.7	128	9.53	5.06	19.6	
Chloroethane	6.84	1.0	10	0	68.4	71.3	135	9.25	30.0	27.8	SZ
Chloroform	8.68	1.0	10	0	86.8	70.2	125	9.22	6.03	20.3	
Dibromochloromethane	7.36	1.0	10	0	73.6	69.5	123	8.17	10.4	18.8	
Ethylbenzene	9.06	1.0	10	0	90.6	71.9	129	9.91	8.96	16.3	
Methylene chloride	9.49	1.0	10	0	94.9	65.3	123	10.1	6.23	21.4	
Tetrachloroethene	7.18	1.0	10	0	71.8	74.5	121	7.55	5.02	20.9	S
Toluene	8.25	1.0	10	0	82.5	73	122	7.88	4.59	19.4	
trans-1,2-Dichloroethene	10.08	1.0	10	0	101	69.1	133	10.68	5.78	16.1	
Trichloroethene	7.72	1.0	10	0	77.2	71.1	126	9.04	15.8	16.6	
Vinyl chloride	8.58	1.0	10	0	85.8	65	137	9.3	8.05	20.5	
Xylenes, Total	27.49	1.0	30	0	91.6	72	130	29.64	7.53	16.1	
Surr: 1,2-Dichloroethane-d4	51.49	5.0	50	0	103	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	61.67	5.0	50	0	123	76.5	125	0	0	0	
Surr: Toluene-d8	50.83	5.0	50	0	102	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190905082

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Geha	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	090519-01-SW-U-A-1	9/5/19	0800	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
002	090519-02-SW-A-A-1	9/5/19	0825	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
003	090519-03-SW-D-B-1	9/5/19	0850	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
004	090519-04-SW-B-A-1	9/5/19	0740	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

LLHg cancelled. MDH 9-5-19

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/5/19 355
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/5/19 4:39 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 9°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy



Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190505082

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
004	090519-04-SW-B-A-1	9/5/19	0740	A	W		✓	3	mercury
	↓	↓	↓	P	↓		↓	1	TSS
005	090519-05-SW-B-A-1	9/5/19	0900	A/P	W		✓	1	TSS
006	090519-01-SW-U-A-2	9/5/19	0815	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	3	mercury
	↓	↓	↓	A/P	↓		↓	1	TSS
007	090519-TB01			A/P	TB				trip blank Lot# WA-F4961
008	090519-TB02			A/P	TB				trip blank Lot# WA-F4952
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					

JM 9/5/19

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:
UHS cancelled. MDH 9-5-19

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/5/19 355
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/5/19 4:59 pm

Temperature: Ambient or (Chilled)
Notes:_____

AES Bottles: Y ☒ N ☐

Properly Preserved: (Y) N
Notes:_____

Received Within Holding Times: (Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190905082

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190905082

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/9/2019

9/5/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E1631W**	**E8082W**	**E8260W**	**TSS_W**			
190905082-001	090519-01-SW-U-A-1	Water	9/5/2019	9/9/2019	D	C	B	A			
190905082-002	090519-02-SW-A-A-1	Water	9/5/2019	9/9/2019	D	C	B	A			
190905082-003	090519-03-SW-D-B-1	Water	9/5/2019	9/9/2019	D	C	B	A			
190905082-004	090519-04-SW-B-A-1	Water	9/5/2019	9/9/2019	D	C	B	A			
190905082-005	090519-05-SW-B-A-1	Water	9/5/2019	9/9/2019				A			
190905082-006	090519-01-SW-U-A-2	Water	9/5/2019	9/9/2019	D	C	B	A			
190905082-007	090519-TB01	Trip Blank	9/5/2019	9/9/2019			A				
190905082-008	090519-TB02	Trip Blank	9/5/2019	9/9/2019			A				

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by MDH 9-5-19

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 11, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190909044
PO#: 229608
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/9/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *11-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190909044	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT: AECOM Environment
Work Order: **190909044**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 229608
Project# 60323713

Client Sample ID: 090919-01-SW-U-B-1
Collection Date: 9/9/2019
Lab Sample ID: 190909044-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
PCB, Total	**ND**	0.065		µg/L	1	9/10/2019 2:56:39 PM
Surr: Decachlorobiphenyl	**85.0**	57.1-135		%REC	1	9/10/2019 2:56:39 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Acetone	**ND**	5.0		µg/L	1	9/10/2019 7:44:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	9/10/2019 7:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/10/2019 7:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/10/2019 7:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Benzene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/10/2019 7:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Toluene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
1,3-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/10/2019 7:44:00 PM

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-01-SW-U-B-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-001
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/10/2019 7:44:00 PM
1,4-Dichlorobenzene	**0.6**	1.0	J	µg/L	1	9/10/2019 7:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/10/2019 7:44:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/10/2019 7:44:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	9/10/2019 7:44:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/10/2019 7:44:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 (Prep: Gen Prep - 9/10/2019)						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.4**	1.1		mg/L	1	9/10/2019

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT: AECOM Environment
Work Order: **190909044**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 229608
Project# 60323713

Client Sample ID: 090919-02-SW-A-B-1
Collection Date: 9/9/2019
Lab Sample ID: 190909044-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
PCB, Total	**ND**	0.065		µg/L	1	9/10/2019 3:09:59 PM
Surr: Decachlorobiphenyl	**79.4**	57.1-135		%REC	1	9/10/2019 3:09:59 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Acetone	**ND**	5.0		µg/L	1	9/10/2019 8:06:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	9/10/2019 8:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/10/2019 8:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/10/2019 8:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Benzene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/10/2019 8:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Toluene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/10/2019 8:06:00 PM

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-02-SW-A-B-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-002
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/10/2019 8:06:00 PM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/10/2019 8:06:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/10/2019 8:06:00 PM
Surr: 1,2-Dichloroethane-d4	**99.2**	80.9-122		%REC	1	9/10/2019 8:06:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/10/2019 8:06:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/10/2019 8:06:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.7**	1.1		mg/L	1	9/10/2019

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-03-SW-D-B-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-003
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1242	**0.079**	0.065	Z	µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/10/2019 3:23:19 PM
PCB, Total	**0.079**	0.065		µg/L	1	9/10/2019 3:23:19 PM
Surr: Decachlorobiphenyl	**78.0**	57.1-135		%REC	1	9/10/2019 3:23:19 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Acetone	**ND**	5.0		µg/L	1	9/10/2019 8:27:00 PM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/10/2019 8:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Benzene	**0.4**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/10/2019 8:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Toluene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Chlorobenzene	**5.6**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-03-SW-D-B-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-003
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM
1,4-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	9/10/2019 8:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/10/2019 8:27:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	9/10/2019 8:27:00 PM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	9/10/2019 8:27:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/10/2019 8:27:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.4**	1.1		mg/L	1	9/10/2019

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT: AECOM Environment
Work Order: **190909044**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 229608
Project# 60323713

Client Sample ID: 090919-04-SW-B-A-1
Collection Date: 9/9/2019
Lab Sample ID: 190909044-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
PCB, Total	**ND**	0.065		µg/L	1	9/10/2019 3:36:37 PM
Surr: Decachlorobiphenyl	**91.0**	57.1-135		%REC	1	9/10/2019 3:36:37 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Acetone	**ND**	5.0		µg/L	1	9/10/2019 8:49:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/10/2019 8:49:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/10/2019 8:49:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Benzene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/10/2019 8:49:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Toluene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/10/2019 8:49:00 PM

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-04-SW-B-A-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-004
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/10/2019 8:49:00 PM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/10/2019 8:49:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/10/2019 8:49:00 PM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	9/10/2019 8:49:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	9/10/2019 8:49:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/10/2019 8:49:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	9/10/2019

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-05-SW-B-C-1
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-005
PO#:	229608	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/10/2019)						
TSS (Residue, Non-Filterable)	**4.6**	1.1		mg/L	1	9/10/2019

Adirondack Environmental Services, Inc

Date: *11-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	090919-TB01
Work Order:	**190909044**	**Collection Date:**	9/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190909044-006
PO#:	229608	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Methylene chloride	**1.7**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Acetone	**5.1**	5.0		µg/L	1	9/10/2019 9:10:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/10/2019 9:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/10/2019 9:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/10/2019 9:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Benzene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/10/2019 9:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Toluene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/10/2019 9:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/10/2019 9:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/10/2019 9:10:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	9/10/2019 9:10:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/10/2019 9:10:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/10/2019 9:10:00 PM

CLIENT: AECOM Environment
Work Order: 190909044
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75475

mblk

SeqNo: **2696664** PrepDate:**9/9/2019** TestNo: **SW8082A** RunNo: **175174**
Samp ID: **mb-75475** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0644	0.0100	0.1	0	64.4	57.1	135	0	0		

lcs

SeqNo: **2696665** PrepDate:**9/9/2019** TestNo: **SW8082A** RunNo: **175174**
Samp ID: **lcs-75475** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4848	0.0650	0.5	0	97	60	140	0	0		
PCB, Total	0.4848	0.0650	0.5	0	97	60	140	0	0		
Surr: Decachlorobiphenyl	0.0734	0.0100	0.1	0	73.4	57.1	135	0	0		

dup

SeqNo: **2696910** PrepDate:**9/9/2019** TestNo: **SW8082A** RunNo: **175174**
Samp ID: **190909044-003** PrepRef: Units: **µg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1242	0.046	0.0720	0	0	0	0	0	0.0786	0	25	
Aroclor 1248	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0720	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0720	0	0	0	0	0	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190909044
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75475

dup	SeqNo: **2696910**	**PrepDate:9/9/2019**	TestNo: **SW8082A**	RunNo: **175174**
	Samp ID: **190909044-003**	**PrepRef:**	Units: **µg/L**	Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1268	ND	0.0720	0	0	0	0	0	0	0	25	
PCB, Total	0.046	0.0720	0	0	0	0	0	0.0786	0	25	
Surr: Decachlorobiphenyl	0.09556	0.0110	0	0	0	0	0	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190909044
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75480

LCS

SeqNo: **2697286** **PrepDate:9/10/2019** TestNo: **SM2540D** RunNo: **175200**
Samp ID: **LCS-75480** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	448	40.0	497	0	90.1	86.5	114	0	0		

DUP

SeqNo: **2697289** **PrepDate:9/10/2019** TestNo: **SM2540D** RunNo: **175200**
Samp ID: **190904055-004** **PrepRef:** Units: **mg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	372	40.0	0	0	0	0	0	396	6.25	10	

DUP

SeqNo: **2697293** **PrepDate:9/10/2019** TestNo: **SM2540D** RunNo: **175200**
Samp ID: **190904063-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	75	10.0	0	0	0	0	0	73	2.70	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190909044
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175189

mblk

SeqNo: **2697088** TestNo: **SW8260C** RunNo: **175189**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.51	1.0									J
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	0.41	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.65	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.8	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.37	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.57	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.44	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	50.31	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190909044
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175189

lcs

SeqNo: **2697087** TestNo: **SW8260C** RunNo: **175189**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	52.8	1.0	50	0	106	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	40.84	1.0	50	0	81.7	72.3	118	0	0		
1,1,2-Trichloroethane	50.33	1.0	50	0	101	73.1	123	0	0		
1,1-Dichloroethane	53.71	1.0	50	0	107	73.2	127	0	0		
1,1-Dichloroethene	53.42	1.0	50	0	107	70.3	128	0	0		
1,2,3-Trichloropropane	21.55	1.0	25	0	86.2	68.4	115	0	0		
1,2-Dichlorobenzene	46.86	1.0	50	0	93.7	71	124	0	0		
1,2-Dichloroethane	48.59	1.0	50	0	97.2	72.5	127	0	0		
1,3-Dichlorobenzene	50.83	1.0	50	0	102	72.2	121	0	0		
1,3-Dichloropropane	27.95	1.0	25	0	112	76	122	0	0		
1,4-Dichlorobenzene	47.94	1.0	50	0	95.9	71.7	127	0	0		
2-Butanone	52.5	5.0	50	0	105	65.1	132	0	0		
4-Methyl-2-pentanone	53.23	5.0	50	0	106	68.7	118	0	0		
Acetone	46.16	5.0	50	0	92.3	69.2	133	0	0		
Benzene	52.5	1.0	50	0	105	71.2	122	0	0		
Carbon disulfide	25.16	1.0	25	0	101	67.8	134	0	0		
Carbon tetrachloride	53.87	1.0	50	0	108	74.5	122	0	0		
Chlorobenzene	47.16	1.0	50	0	94.3	72.7	124	0	0		
Chloroethane	42.07	1.0	50	0	84.1	72.3	136	0	0		
Chloroform	51.91	1.0	50	0	104	71.6	133	0	0		
Dibromochloromethane	54.25	1.0	50	0	108	70.6	124	0	0		
Ethylbenzene	52.3	1.0	50	0	105	70.9	126	0	0		
Methylene chloride	54.65	1.0	50	0	109	66.3	130	0	0		
Tetrachloroethene	54.61	1.0	50	0	109	72.4	119	0	0		
Toluene	52.16	1.0	50	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	55.54	1.0	50	0	111	70.3	120	0	0		
Trichloroethene	52.4	1.0	50	0	105	73	127	0	0		
Vinyl chloride	44.1	1.0	50	0	88.2	65.2	134	0	0		
Xylenes, Total	151	1.0	150	0	101	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.73	5.0	50	0	95.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.79	5.0	50	0	95.6	76.5	125	0	0		
Surr: Toluene-d8	49.55	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190909044

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patricia Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	090919-01-SW-U-B-1	9/9/19	0850	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	090919-02-SW-A-B-1	9/9/19	0910	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	091919-03-SW-D-B-1	9/9/19	0920	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	090919-04-SW-B-A-1	9/9/19	0830	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	090919-05-SW-B-C-1	9/9/19	0945	A	W		✓	1	TSS
006	090919-TB01			A	TB			1	trip blank 4601

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/9/19 400
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9-9-19 @ 4:53pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

190909044

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(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/10/19 – 9/16/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 9/10/19 through 9/16/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one exceedances of the water quality criteria (chlorobenzene). The chlorobenzene exceedance (22 µg/l vs threshold of 5 µg/l) on 9/11/19 was at the downstream (Buoy 3) location. The sample was collected approximately 2 hours before low tide. The data received for the next day's sample set (9/12/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 5 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically in the low teens and never higher than 11.6 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
091019-01-SW-U-A-1	14:05	CHLOROBENZENE	T	ug/l	5	1	J		U	16	4.94	4.08	Incoming Tide (Flood)	11.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091019-01-SW-U-A-1	14:05	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			U	16	4.94	4.08	Incoming Tide (Flood)	11.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091019-02-SW-A-A-1	14:20	CHLOROBENZENE	T	ug/l	5	2			A	18	3.57	4.03	High Tide	7.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091019-02-SW-A-A-1	14:20	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.4			A	18	3.57	4.03	High Tide	7.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091019-03-SW-D-A-1	14:35	CHLOROBENZENE	T	ug/l	5	1.5			D	21	3.04	3.99	High Tide	6.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091019-03-SW-D-A-1	14:35	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			D	21	3.04	3.99	High Tide	6.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:15
091119-03-SW-D-A-1	08:10	AROCLOR-1242	T	ug/l	0.2	0.122			D	20	2.47	0.79	Outgoing Tide (Ebb)	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
091119-03-SW-D-A-1	08:10	BENZENE	T	ug/l	10	0.9	J		D	20	2.47	0.79	Outgoing Tide (Ebb)	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
091119-03-SW-D-A-1	08:10	CHLOROBENZENE	T	ug/l	5	22		X	D	20	2.47	0.79	Outgoing Tide (Ebb)	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
091119-03-SW-D-A-1	08:10	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	3.5			D	20	2.47	0.79	Outgoing Tide (Ebb)	9.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
091119-04-SW-B-A-1	07:25	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.3			B	15	2.25	1.18	Outgoing Tide (Ebb)	6.7	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
091319-02-SW-A-A-1	12:25	AROCLOR-1242	T	ug/l	0.2	0.065	J		A	17	3.72	1.81	Low Tide	6.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45
091319-02-SW-A-A-1	12:25	BENZENE	T	ug/l	10	0.2	J		A	17	3.72	1.81	Low Tide	6.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45
091319-02-SW-A-A-1	12:25	CHLOROBENZENE	T	ug/l	5	1.2			A	17	3.72	1.81	Low Tide	6.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45
091319-03-SW-D-A-1	12:40	AROCLOR-1242	T	ug/l	0.2	0.054	J		D	31	2.90	2.35	Low Tide	7.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45
091619-01-SW-U-C-1	08:55	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.9			U	3	2.88	1.61	Outgoing Tide (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
091619-02-SW-A-A-1	09:05	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.6			A	20	3.67	1.61	Outgoing Tide (Ebb)	6.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
091619-03-SW-D-C-1	09:30	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.6			D	3	4.12	1.22	Outgoing Tide (Ebb)	6.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
091619-04-SW-B-C-1	08:35	DICHLOROBENZENE (MIXED ISOMERS)	T	ug/l	5	0.2			B	3	4.85	2.04	Outgoing Tide (Ebb)	5.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 12, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190910063
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/10/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *12-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190910063	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT: AECOM Environment
Work Order: **190910063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091019-01-SW-U-A-1
Collection Date: 9/10/2019
Lab Sample ID: 190910063-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Acetone	**ND**	5.0		µg/L	1	9/11/2019 9:38:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/11/2019 9:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/11/2019 9:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/11/2019 9:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Benzene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/11/2019 9:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Toluene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Chlorobenzene	**1.0**	1.0	J	µg/L	1	9/11/2019 9:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/11/2019 9:38:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/11/2019 9:38:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/11/2019 9:38:00 PM
Surr: 1,2-Dichloroethane-d4	**110**	80.9-122		%REC	1	9/11/2019 9:38:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/11/2019 9:38:00 PM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	9/11/2019 9:38:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**11.5**	1.1		mg/L	1	9/11/2019

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091019-02-SW-A-A-1
Work Order:	**190910063**	**Collection Date:**	9/10/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190910063-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Acetone	**ND**	5.0		µg/L	1	9/11/2019 9:59:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/11/2019 9:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/11/2019 9:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/11/2019 9:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Benzene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/11/2019 9:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Toluene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Chlorobenzene	**2.0**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/11/2019 9:59:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/11/2019 9:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/11/2019 9:59:00 PM
Surr: 1,2-Dichloroethane-d4	**110**	80.9-122		%REC	1	9/11/2019 9:59:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/11/2019 9:59:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	9/11/2019 9:59:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.8**	1.1		mg/L	1	9/11/2019

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT: AECOM Environment
Work Order: **190910063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091019-03-SW-D-A-1
Collection Date: 9/10/2019
Lab Sample ID: 190910063-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Acetone	**ND**	5.0		µg/L	1	9/11/2019 10:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/11/2019 10:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/11/2019 10:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Benzene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/11/2019 10:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Toluene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Chlorobenzene	**1.5**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/11/2019 10:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/11/2019 10:21:00 PM
Surr: 1,2-Dichloroethane-d4	**111**	80.9-122		%REC	1	9/11/2019 10:21:00 PM
Surr: 4-Bromofluorobenzene	**94.7**	76.5-125		%REC	1	9/11/2019 10:21:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	9/11/2019 10:21:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.5**	1.0		mg/L	1	9/11/2019

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT: AECOM Environment
Work Order: **190910063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091019-04-SW-B-A-1
Collection Date: 9/10/2019
Lab Sample ID: 190910063-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	9/11/2019 10:42:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/11/2019 10:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/11/2019 10:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/11/2019 10:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Benzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/11/2019 10:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Toluene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/11/2019 10:42:00 PM
Surr: 1,2-Dichloroethane-d4	**111**	80.9-122		%REC	1	9/11/2019 10:42:00 PM
Surr: 4-Bromofluorobenzene	**99.8**	76.5-125		%REC	1	9/11/2019 10:42:00 PM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	9/11/2019 10:42:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**11.6**	1.1		mg/L	1	9/11/2019

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091019-05-SW-B-A-1
Work Order:	**190910063**	**Collection Date:**	9/10/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190910063-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/11/2019)						
TSS (Residue, Non-Filterable)	**11.5**	1.0		mg/L	1	9/11/2019

Adirondack Environmental Services, Inc

Date: *12-Sep-19*

CLIENT: AECOM Environment
Work Order: **190910063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091019-TB01
Collection Date: 9/10/2019
Lab Sample ID: 190910063-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Methylene chloride	**2.4**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Acetone	**6.9**	5.0		µg/L	1	9/11/2019 11:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/11/2019 11:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/11/2019 11:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Benzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/11/2019 11:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Toluene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/11/2019 11:04:00 PM
Surr: 1,2-Dichloroethane-d4	**110**	80.9-122		%REC	1	9/11/2019 11:04:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/11/2019 11:04:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	9/11/2019 11:04:00 PM

CLIENT: AECOM Environment
Work Order: 190910063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75505

LCS

SeqNo: **2698372** **PrepDate:9/11/2019** TestNo: **SM2540D** RunNo: **175257**
Samp ID: **LCS-75505** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	484	40.0	497	0	97.4	86.5	114	0	0		

DUP

SeqNo: **2698387** **PrepDate:9/11/2019** TestNo: **SM2540D** RunNo: **175257**
Samp ID: **190905071-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1680	200	0	0	0	0	0	1620	3.64	10	

DUP

SeqNo: **2698389** **PrepDate:9/11/2019** TestNo: **SM2540D** RunNo: **175257**
Samp ID: **190906035-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	906.7	67.0	0	0	0	0	0	960	5.71	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190910063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175247

mblk

SeqNo: **2698197** TestNo: **SW8260C** RunNo: **175247**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.1	1.0									J
1,3-Dichlorobenzene	0.18	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.29	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	55.36	5.0	50	0	111	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.82	5.0	50	0	97.6	76.5	125	0	0		
Surr: Toluene-d8	48.09	5.0	50	0	96.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190910063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175247

lcs

SeqNo: **2698195** TestNo: **SW8260C** RunNo: **175247**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.21	1.0	10	0	102	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.99	1.0	10	0	99.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.57	1.0	10	0	95.7	73.1	123	0	0		
1,1-Dichloroethane	9.59	1.0	10	0	95.9	73.2	127	0	0		
1,1-Dichloroethene	9.42	1.0	10	0	94.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.21	1.0	5	0	84.2	68.4	115	0	0		
1,2-Dichlorobenzene	9.71	1.0	10	0	97.1	71	124	0	0		
1,2-Dichloroethane	10.72	1.0	10	0	107	72.5	127	0	0		
1,3-Dichlorobenzene	9.77	1.0	10	0	97.7	72.2	121	0	0		
1,3-Dichloropropane	5.19	1.0	5	0	104	76	122	0	0		
1,4-Dichlorobenzene	9.43	1.0	10	0	94.3	71.7	127	0	0		
2-Butanone	7.8	5.0	10	0	78	65.1	132	0	0		
4-Methyl-2-pentanone	9.93	5.0	10	0	99.3	68.7	118	0	0		
Acetone	12.89	5.0	10	0	129	69.2	133	0	0		
Benzene	8.9	1.0	10	0	89	71.2	122	0	0		
Carbon disulfide	4.18	1.0	5	0	83.6	67.8	134	0	0		
Carbon tetrachloride	10.27	1.0	10	0	103	74.5	122	0	0		
Chlorobenzene	9	1.0	10	0	90	72.7	124	0	0		
Chloroethane	8.37	1.0	10	0	83.7	72.3	136	0	0		
Chloroform	9.4	1.0	10	0	94	71.6	133	0	0		
Dibromochloromethane	10.42	1.0	10	0	104	70.6	124	0	0		
Ethylbenzene	9.52	1.0	10	0	95.2	70.9	126	0	0		
Methylene chloride	9.69	1.0	10	0	96.9	66.3	130	0	0		
Tetrachloroethene	10.32	1.0	10	0	103	72.4	119	0	0		
Toluene	9.32	1.0	10	0	93.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	9.14	1.0	10	0	91.4	73	127	0	0		
Vinyl chloride	6.54	1.0	10	0	65.4	65.2	134	0	0		
Xylenes, Total	27.74	1.0	30	0	92.5	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	55.41	5.0	50	0	111	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47	5.0	50	0	94	76.5	125	0	0		
Surr: Toluene-d8	48.4	5.0	50	0	96.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190910063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175247

ms	SeqNo: **2698203**	TestNo: **SW8260C**	RunNo: **175247**
	Samp ID: **190910063-001b (091019-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.46	1.0	10	0	115	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.57	1.0	10	0	95.7	70.1	123	0	0		
1,1,2-Trichloroethane	10.04	1.0	10	0	100	72.1	119	0	0		
1,1-Dichloroethane	10.45	1.0	10	0	104	70.4	126	0	0		
1,1-Dichloroethene	11.04	1.0	10	0	110	70.2	125	0	0		
1,2,3-Trichloropropane	4.11	1.0	5	0	82.2	53.7	101	0	0		
1,2-Dichlorobenzene	9.8	1.0	10	0	98	70.2	123	0	0		
1,2-Dichloroethane	11.28	1.0	10	0.17	111	73.5	126	0	0		
1,3-Dichlorobenzene	9.91	1.0	10	0.15	97.6	70.4	124	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	64	125	0	0		
1,4-Dichlorobenzene	9.63	1.0	10	0.23	94	70.8	127	0	0		
2-Butanone	6.29	5.0	10	0	62.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.8	5.0	10	0	88	52.8	133	0	0		
Acetone	12.56	5.0	10	0	126	56.3	135	0	0		
Benzene	9.98	1.0	10	0	99.8	70.2	127	0	0		
Carbon disulfide	4.79	1.0	5	0.13	93.2	62.2	130	0	0		
Carbon tetrachloride	12.03	1.0	10	0	120	56.4	137	0	0		
Chlorobenzene	10.63	1.0	10	0.95	96.8	72.7	128	0	0		
Chloroethane	8.83	1.0	10	0	88.3	71.3	135	0	0		
Chloroform	10.46	1.0	10	0	105	70.2	125	0	0		
Dibromochloromethane	10.4	1.0	10	0	104	69.5	123	0	0		
Ethylbenzene	10.6	1.0	10	0	106	71.9	129	0	0		
Methylene chloride	9.56	1.0	10	0	95.6	65.3	123	0	0		
Tetrachloroethene	14.59	1.0	10	0	146	74.5	121	0	0		S
Toluene	10.2	1.0	10	0	102	73	122	0	0		
trans-1,2-Dichloroethene	10.8	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	10.13	1.0	10	0	101	71.1	126	0	0		
Vinyl chloride	7.1	1.0	10	0	71	65	137	0	0		
Xylenes, Total	30.4	1.0	30	0	101	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	55.63	5.0	50	0	111	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.94	5.0	50	0	93.9	76.5	125	0	0		
Surr: Toluene-d8	48.7	5.0	50	0	97.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190910063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175247

msd	SeqNo: **2698204**	TestNo: **SW8260C**	RunNo: **175247**
	Samp ID: **190910063-001b (091019-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.15	1.0	10	0	112	71.6	126	11.46	2.74	20.4	
1,1,2,2-Tetrachloroethane	9.84	1.0	10	0	98.4	70.1	123	9.57	2.78	18.6	
1,1,2-Trichloroethane	9.73	1.0	10	0	97.3	72.1	119	10.04	3.14	20	
1,1-Dichloroethane	10.16	1.0	10	0	102	70.4	126	10.45	2.81	19.2	
1,1-Dichloroethene	10.94	1.0	10	0	109	70.2	125	11.04	0.910	16.1	
1,2,3-Trichloropropane	4.22	1.0	5	0	84.4	53.7	101	4.11	2.64	20	
1,2-Dichlorobenzene	10.4	1.0	10	0	104	70.2	123	9.8	5.94	17.9	
1,2-Dichloroethane	10.83	1.0	10	0.17	107	73.5	126	11.28	4.07	15.6	
1,3-Dichlorobenzene	10.21	1.0	10	0.15	101	70.4	124	9.91	2.98	14.3	
1,3-Dichloropropane	5.07	1.0	5	0	101	64	125	5.09	0.394	0	
1,4-Dichlorobenzene	10.68	1.0	10	0.23	104	70.8	127	9.63	10.3	14.4	
2-Butanone	7.59	5.0	10	0	75.9	60.5	123	6.29	18.7	15	Z
4-Methyl-2-pentanone	9.12	5.0	10	0	91.2	52.8	133	8.8	3.57	11.9	
Acetone	12.46	5.0	10	0	125	56.3	135	12.56	0.799	10.6	
Benzene	9.79	1.0	10	0	97.9	70.2	127	9.98	1.92	18.4	
Carbon disulfide	4.59	1.0	5	0.13	89.2	62.2	130	4.79	4.26	13.1	
Carbon tetrachloride	11.54	1.0	10	0	115	56.4	137	12.03	4.16	20.3	
Chlorobenzene	10.38	1.0	10	0.95	94.3	72.7	128	10.63	2.38	19.6	
Chloroethane	8.36	1.0	10	0	83.6	71.3	135	8.83	5.47	27.8	
Chloroform	10.07	1.0	10	0	101	70.2	125	10.46	3.80	20.3	
Dibromochloromethane	10.52	1.0	10	0	105	69.5	123	10.4	1.15	18.8	
Ethylbenzene	10.23	1.0	10	0	102	71.9	129	10.6	3.55	16.3	
Methylene chloride	9.19	1.0	10	0	91.9	65.3	123	9.56	3.95	21.4	
Tetrachloroethene	13.46	1.0	10	0	135	74.5	121	14.59	8.06	20.9	S
Toluene	9.94	1.0	10	0	99.4	73	122	10.2	2.58	19.4	
trans-1,2-Dichloroethene	10.05	1.0	10	0	100	69.1	133	10.8	7.19	16.1	
Trichloroethene	9.73	1.0	10	0	97.3	71.1	126	10.13	4.03	16.6	
Vinyl chloride	7.01	1.0	10	0	70.1	65	137	7.1	1.28	20.5	
Xylenes, Total	29.81	1.0	30	0	99.4	72	130	30.4	1.96	16.1	
Surr: 1,2-Dichloroethane-d4	54.82	5.0	50	0	110	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.99	5.0	50	0	94	76.5	125	0	0	0	
Surr: Toluene-d8	48.44	5.0	50	0	96.9	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190910063

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.llerler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091019-01-SW-U-A-1	9/10/19	1405	A/P	W		✓	2	VOCs
	↓	9/10/19	↓	A/P	W		✓	1	TSS
002	091019-02-SW-A-A-1	9/10/19	1420	A/P	W		✓	2	VOCs
	↓	9/10/19	↓	A/P	W		✓	1	TSS
003	091019-03-SW-D-A-1	9/10/19	1435	A/P	W		✓	2	VOCs
	↓	9/10/19	↓	A/P	W		✓	1	TSS
004	091019-04-SW-B-A-1	9/10/19	1350	A/P	W		✓	2	VOCs
	↓	9/10/19	↓	A/P	W		✓	1	TSS
005	091019-05-SW-B-A-1	9/10/19	1450	A/P	W		✓	1	TSS
006	091019-TB01 Lot# VQ19-F46			A/P	TB				trip blank
		J.M. 9/10/19		A/P					
				A/P					
				A/P					
				A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/10/19 3:55 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	J.M.	9/10/19 4:50 PM

Temperature: Ambient or (Chilled) Notes: 6°C

AES Bottles: Y (☒) N (☐)

Properly Preserved: (Y) N Notes:

Received Within Holding Times: (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

190910063

Adirondack Environmental Services, Inc

190910063

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190910063

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/12/2019

9/10/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
190910063-001	091019-01-SW-U-A-1	Water	9/10/2019	9/12/2019	B	A					
190910063-002	091019-02-SW-A-A-1	Water	9/10/2019	9/12/2019	B	A					
190910063-003	091019-03-SW-D-A-1	Water	9/10/2019	9/12/2019	B	A					
190910063-004	091019-04-SW-B-A-1	Water	9/10/2019	9/12/2019	B	A					
190910063-005	091019-05-SW-B-A-1	Water	9/10/2019	9/12/2019		A					
190910063-006	091019-TB01	Trip Blank	9/10/2019	9/12/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 13, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190911070
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/11/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *13-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190911070	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT: AECOM Environment
Work Order: **190911070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091119-01-SW-U-A-1
Collection Date: 9/11/2019
Lab Sample ID: 190911070-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
PCB, Total	**ND**	0.065		µg/L	1	9/11/2019 7:57:07 PM
Surr: Decachlorobiphenyl	**82.6**	57.1-135		%REC	1	9/11/2019 7:57:07 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Acetone	**3.4**	5.0	J	µg/L	1	9/13/2019 11:27:00 AM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/13/2019 11:27:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 11:27:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 11:27:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 11:27:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-01-SW-U-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 11:27:00 AM
Surr: 1,2-Dichloroethane-d4	**104**	80.9-122		%REC	1	9/13/2019 11:27:00 AM
Surr: 4-Bromofluorobenzene	**96.1**	76.5-125		%REC	1	9/13/2019 11:27:00 AM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	9/13/2019 11:27:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/12/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.4**	1.1		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-02-SW-A-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
PCB, Total	**ND**	0.065		µg/L	1	9/11/2019 8:10:28 PM
Surr: Decachlorobiphenyl	**99.2**	57.1-135		%REC	1	9/11/2019 8:10:28 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Acetone	**2.5**	5.0	J	µg/L	1	9/13/2019 11:49:00 AM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/13/2019 11:49:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 11:49:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 11:49:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 11:49:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-02-SW-A-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 11:49:00 AM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	9/13/2019 11:49:00 AM
Surr: 4-Bromofluorobenzene	**98.9**	76.5-125		%REC	1	9/13/2019 11:49:00 AM
Surr: Toluene-d8	**97.7**	80.4-121		%REC	1	9/13/2019 11:49:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/12/2019)						
TSS (Residue, Non-Filterable)	**5.1**	1.1		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-03-SW-D-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1242	**0.122**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/11/2019 8:23:47 PM
PCB, Total	**0.122**	0.065		µg/L	1	9/11/2019 8:23:47 PM
Surr: Decachlorobiphenyl	**49.2**	57.1-135	S	%REC	1	9/11/2019 8:23:47 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 12:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/13/2019 12:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 12:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Benzene	**0.9**	1.0	J	µg/L	1	9/13/2019 12:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 12:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	9/13/2019 12:10:00 PM
Chlorobenzene	**22**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/13/2019 12:10:00 PM

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-03-SW-D-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**2.6**	1.0		µg/L	1	9/13/2019 12:10:00 PM
1,4-Dichlorobenzene	**0.6**	1.0	J	µg/L	1	9/13/2019 12:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 12:10:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	9/13/2019 12:10:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/13/2019 12:10:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/13/2019 12:10:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 (Prep: Gen Prep - 9/12/2019)						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.2**	1.0		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-04-SW-B-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
PCB, Total	**ND**	0.065		µg/L	1	9/11/2019 8:37:08 PM
Surr: Decachlorobiphenyl	**85.8**	57.1-135		%REC	1	9/11/2019 8:37:08 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 12:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 12:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 12:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 12:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-04-SW-B-A-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/13/2019 12:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 12:32:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/13/2019 12:32:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/13/2019 12:32:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	9/13/2019 12:32:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/12/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.7**	1.1		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-05-SW-B-B-1
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/12/2019)						
TSS (Residue, Non-Filterable)	**6.4**	1.0		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-01-SW-U-A-3
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
PCB, Total	**ND**	0.065		µg/L	1	9/11/2019 8:50:29 PM
Surr: Decachlorobiphenyl	**53.0**	57.1-135	S	%REC	1	9/11/2019 8:50:29 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Acetone	**3.5**	5.0	J	µg/L	1	9/13/2019 12:53:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	9/13/2019 12:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Chloroform	**2.3**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 12:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 12:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 12:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091119-01-SW-U-A-3
Work Order:	**190911070**	**Collection Date:**	9/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190911070-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 12:53:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/13/2019 12:53:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/13/2019 12:53:00 PM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	9/13/2019 12:53:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/12/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.1		mg/L	1	9/12/2019

Adirondack Environmental Services, Inc

Date: *13-Sep-19*

CLIENT: AECOM Environment
Work Order: **190911070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091119-TB01
Collection Date: 9/11/2019
Lab Sample ID: 190911070-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Methylene chloride	**1.6**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Acetone	**4.7**	5.0	J	µg/L	1	9/13/2019 1:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 1:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 1:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 1:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 1:15:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/13/2019 1:15:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/13/2019 1:15:00 PM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	9/13/2019 1:15:00 PM

CLIENT: AECOM Environment
Work Order: 190911070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75536

mblk

SeqNo: **2697965** **PrepDate:9/11/2019** TestNo: **E608** RunNo: **175236**
Samp ID: **mb-75536** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.0854	0	0.1	0	85.4	48.8	140	0	0		

lcs

SeqNo: **2697966** **PrepDate:9/11/2019** TestNo: **E608** RunNo: **175236**
Samp ID: **lcs-75536** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1222	0.0650	0.1	0	122	59	141	0	0		
Surr: Decachlorobiphenyl	0.1082	0	0.1	0	108	48.8	140	0	0		

mblk

SeqNo: **2698865** **PrepDate:9/11/2019** TestNo: **E608** RunNo: **175283**
Samp ID: **mb-75536** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.08	0	0.1	0	80	51.5	144	0	0		

lcs

SeqNo: **2698868** **PrepDate:9/11/2019** TestNo: **E608** RunNo: **175283**
Samp ID: **lcs-75536** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.074	0	0.1	0	74	51.5	144	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190911070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75545

LCS

SeqNo: **2699246** PrepDate:**9/12/2019** TestNo: **SM2540D** RunNo: **175314**
Samp ID: **LCS-75545** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	497	0	95	86.5	114	0	0		

DUP

SeqNo: **2699249** PrepDate:**9/12/2019** TestNo: **SM2540D** RunNo: **175314**
Samp ID: **190906002-003** PrepRef: Units: **mg/L** Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	5030	100	0	0	0	0	0	5240	4.09	10	

DUP

SeqNo: **2699258** PrepDate:**9/12/2019** TestNo: **SM2540D** RunNo: **175314**
Samp ID: **190906077-002** PrepRef: Units: **mg/L** Analysis Date: **9/12/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	35.2	4.00	0	0	0	0	0	35.2	0	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190911070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175306

mblk

SeqNo: **2699177** TestNo: **SW8260C** RunNo: **175306**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.22	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	3.55	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.31	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	53.28	5.0	50	0	107	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.72	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	48.46	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190911070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175306

lcs	SeqNo: **2699175**	TestNo: **SW8260C**	RunNo: **175306**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.05	1.0	10	0	100	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.96	1.0	10	0	89.6	72.3	118	0	0		
1,1,2-Trichloroethane	8.98	1.0	10	0	89.8	73.1	123	0	0		
1,1-Dichloroethane	9.46	1.0	10	0	94.6	73.2	127	0	0		
1,1-Dichloroethene	9.56	1.0	10	0	95.6	70.3	128	0	0		
1,2,3-Trichloropropane	3.73	1.0	5	0	74.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.5	1.0	10	0	85	71	124	0	0		
1,2-Dichloroethane	10.11	1.0	10	0	101	72.5	127	0	0		
1,3-Dichlorobenzene	8.61	1.0	10	0	86.1	72.2	121	0	0		
1,3-Dichloropropane	4.79	1.0	5	0	95.8	76	122	0	0		
1,4-Dichlorobenzene	8.22	1.0	10	0	82.2	71.7	127	0	0		
2-Butanone	ND	5.0	10	0	0	65.1	132	0	0		S
4-Methyl-2-pentanone	8.08	5.0	10	0	80.8	68.7	118	0	0		
Acetone	12.79	5.0	10	0	128	69.2	133	0	0		
Benzene	9.11	1.0	10	0	91.1	71.2	122	0	0		
Carbon disulfide	4.3	1.0	5	0	86	67.8	134	0	0		
Carbon tetrachloride	10.17	1.0	10	0	102	74.5	122	0	0		
Chlorobenzene	8.76	1.0	10	0	87.6	72.7	124	0	0		
Chloroethane	8.76	1.0	10	0	87.6	72.3	136	0	0		
Chloroform	9.6	1.0	10	0	96	71.6	133	0	0		
Dibromochloromethane	9.79	1.0	10	0	97.9	70.6	124	0	0		
Ethylbenzene	9.48	1.0	10	0	94.8	70.9	126	0	0		
Methylene chloride	10.1	1.0	10	0	101	66.3	130	0	0		
Tetrachloroethene	10.49	1.0	10	0	105	72.4	119	0	0		
Toluene	9.37	1.0	10	0	93.7	71.8	116	0	0		
trans-1,2-Dichloroethene	9.87	1.0	10	0	98.7	70.3	120	0	0		
Trichloroethene	8.87	1.0	10	0	88.7	73	127	0	0		
Vinyl chloride	6.8	1.0	10	0	68	65.2	134	0	0		
Xylenes, Total	27.59	1.0	30	0	92	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	54.86	5.0	50	0	110	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.5	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	49.49	5.0	50	0	99	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190911070

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patricia Gehan	
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091119-01-SW-U-A-1	9/11/19	0740	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	091119-02-SW-A-A-1	9/11/19	0755	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	091119-03-SW-D-A-1	9/11/19	0810	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	091119-04-SW-B-A-1	9/11/19	0725	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	091119-05-SW-B-B-1	9/11/19	0835	A	W		✓	1	TSS
006	091119-01-SW-U-A-3	9/11/19	1130	A	W		✓	2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 9/11/19 405pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 9/11/19 4:55 To

Temperature Ambient or (Chilled) 9°C Notes:_____

AES Bottles Y ☒ N ☐

Properly Preserved (Y) N Notes:_____

Received Within Holding Times (Y) N Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services,

Demo 190911070

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 1909110 20

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	091119-01-SW-U-A-3	9/11/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	091119-TB01 Lot # VOA-F46.1			A	TB			1	trip blank
		9/11/19		P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/11/19 405pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/11/19 4:55pm

TEMPERATURE
Ambient or (Chilled)
Notes: 9°C

AES Bottles
Y ☒ N ☐

PROPERLY PRESERVED
(Y) N
Notes:

RECEIVED WITHIN HOLDING TIMES
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190911070

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190911070

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/13/2019

9/11/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
190911070-001	091119-01-SW-U-A-1	Water	9/11/2019	9/13/2019	C	B	A				
190911070-002	091119-02-SW-A-A-1	Water	9/11/2019	9/13/2019	C	B	A				
190911070-003	091119-03-SW-D-A-1	Water	9/11/2019	9/13/2019	C	B	A				
190911070-004	091119-04-SW-B-A-1	Water	9/11/2019	9/13/2019	C	B	A				
190911070-005	091119-05-SW-B-B-1	Water	9/11/2019	9/13/2019			A				
190911070-006	091119-01-SW-U-A-3	Water	9/11/2019	9/13/2019	C	B	A				
190911070-007	091119-TB01	Trip Blank	9/11/2019	9/13/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 16, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190912086
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/12/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*16-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190912086		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT: AECOM Environment
Work Order: **190912086**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091219-01-SW-U-A-1
Collection Date: 9/12/2019
Lab Sample ID: 190912086-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 9:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 9:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 9:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 9:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 9:32:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	9/13/2019 9:32:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	9/13/2019 9:32:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/13/2019 9:32:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/13/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.9**	1.1		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT: AECOM Environment
Work Order: **190912086**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091219-02-SW-A-A-1
Collection Date: 9/12/2019
Lab Sample ID: 190912086-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 9:53:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/13/2019 9:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 9:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 9:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 9:53:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/13/2019 9:53:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/13/2019 9:53:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	9/13/2019 9:53:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/13/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.9**	1.1		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091219-03-SW-D-A-1
Work Order:	**190912086**	**Collection Date:**	9/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190912086-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 10:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/13/2019 10:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 10:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 10:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 10:15:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/13/2019 10:15:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	9/13/2019 10:15:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/13/2019 10:15:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/13/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.9**	1.1		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091219-04-SW-B-A-1
Work Order:	**190912086**	**Collection Date:**	9/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190912086-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Acetone	**2.9**	5.0	J	µg/L	1	9/13/2019 10:36:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 10:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 10:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 10:36:00 PM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	9/13/2019 10:36:00 PM
Surr: 4-Bromofluorobenzene	**99.8**	76.5-125		%REC	1	9/13/2019 10:36:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	9/13/2019 10:36:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/13/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.8**	1.1		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091219-05-SW-B-A-1
Work Order:	**190912086**	**Collection Date:**	9/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190912086-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/13/2019)						
TSS (Residue, Non-Filterable)	**7.6**	1.0		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091219-04-SW-B-A-2
Work Order:	**190912086**	**Collection Date:**	9/12/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190912086-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Acetone	**ND**	5.0		µg/L	1	9/13/2019 10:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/13/2019 10:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 10:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 10:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 10:58:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/13/2019 10:58:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/13/2019 10:58:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/13/2019 10:58:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/13/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.5**	1.0		mg/L	1	9/13/2019

Adirondack Environmental Services, Inc

Date: *16-Sep-19*

CLIENT: AECOM Environment
Work Order: **190912086**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091219-TB01
Collection Date: 9/12/2019
Lab Sample ID: 190912086-007
Matrix: TRIP BLANK

VOLATILE ORGANICS EPA 8260C (SW5030C PREP) Analyst: **SMD**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Methylene chloride	**1.2**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Acetone	**4.0**	5.0	J	µg/L	1	9/13/2019 11:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/13/2019 11:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 11:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 11:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 11:19:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/13/2019 11:19:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/13/2019 11:19:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/13/2019 11:19:00 PM

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75575

LCS

SeqNo: **2700401** **PrepDate:9/13/2019** TestNo: **SM2540D** RunNo: **175371**
Samp ID: **LCS-75575** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	497	0	99.8	86.5	114	0	0		

DUP

SeqNo: **2700411** **PrepDate:9/13/2019** TestNo: **SM2540D** RunNo: **175371**
Samp ID: **190910031-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	492	40.0	0	0	0	0	0	476	3.31	10	

DUP

SeqNo: **2700413** **PrepDate:9/13/2019** TestNo: **SM2540D** RunNo: **175371**
Samp ID: **190910040-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	314	20.0	0	0	0	0	0	328	4.36	10	

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

mblk

SeqNo: **2699727** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.16	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	3.07	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	51.3	5.0	50	0	103	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.39	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	49.55	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

lcs

SeqNo: **2699725** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.66	1.0	10	0	117	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.73	1.0	10	0	97.3	72.3	118	0	0		
1,1,2-Trichloroethane	10.31	1.0	10	0	103	73.1	123	0	0		
1,1-Dichloroethane	10.73	1.0	10	0	107	73.2	127	0	0		
1,1-Dichloroethene	10.97	1.0	10	0	110	70.3	128	0	0		
1,2,3-Trichloropropane	4.15	1.0	5	0	83	68.4	115	0	0		
1,2-Dichlorobenzene	9.42	1.0	10	0	94.2	71	124	0	0		
1,2-Dichloroethane	9.41	1.0	10	0	94.1	72.5	127	0	0		
1,3-Dichlorobenzene	9.72	1.0	10	0	97.2	72.2	121	0	0		
1,3-Dichloropropane	5.55	1.0	5	0	111	76	122	0	0		
1,4-Dichlorobenzene	9.87	1.0	10	0	98.7	71.7	127	0	0		
2-Butanone	7.61	5.0	10	0	76.1	65.1	132	0	0		
4-Methyl-2-pentanone	9.14	5.0	10	0	91.4	68.7	118	0	0		
Acetone	11.36	5.0	10	0	114	69.2	133	0	0		
Benzene	11.49	1.0	10	0	115	71.2	122	0	0		
Carbon disulfide	4.94	1.0	5	0	98.8	67.8	134	0	0		
Carbon tetrachloride	11.12	1.0	10	0	111	74.5	122	0	0		
Chlorobenzene	10.72	1.0	10	0	107	72.7	124	0	0		
Chloroethane	7.55	1.0	10	0	75.5	72.3	136	0	0		
Chloroform	9.65	1.0	10	0	96.5	71.6	133	0	0		
Dibromochloromethane	10.63	1.0	10	0	106	70.6	124	0	0		
Ethylbenzene	11.68	1.0	10	0	117	70.9	126	0	0		
Methylene chloride	10.4	1.0	10	0	104	66.3	130	0	0		
Tetrachloroethene	11.45	1.0	10	0	114	72.4	119	0	0		
Toluene	11.16	1.0	10	0	112	71.8	116	0	0		
trans-1,2-Dichloroethene	10.62	1.0	10	0	106	70.3	120	0	0		
Trichloroethene	10.77	1.0	10	0	108	73	127	0	0		
Vinyl chloride	6.91	1.0	10	0	69.1	65.2	134	0	0		
Xylenes, Total	33.68	1.0	30	0	112	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.82	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.54	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	53.37	5.0	50	0	107	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

lcsd

SeqNo: **2699726** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.42	1.0	10	0	104	72.3	121	11.66	11.2	25	
1,1,2,2-Tetrachloroethane	10.27	1.0	10	0	103	72.3	118	9.73	5.40	25	
1,1,2-Trichloroethane	10.09	1.0	10	0	101	73.1	123	10.31	2.16	25	
1,1-Dichloroethane	10.39	1.0	10	0	104	73.2	127	10.73	3.22	25	
1,1-Dichloroethene	10.29	1.0	10	0	103	70.3	128	10.97	6.40	25	
1,2,3-Trichloropropane	4.54	1.0	5	0	90.8	68.4	115	4.15	8.98	25	
1,2-Dichlorobenzene	9.97	1.0	10	0	99.7	71	124	9.42	5.67	25	
1,2-Dichloroethane	9.81	1.0	10	0	98.1	72.5	127	9.41	4.16	25	
1,3-Dichlorobenzene	10.17	1.0	10	0	102	72.2	121	9.72	4.52	25	
1,3-Dichloropropane	5.23	1.0	5	0	105	76	122	5.55	5.94	0	
1,4-Dichlorobenzene	10.18	1.0	10	0	102	71.7	127	9.87	3.09	25	
2-Butanone	6.78	5.0	10	0	67.8	65.1	132	7.61	11.5	25	
4-Methyl-2-pentanone	10.07	5.0	10	0	101	68.7	118	9.14	9.68	25	
Acetone	12.56	5.0	10	0	126	69.2	133	11.36	10.0	25	
Benzene	10.27	1.0	10	0	103	71.2	122	11.49	11.2	25	
Carbon disulfide	4.72	1.0	5	0	94.4	67.8	134	4.94	4.55	25	
Carbon tetrachloride	10.09	1.0	10	0	101	74.5	122	11.12	9.71	25	
Chlorobenzene	10.08	1.0	10	0	101	72.7	124	10.72	6.15	25	
Chloroethane	8.08	1.0	10	0	80.8	72.3	136	7.55	6.78	25	
Chloroform	9.66	1.0	10	0	96.6	71.6	133	9.65	0.104	25	
Dibromochloromethane	10.21	1.0	10	0	102	70.6	124	10.63	4.03	25	
Ethylbenzene	10.79	1.0	10	0	108	70.9	126	11.68	7.92	25	
Methylene chloride	10.35	1.0	10	0	104	66.3	130	10.4	0.482	25	
Tetrachloroethene	10.34	1.0	10	0	103	72.4	119	11.45	10.2	25	
Toluene	9.87	1.0	10	0	98.7	71.8	116	11.16	12.3	25	
trans-1,2-Dichloroethene	10.64	1.0	10	0	106	70.3	120	10.62	0.188	25	
Trichloroethene	9.8	1.0	10	0	98	73	127	10.77	9.43	25	
Vinyl chloride	7.42	1.0	10	0	74.2	65.2	134	6.91	7.12	25	
Xylenes, Total	30.91	1.0	30	0	103	72.1	124	33.68	8.58	25	
Surr: 1,2-Dichloroethane-d4	51.24	5.0	50	0	102	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	50.83	5.0	50	0	102	76.5	125	0	0	25	
Surr: Toluene-d8	50.55	5.0	50	0	101	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

ms	SeqNo: **2699740**	TestNo: **SW8260C**	RunNo: **175344**
	Samp ID: **190913055-001b**	Units: **µg/L**	Analysis Date: **9/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.04	1.0	10	0	100	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.53	1.0	10	0	95.3	70.1	123	0	0		
1,1,2-Trichloroethane	9.52	1.0	10	0	95.2	72.1	119	0	0		
1,1-Dichloroethane	9.87	1.0	10	0	98.7	70.4	126	0	0		
1,1-Dichloroethene	10.13	1.0	10	0	101	70.2	125	0	0		
1,2,3-Trichloropropane	4.46	1.0	5	0	89.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.68	1.0	10	0	86.8	70.2	123	0	0		
1,2-Dichloroethane	9.03	1.0	10	0	90.3	73.5	126	0	0		
1,3-Dichlorobenzene	8.97	1.0	10	0	89.7	70.4	124	0	0		
1,3-Dichloropropane	5.16	1.0	5	0	103	64	125	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	70.8	127	0	0		
2-Butanone	7.13	5.0	10	0	71.3	60.5	123	0	0		
4-Methyl-2-pentanone	9.4	5.0	10	0	94	52.8	133	0	0		
Acetone	11.5	5.0	10	3.06	84.4	56.3	135	0	0		
Benzene	10.05	1.0	10	0	100	70.2	127	0	0		
Carbon disulfide	4.63	1.0	5	0	92.6	62.2	130	0	0		
Carbon tetrachloride	10.14	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	9.99	1.0	10	0	99.9	72.7	128	0	0		
Chloroethane	7.32	1.0	10	0	73.2	71.3	135	0	0		
Chloroform	9.3	1.0	10	0	93	70.2	125	0	0		
Dibromochloromethane	9.46	1.0	10	0	94.6	69.5	123	0	0		
Ethylbenzene	10.68	1.0	10	0	107	71.9	129	0	0		
Methylene chloride	9.23	1.0	10	0	92.3	65.3	123	0	0		
Tetrachloroethene	10.02	1.0	10	0	100	74.5	121	0	0		
Toluene	9.72	1.0	10	0	97.2	73	122	0	0		
trans-1,2-Dichloroethene	10.16	1.0	10	0	102	69.1	133	0	0		
Trichloroethene	9.38	1.0	10	0	93.8	71.1	126	0	0		
Vinyl chloride	6.89	1.0	10	0	68.9	65	137	0	0		
Xylenes, Total	31.29	1.0	30	0	104	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.1	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.66	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	50.05	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190912086
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

msd

SeqNo: **2699741** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **190913055-001b** Units: **µg/L** Analysis Date: **9/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.36	1.0	10	0	104	71.6	126	10.04	3.14	20.4	
1,1,2,2-Tetrachloroethane	10	1.0	10	0	100	70.1	123	9.53	4.81	18.6	
1,1,2-Trichloroethane	9.85	1.0	10	0	98.5	72.1	119	9.52	3.41	20	
1,1-Dichloroethane	10.52	1.0	10	0	105	70.4	126	9.87	6.38	19.2	
1,1-Dichloroethene	10.64	1.0	10	0	106	70.2	125	10.13	4.91	16.1	
1,2,3-Trichloropropane	4.36	1.0	5	0	87.2	53.7	101	4.46	2.27	20	
1,2-Dichlorobenzene	9.7	1.0	10	0	97	70.2	123	8.68	11.1	17.9	
1,2-Dichloroethane	9.6	1.0	10	0	96	73.5	126	9.03	6.12	15.6	
1,3-Dichlorobenzene	9.99	1.0	10	0	99.9	70.4	124	8.97	10.8	14.3	
1,3-Dichloropropane	5.28	1.0	5	0	106	64	125	5.16	2.30	0	
1,4-Dichlorobenzene	9.78	1.0	10	0	97.8	70.8	127	8.12	18.5	14.4	Z
2-Butanone	6.46	5.0	10	0	64.6	60.5	123	7.13	9.86	15	
4-Methyl-2-pentanone	10.25	5.0	10	0	103	52.8	133	9.4	8.65	11.9	
Acetone	14.51	5.0	10	3.06	114	56.3	135	11.5	23.1	10.6	Z
Benzene	10.29	1.0	10	0	103	70.2	127	10.05	2.36	18.4	
Carbon disulfide	4.75	1.0	5	0	95	62.2	130	4.63	2.56	13.1	
Carbon tetrachloride	10.52	1.0	10	0	105	56.4	137	10.14	3.68	20.3	
Chlorobenzene	9.87	1.0	10	0	98.7	72.7	128	9.99	1.21	19.6	
Chloroethane	7.34	1.0	10	0	73.4	71.3	135	7.32	0.273	27.8	
Chloroform	9.78	1.0	10	0	97.8	70.2	125	9.3	5.03	20.3	
Dibromochloromethane	9.61	1.0	10	0	96.1	69.5	123	9.46	1.57	18.8	
Ethylbenzene	10.68	1.0	10	0	107	71.9	129	10.68	0	16.3	
Methylene chloride	9.72	1.0	10	0	97.2	65.3	123	9.23	5.17	21.4	
Tetrachloroethene	10.5	1.0	10	0	105	74.5	121	10.02	4.68	20.9	
Toluene	10.31	1.0	10	0	103	73	122	9.72	5.89	19.4	
trans-1,2-Dichloroethene	10.53	1.0	10	0	105	69.1	133	10.16	3.58	16.1	
Trichloroethene	9.58	1.0	10	0	95.8	71.1	126	9.38	2.11	16.6	
Vinyl chloride	7.26	1.0	10	0	72.6	65	137	6.89	5.23	20.5	
Xylenes, Total	30.61	1.0	30	0	102	72	130	31.29	2.20	16.1	
Surr: 1,2-Dichloroethane-d4	51.09	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.31	5.0	50	0	101	76.5	125	0	0	0	
Surr: Toluene-d8	50.14	5.0	50	0	100	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 190912086

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bluker@aecom.com	PO Number: 224608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091219-01-SW-U-A-1	9/12/19	0740	A	W		✓	2	VOCs
	↓	9/12/19	0740	A	W		✓	1	TSS
002	091219-02-SW-A-A-1	9/12/19	0755	A	W		✓	2	VOCs
	↓	9/12/19	0755	A	W		✓	1	TSS
003	091219-03-SW-D-A-1	9/12/19	0810	A	W		✓	2	VOCs
	↓	9/12/19	0810	A	W		✓	1	TSS
004	091219-04-SW-B-A-1	9/12/19	0725	A	W		✓	2	VOCs
	↓	9/12/19	0725	A	W		✓	1	TSS
005	091219-05-SW-B-A-1	9/12/19	0825	A	W		✓	1	TSS
006	091219-~~04~~-SW-~~B~~-A-2	9/12/19	0740	A	W		✓	2	VOCs
	↓	9/12/19	0740	A	W		✓	1	TSS
007	091219-TB01 #460.1 ICAM 9/12			A	TB			1	trip blank
				A					
				A					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 9/12/19 403pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: IC. Miller	Date/Time 9.12.19 4:28pm

Temperature
Ambient or Chilled (6°C)
Notes:_____

AES Bottles
Y ☑ N ☐

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

190912086

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 17, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190913055
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/13/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*17-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190913055		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-01-SW-U-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/13/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
PCB, Total	**ND**	0.065		µg/L	1	9/13/2019 6:12:11 PM
Surr: Decachlorobiphenyl	**82.4**	57.1-135		%REC	1	9/13/2019 6:12:11 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Acetone	**3.1**	5.0	J	µg/L	1	9/13/2019 11:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/13/2019 11:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Benzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/13/2019 11:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Toluene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-01-SW-U-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/13/2019 11:41:00 PM
Surr: 1,2-Dichloroethane-d4	**104**	80.9-122		%REC	1	9/13/2019 11:41:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	9/13/2019 11:41:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/13/2019 11:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.3**	1.0		mg/L	1	9/16/2019

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-02-SW-A-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/13/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1242	**0.065**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/13/2019 6:25:31 PM
PCB, Total	**0.065**	0.065	J	µg/L	1	9/13/2019 6:25:31 PM
Surr: Decachlorobiphenyl	**84.0**	57.1-135		%REC	1	9/13/2019 6:25:31 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Acetone	**2.6**	5.0	J	µg/L	1	9/14/2019 12:02:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/14/2019 12:02:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/14/2019 12:02:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Benzene	**0.2**	1.0	J	µg/L	1	9/14/2019 12:02:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/14/2019 12:02:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Toluene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Chlorobenzene	**1.2**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-02-SW-A-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/14/2019 12:02:00 AM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/14/2019 12:02:00 AM
Surr: 4-Bromofluorobenzene	**110**	76.5-125		%REC	1	9/14/2019 12:02:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/14/2019 12:02:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.8**	1.1		mg/L	1	9/16/2019

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-03-SW-D-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/13/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1242	**0.054**	0.065	J	µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/13/2019 6:38:49 PM
PCB, Total	**0.054**	0.065	J	µg/L	1	9/13/2019 6:38:49 PM
Surr: Decachlorobiphenyl	**89.6**	57.1-135		%REC	1	9/13/2019 6:38:49 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Acetone	**3.3**	5.0	J	µg/L	1	9/14/2019 12:24:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/14/2019 12:24:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Benzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/14/2019 12:24:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Toluene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-03-SW-D-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/14/2019 12:24:00 AM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/14/2019 12:24:00 AM
Surr: 4-Bromofluorobenzene	**97.4**	76.5-125		%REC	1	9/14/2019 12:24:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	9/14/2019 12:24:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.9**	1.0		mg/L	1	9/16/2019

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-04-SW-B-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/13/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
PCB, Total	**ND**	0.065		µg/L	1	9/13/2019 6:52:09 PM
Surr: Decachlorobiphenyl	**79.4**	57.1-135		%REC	1	9/13/2019 6:52:09 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Acetone	**2.6**	5.0	J	µg/L	1	9/14/2019 12:46:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/14/2019 12:46:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/14/2019 12:46:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Benzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/14/2019 12:46:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Toluene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-04-SW-B-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/14/2019 12:46:00 AM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	9/14/2019 12:46:00 AM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	9/14/2019 12:46:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/14/2019 12:46:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.2**	1.0		mg/L	1	9/16/2019

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-05-SW-B-A-1
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/16/2019)						
TSS (Residue, Non-Filterable)	**10.6**	1.0		mg/L	1	9/16/2019

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-TB01
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Methylene chloride	**0.6**	1.0	J	µg/L	1	9/14/2019 1:07:00 AM
Acetone	**2.8**	5.0	J	µg/L	1	9/14/2019 1:07:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Chloroform	**0.3**	1.0	J	µg/L	1	9/14/2019 1:07:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/14/2019 1:07:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/14/2019 1:07:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Benzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/14/2019 1:07:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Toluene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/14/2019 1:07:00 AM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/14/2019 1:07:00 AM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/14/2019 1:07:00 AM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	9/14/2019 1:07:00 AM

Adirondack Environmental Services, Inc

Date: *17-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091319-TB02
Work Order:	**190913055**	**Collection Date:**	9/13/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190913055-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Methylene chloride	**1.5**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Acetone	**5.7**	5.0		µg/L	1	9/14/2019 1:29:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/14/2019 1:29:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/14/2019 1:29:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Benzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/14/2019 1:29:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Toluene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/14/2019 1:29:00 AM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/14/2019 1:29:00 AM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/14/2019 1:29:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/14/2019 1:29:00 AM

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75593

mblk

SeqNo: **2700668** PrepDate:**9/13/2019** TestNo: **E608** RunNo: **175380**
Samp ID: **mb-75593** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.078	0	0.1	0	78	51.5	144	0	0		

lcs

SeqNo: **2700670** PrepDate:**9/13/2019** TestNo: **E608** RunNo: **175380**
Samp ID: **lcs-75593** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.092	0	0.1	0	92	51.5	144	0	0		

mblk

SeqNo: **2699531** PrepDate:**9/13/2019** TestNo: **SW8082A** RunNo: **175331**
Samp ID: **mb-75593** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0856	0	0.1	0	85.6	57.1	135	0	0		

lcs

SeqNo: **2699532** PrepDate:**9/13/2019** TestNo: **SW8082A** RunNo: **175331**
Samp ID: **lcs-75593** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5878	0.0650	0.5	0	118	60	140	0	0		
PCB, Total	0.5878	0.0650	0.5	0	118	60	140	0	0		
Surr: Decachlorobiphenyl	0.084	0	0.1	0	84	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75593

ms

SeqNo: **2699539** **PrepDate:9/13/2019** TestNo: **SW8082A** RunNo: **175331**
Samp ID: **190913055-001c (091319-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4364	0.0650	0.5	0	87.3	46.7	130	0	0		
PCB, Total	0.4364	0.0650	0.5	0	87.3	51	150	0	0		
Surr: Decachlorobiphenyl	0.0448	0	0.1	0	44.8	57.1	135	0	0		S

msd

SeqNo: **2699540** **PrepDate:9/13/2019** TestNo: **SW8082A** RunNo: **175331**
Samp ID: **190913055-001c (091319-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5518	0.0650	0.5	0	110	46.7	130	0.4364	23.4	30	
PCB, Total	0.5518	0.0650	0.5	0	110	51	150	0.4364	23.4	30	
Surr: Decachlorobiphenyl	0.076	0	0.1	0	76	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75600

LCS

SeqNo: **2701065** **PrepDate:9/16/2019** TestNo: **SM2540D** RunNo: **175402**
Samp ID: **LCS-75600** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	497	0	95	86.5	114	0	0		

DUP

SeqNo: **2701075** **PrepDate:9/16/2019** TestNo: **SM2540D** RunNo: **175402**
Samp ID: **190911044-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	3428	20.0	0	0	0	0	0	3406	0.644	10	

DUP

SeqNo: **2701083** **PrepDate:9/16/2019** TestNo: **SM2540D** RunNo: **175402**
Samp ID: **190913055-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	7.5	1.00	0	0	0	0	0	7.3	2.70	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

mblk

SeqNo: **2699727** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.16	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	3.07	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	51.3	5.0	50	0	103	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.39	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	49.55	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

lcs	SeqNo: **2699725**	TestNo: **SW8260C**	RunNo: **175344**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **9/13/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.66	1.0	10	0	117	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.73	1.0	10	0	97.3	72.3	118	0	0		
1,1,2-Trichloroethane	10.31	1.0	10	0	103	73.1	123	0	0		
1,1-Dichloroethane	10.73	1.0	10	0	107	73.2	127	0	0		
1,1-Dichloroethene	10.97	1.0	10	0	110	70.3	128	0	0		
1,2,3-Trichloropropane	4.15	1.0	5	0	83	68.4	115	0	0		
1,2-Dichlorobenzene	9.42	1.0	10	0	94.2	71	124	0	0		
1,2-Dichloroethane	9.41	1.0	10	0	94.1	72.5	127	0	0		
1,3-Dichlorobenzene	9.72	1.0	10	0	97.2	72.2	121	0	0		
1,3-Dichloropropane	5.55	1.0	5	0	111	76	122	0	0		
1,4-Dichlorobenzene	9.87	1.0	10	0	98.7	71.7	127	0	0		
2-Butanone	7.61	5.0	10	0	76.1	65.1	132	0	0		
4-Methyl-2-pentanone	9.14	5.0	10	0	91.4	68.7	118	0	0		
Acetone	11.36	5.0	10	0	114	69.2	133	0	0		
Benzene	11.49	1.0	10	0	115	71.2	122	0	0		
Carbon disulfide	4.94	1.0	5	0	98.8	67.8	134	0	0		
Carbon tetrachloride	11.12	1.0	10	0	111	74.5	122	0	0		
Chlorobenzene	10.72	1.0	10	0	107	72.7	124	0	0		
Chloroethane	7.55	1.0	10	0	75.5	72.3	136	0	0		
Chloroform	9.65	1.0	10	0	96.5	71.6	133	0	0		
Dibromochloromethane	10.63	1.0	10	0	106	70.6	124	0	0		
Ethylbenzene	11.68	1.0	10	0	117	70.9	126	0	0		
Methylene chloride	10.4	1.0	10	0	104	66.3	130	0	0		
Tetrachloroethene	11.45	1.0	10	0	114	72.4	119	0	0		
Toluene	11.16	1.0	10	0	112	71.8	116	0	0		
trans-1,2-Dichloroethene	10.62	1.0	10	0	106	70.3	120	0	0		
Trichloroethene	10.77	1.0	10	0	108	73	127	0	0		
Vinyl chloride	6.91	1.0	10	0	69.1	65.2	134	0	0		
Xylenes, Total	33.68	1.0	30	0	112	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.82	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.54	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	53.37	5.0	50	0	107	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

ms	SeqNo: **2699740**	TestNo: **SW8260C**	RunNo: **175344**
	Samp ID: **190913055-001b (091319-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.04	1.0	10	0	100	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.53	1.0	10	0	95.3	70.1	123	0	0		
1,1,2-Trichloroethane	9.52	1.0	10	0	95.2	72.1	119	0	0		
1,1-Dichloroethane	9.87	1.0	10	0	98.7	70.4	126	0	0		
1,1-Dichloroethene	10.13	1.0	10	0	101	70.2	125	0	0		
1,2,3-Trichloropropane	4.46	1.0	5	0	89.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.68	1.0	10	0	86.8	70.2	123	0	0		
1,2-Dichloroethane	9.03	1.0	10	0	90.3	73.5	126	0	0		
1,3-Dichlorobenzene	8.97	1.0	10	0	89.7	70.4	124	0	0		
1,3-Dichloropropane	5.16	1.0	5	0	103	64	125	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	70.8	127	0	0		
2-Butanone	7.13	5.0	10	0	71.3	60.5	123	0	0		
4-Methyl-2-pentanone	9.4	5.0	10	0	94	52.8	133	0	0		
Acetone	11.5	5.0	10	3.06	84.4	56.3	135	0	0		
Benzene	10.05	1.0	10	0	100	70.2	127	0	0		
Carbon disulfide	4.63	1.0	5	0	92.6	62.2	130	0	0		
Carbon tetrachloride	10.14	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	9.99	1.0	10	0	99.9	72.7	128	0	0		
Chloroethane	7.32	1.0	10	0	73.2	71.3	135	0	0		
Chloroform	9.3	1.0	10	0	93	70.2	125	0	0		
Dibromochloromethane	9.46	1.0	10	0	94.6	69.5	123	0	0		
Ethylbenzene	10.68	1.0	10	0	107	71.9	129	0	0		
Methylene chloride	9.23	1.0	10	0	92.3	65.3	123	0	0		
Tetrachloroethene	10.02	1.0	10	0	100	74.5	121	0	0		
Toluene	9.72	1.0	10	0	97.2	73	122	0	0		
trans-1,2-Dichloroethene	10.16	1.0	10	0	102	69.1	133	0	0		
Trichloroethene	9.38	1.0	10	0	93.8	71.1	126	0	0		
Vinyl chloride	6.89	1.0	10	0	68.9	65	137	0	0		
Xylenes, Total	31.29	1.0	30	0	104	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.1	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.66	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	50.05	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190913055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175344

msd

SeqNo: **2699741** TestNo: **SW8260C** RunNo: **175344**
Samp ID: **190913055-001b (091319-01-SW-U-** Units: **µg/L** Analysis Date: **9/14/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.36	1.0	10	0	104	71.6	126	10.04	3.14	20.4	
1,1,2,2-Tetrachloroethane	10	1.0	10	0	100	70.1	123	9.53	4.81	18.6	
1,1,2-Trichloroethane	9.85	1.0	10	0	98.5	72.1	119	9.52	3.41	20	
1,1-Dichloroethane	10.52	1.0	10	0	105	70.4	126	9.87	6.38	19.2	
1,1-Dichloroethene	10.64	1.0	10	0	106	70.2	125	10.13	4.91	16.1	
1,2,3-Trichloropropane	4.36	1.0	5	0	87.2	53.7	101	4.46	2.27	20	
1,2-Dichlorobenzene	9.7	1.0	10	0	97	70.2	123	8.68	11.1	17.9	
1,2-Dichloroethane	9.6	1.0	10	0	96	73.5	126	9.03	6.12	15.6	
1,3-Dichlorobenzene	9.99	1.0	10	0	99.9	70.4	124	8.97	10.8	14.3	
1,3-Dichloropropane	5.28	1.0	5	0	106	64	125	5.16	2.30	0	
1,4-Dichlorobenzene	9.78	1.0	10	0	97.8	70.8	127	8.12	18.5	14.4	Z
2-Butanone	6.46	5.0	10	0	64.6	60.5	123	7.13	9.86	15	
4-Methyl-2-pentanone	10.25	5.0	10	0	103	52.8	133	9.4	8.65	11.9	
Acetone	14.51	5.0	10	3.06	114	56.3	135	11.5	23.1	10.6	Z
Benzene	10.29	1.0	10	0	103	70.2	127	10.05	2.36	18.4	
Carbon disulfide	4.75	1.0	5	0	95	62.2	130	4.63	2.56	13.1	
Carbon tetrachloride	10.52	1.0	10	0	105	56.4	137	10.14	3.68	20.3	
Chlorobenzene	9.87	1.0	10	0	98.7	72.7	128	9.99	1.21	19.6	
Chloroethane	7.34	1.0	10	0	73.4	71.3	135	7.32	0.273	27.8	
Chloroform	9.78	1.0	10	0	97.8	70.2	125	9.3	5.03	20.3	
Dibromochloromethane	9.61	1.0	10	0	96.1	69.5	123	9.46	1.57	18.8	
Ethylbenzene	10.68	1.0	10	0	107	71.9	129	10.68	0	16.3	
Methylene chloride	9.72	1.0	10	0	97.2	65.3	123	9.23	5.17	21.4	
Tetrachloroethene	10.5	1.0	10	0	105	74.5	121	10.02	4.68	20.9	
Toluene	10.31	1.0	10	0	103	73	122	9.72	5.89	19.4	
trans-1,2-Dichloroethene	10.53	1.0	10	0	105	69.1	133	10.16	3.58	16.1	
Trichloroethene	9.58	1.0	10	0	95.8	71.1	126	9.38	2.11	16.6	
Vinyl chloride	7.26	1.0	10	0	72.6	65	137	6.89	5.23	20.5	
Xylenes, Total	30.61	1.0	30	0	102	72	130	31.29	2.20	16.1	
Surr: 1,2-Dichloroethane-d4	51.09	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.31	5.0	50	0	101	76.5	125	0	0	0	
Surr: Toluene-d8	50.14	5.0	50	0	100	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190913055

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	227608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091319-01-SW-U-A-1	9/13/19	1155	A	W		✓	6	PCBs
				P				6	VOCs
				A				3	TSS
				P					
002	091319-02-SW-A-A-1	9/13/19	1225	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
003	091319-03-SW-D-A-1	9/13/19	1240	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
004	091319-04-SW-B-A-1	9/13/19	1135	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
005	091319-05-SW-B-A-1	9/13/19	1255	A	W		✓	1	TSS
				P					
006	091319-TB01			A	TB			1	trip blank LOT # WA74501
				P					9/13/19

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/13/19 4:00 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/13/19 4:44 pm

Temperature	AES Bottles		Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 6°C	☒	☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190913055

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19091305S

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	091319-TB02 Lot# VOA-F461 Exp. 9/13/19			A P	TB			1	trip blank
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:

FedEx UPS Client AES Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/13/19 4:00 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/13/19 9:44 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	Y N	Y N
Notes: 6°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 18, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190916053
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 9/16/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*18-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190916053		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-01-SW-U-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
PCB, Total	**ND**	0.065		µg/L	1	9/16/2019 7:45:50 PM
Surr: Decachlorobiphenyl	**97.6**	57.1-135		%REC	1	9/16/2019 7:45:50 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Acetone	**ND**	5.0		µg/L	1	9/17/2019 7:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 7:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 7:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 7:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 7:58:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 7:58:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-01-SW-U-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/17/2019 7:58:00 PM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/17/2019 7:58:00 PM
Xylenes, Total	**0.6**	1.0	J	µg/L	1	9/17/2019 7:58:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	9/17/2019 7:58:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/17/2019 7:58:00 PM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	9/17/2019 7:58:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.9**	1.0		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-02-SW-A-A-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
PCB, Total	**ND**	0.065		µg/L	1	9/16/2019 7:59:09 PM
Surr: Decachlorobiphenyl	**81.8**	57.1-135		%REC	1	9/16/2019 7:59:09 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Acetone	**ND**	5.0		µg/L	1	9/17/2019 8:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 8:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 8:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 8:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 8:19:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:19:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-02-SW-A-A-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:19:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:19:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	9/17/2019 8:19:00 PM
Surr: 1,2-Dichloroethane-d4	**94.5**	80.9-122		%REC	1	9/17/2019 8:19:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/17/2019 8:19:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	9/17/2019 8:19:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.5**	1.0		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-03-SW-D-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
PCB, Total	**ND**	0.065		µg/L	1	9/16/2019 8:12:27 PM
Surr: Decachlorobiphenyl	**84.8**	57.1-135		%REC	1	9/16/2019 8:12:27 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Acetone	**ND**	5.0		µg/L	1	9/17/2019 8:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 8:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 8:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 8:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 8:41:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:41:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-03-SW-D-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:41:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 8:41:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	9/17/2019 8:41:00 PM
Surr: 1,2-Dichloroethane-d4	**94.0**	80.9-122		%REC	1	9/17/2019 8:41:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/17/2019 8:41:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/17/2019 8:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-04-SW-B-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
PCB, Total	**ND**	0.065		µg/L	1	9/16/2019 8:25:52 PM
Surr: Decachlorobiphenyl	**78.0**	57.1-135		%REC	1	9/16/2019 8:25:52 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Acetone	**ND**	5.0		µg/L	1	9/17/2019 9:02:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 9:02:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 9:02:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 9:02:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-04-SW-B-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:02:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/17/2019 9:02:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/17/2019 9:02:00 PM
Surr: 1,2-Dichloroethane-d4	**92.8**	80.9-122		%REC	1	9/17/2019 9:02:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/17/2019 9:02:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	9/17/2019 9:02:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.6**	1.0		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-05-SW-B-C-1
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/17/2019)						
TSS (Residue, Non-Filterable)	**5.2**	1.1		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-01-SW-U-C-3
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
PCB, Total	**ND**	0.065		µg/L	1	9/16/2019 8:39:12 PM
Surr: Decachlorobiphenyl	**39.0**	57.1-135	S	%REC	1	9/16/2019 8:39:12 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Acetone	**ND**	5.0		µg/L	1	9/18/2019 1:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Chloroform	**2.8**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/18/2019 1:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 1:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Benzene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 1:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 1:43:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-01-SW-U-C-3
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 1:43:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 1:43:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/18/2019 1:43:00 PM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	9/18/2019 1:43:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/18/2019 1:43:00 PM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	9/18/2019 1:43:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**1.1**	1.0		mg/L	1	9/17/2019

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091619-TB01
Work Order:	**190916053**	**Collection Date:**	9/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190916053-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Methylene chloride	**1.7**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Acetone	**5.3**	5.0		µg/L	1	9/17/2019 9:45:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 9:45:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 9:45:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 9:45:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/17/2019 9:45:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	9/17/2019 9:45:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/17/2019 9:45:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	9/17/2019 9:45:00 PM

Adirondack Environmental Services, Inc

Date: *18-Sep-19*

CLIENT: AECOM Environment
Work Order: **190916053**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091619-TB02
Collection Date: 9/16/2019
Lab Sample ID: 190916053-008
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	9/17/2019 10:06:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/17/2019 10:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/17/2019 10:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Benzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/17/2019 10:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Toluene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/17/2019 10:06:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	9/17/2019 10:06:00 PM
Surr: 1,2-Dichloroethane-d4	**97.9**	80.9-122		%REC	1	9/17/2019 10:06:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/17/2019 10:06:00 PM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	9/17/2019 10:06:00 PM

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75611

mblk

SeqNo: **2700633** PrepDate:**9/16/2019** TestNo: **SW8082A** RunNo: **175375**
Samp ID: **mb-75611** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0824	0.0100	0.1	0	82.4	57.1	135	0	0		

lcs

SeqNo: **2700634** PrepDate:**9/16/2019** TestNo: **SW8082A** RunNo: **175375**
Samp ID: **lcs-75611** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.607	0.0650	0.5	0	121	60	140	0	0		
PCB, Total	0.607	0.0650	0.5	0	121	60	140	0	0		
Surr: Decachlorobiphenyl	0.088	0.0100	0.1	0	88	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75636

LCS

SeqNo: **2701863** **PrepDate:9/17/2019** TestNo: **SM2540D** RunNo: **175452**
Samp ID: **LCS-75636** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	564	40.0	497	0	113	86.5	114	0	0		

DUP

SeqNo: **2701868** **PrepDate:9/17/2019** TestNo: **SM2540D** RunNo: **175452**
Samp ID: **190911066-002** **PrepRef:** Units: **mg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1672	20.0	0	0	0	0	0	1804	7.59	10	

DUP

SeqNo: **2701871** **PrepDate:9/17/2019** TestNo: **SM2540D** RunNo: **175452**
Samp ID: **190911068-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	110	4.00	0	0	0	0	0	100.4	9.13	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175441

mblk

SeqNo: **2701711** TestNo: **SW8260C** RunNo: **175441**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.5	1.0									J
1,2-Dichloroethane	0.17	1.0									J
1,3-Dichlorobenzene	0.41	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.56	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	1.48	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.76	1.0									J
Surr: 1,2-Dichloroethane-d4	47.49	5.0	50	0	95	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	53.44	5.0	50	0	107	76.5	125	0	0		
Surr: Toluene-d8	49.67	5.0	50	0	99.3	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175441

lcs

SeqNo: **2701709** TestNo: **SW8260C** RunNo: **175441**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.08	1.0	10	0	101	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.16	1.0	10	0	102	72.3	118	0	0		
1,1,2-Trichloroethane	10.1	1.0	10	0	101	73.1	123	0	0		
1,1-Dichloroethane	10.54	1.0	10	0	105	73.2	127	0	0		
1,1-Dichloroethene	10.23	1.0	10	0	102	70.3	128	0	0		
1,2,3-Trichloropropane	4.82	1.0	5	0	96.4	68.4	115	0	0		
1,2-Dichlorobenzene	8.83	1.0	10	0	88.3	71	124	0	0		
1,2-Dichloroethane	9.67	1.0	10	0	96.7	72.5	127	0	0		
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	72.2	121	0	0		
1,3-Dichloropropane	5.38	1.0	5	0	108	76	122	0	0		
1,4-Dichlorobenzene	8.24	1.0	10	0	82.4	71.7	127	0	0		
2-Butanone	8.87	5.0	10	0	88.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.68	5.0	10	0	96.8	68.7	118	0	0		
Acetone	11.93	5.0	10	0	119	69.2	133	0	0		
Benzene	10.54	1.0	10	0	105	71.2	122	0	0		
Carbon disulfide	4.48	1.0	5	0	89.6	67.8	134	0	0		
Carbon tetrachloride	9.66	1.0	10	0	96.6	74.5	122	0	0		
Chlorobenzene	10.62	1.0	10	0	106	72.7	124	0	0		
Chloroethane	10.32	1.0	10	0	103	72.3	136	0	0		
Chloroform	11.25	1.0	10	0	112	71.6	133	0	0		B
Dibromochloromethane	9.68	1.0	10	0	96.8	70.6	124	0	0		
Ethylbenzene	11.37	1.0	10	0	114	70.9	126	0	0		
Methylene chloride	11.11	1.0	10	0	111	66.3	130	0	0		
Tetrachloroethene	10.08	1.0	10	0	101	72.4	119	0	0		
Toluene	10.1	1.0	10	0	101	71.8	116	0	0		
trans-1,2-Dichloroethene	10.67	1.0	10	0	107	70.3	120	0	0		
Trichloroethene	9.61	1.0	10	0	96.1	73	127	0	0		
Vinyl chloride	12.24	1.0	10	0	122	65.2	134	0	0		
Xylenes, Total	33.16	1.0	30	0	111	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.33	5.0	50	0	96.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.13	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	49.9	5.0	50	0	99.8	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175441

ms	SeqNo: **2701720**	TestNo: **SW8260C**	RunNo: **175441**
	Samp ID: **190916053-004b (091619-04-SW-B-**	Units: **µg/L**	Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.54	1.0	10	0	95.4	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.8	1.0	10	0	78	70.1	123	0	0		
1,1,2-Trichloroethane	9.25	1.0	10	0	92.5	72.1	119	0	0		
1,1-Dichloroethane	9.77	1.0	10	0	97.7	70.4	126	0	0		
1,1-Dichloroethene	9.92	1.0	10	0	99.2	70.2	125	0	0		
1,2,3-Trichloropropane	4.11	1.0	5	0	82.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.36	1.0	10	0	83.6	70.2	123	0	0		
1,2-Dichloroethane	8.52	1.0	10	0.13	83.9	73.5	126	0	0		
1,3-Dichlorobenzene	7.89	1.0	10	0	78.9	70.4	124	0	0		
1,3-Dichloropropane	4.97	1.0	5	0	99.4	64	125	0	0		
1,4-Dichlorobenzene	7.72	1.0	10	0.19	75.3	70.8	127	0	0		
2-Butanone	9.6	5.0	10	0	96	60.5	123	0	0		
4-Methyl-2-pentanone	7.79	5.0	10	0	77.9	52.8	133	0	0		
Acetone	11.94	5.0	10	0	119	56.3	135	0	0		
Benzene	9.71	1.0	10	0	97.1	70.2	127	0	0		
Carbon disulfide	4.15	1.0	5	0	83	62.2	130	0	0		
Carbon tetrachloride	9.46	1.0	10	0	94.6	56.4	137	0	0		
Chlorobenzene	8.74	1.0	10	0	87.4	72.7	128	0	0		
Chloroethane	9.91	1.0	10	0	99.1	71.3	135	0	0		
Chloroform	9.19	1.0	10	0	91.9	70.2	125	0	0		B
Dibromochloromethane	8.54	1.0	10	0	85.4	69.5	123	0	0		
Ethylbenzene	9.42	1.0	10	0	94.2	71.9	129	0	0		
Methylene chloride	9.18	1.0	10	0	91.8	65.3	123	0	0		
Tetrachloroethene	9.75	1.0	10	0	97.5	74.5	121	0	0		
Toluene	9.3	1.0	10	0	93	73	122	0	0		
trans-1,2-Dichloroethene	9.7	1.0	10	0	97	69.1	133	0	0		
Trichloroethene	8.94	1.0	10	0	89.4	71.1	126	0	0		
Vinyl chloride	12.06	1.0	10	0	121	65	137	0	0		
Xylenes, Total	26.98	1.0	30	0.38	88.7	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	47.79	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.04	5.0	50	0	96.1	76.5	125	0	0		
Surr: Toluene-d8	49.48	5.0	50	0	99	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175441

msd

SeqNo: **2701721** TestNo: **SW8260C** RunNo: **175441**
Samp ID: **190916053-004b (091619-04-SW-B-** Units: **µg/L** Analysis Date: **9/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.32	1.0	10	0	93.2	71.6	126	9.54	2.33	20.4	
1,1,2,2-Tetrachloroethane	8.36	1.0	10	0	83.6	70.1	123	7.8	6.93	18.6	
1,1,2-Trichloroethane	9.04	1.0	10	0	90.4	72.1	119	9.25	2.30	20	
1,1-Dichloroethane	9.19	1.0	10	0	91.9	70.4	126	9.77	6.12	19.2	
1,1-Dichloroethene	9.46	1.0	10	0	94.6	70.2	125	9.92	4.75	16.1	
1,2,3-Trichloropropane	4.13	1.0	5	0	82.6	53.7	101	4.11	0.485	20	
1,2-Dichlorobenzene	8.56	1.0	10	0	85.6	70.2	123	8.36	2.36	17.9	
1,2-Dichloroethane	8.02	1.0	10	0.13	78.9	73.5	126	8.52	6.05	15.6	
1,3-Dichlorobenzene	8.53	1.0	10	0	85.3	70.4	124	7.89	7.80	14.3	
1,3-Dichloropropane	4.83	1.0	5	0	96.6	64	125	4.97	2.86	0	
1,4-Dichlorobenzene	8.27	1.0	10	0.19	80.8	70.8	127	7.72	6.88	14.4	
2-Butanone	10.18	5.0	10	0	102	60.5	123	9.6	5.86	15	
4-Methyl-2-pentanone	8.86	5.0	10	0	88.6	52.8	133	7.79	12.9	11.9	Z
Acetone	9.94	5.0	10	0	99.4	56.3	135	11.94	18.3	10.6	Z
Benzene	9.19	1.0	10	0	91.9	70.2	127	9.71	5.50	18.4	
Carbon disulfide	4.07	1.0	5	0	81.4	62.2	130	4.15	1.95	13.1	
Carbon tetrachloride	9.42	1.0	10	0	94.2	56.4	137	9.46	0.424	20.3	
Chlorobenzene	9.52	1.0	10	0	95.2	72.7	128	8.74	8.54	19.6	
Chloroethane	9.47	1.0	10	0	94.7	71.3	135	9.91	4.54	27.8	
Chloroform	8.58	1.0	10	0	85.8	70.2	125	9.19	6.87	20.3	B
Dibromochloromethane	8.41	1.0	10	0	84.1	69.5	123	8.54	1.53	18.8	
Ethylbenzene	10	1.0	10	0	100	71.9	129	9.42	5.97	16.3	
Methylene chloride	8.87	1.0	10	0	88.7	65.3	123	9.18	3.43	21.4	
Tetrachloroethene	9.88	1.0	10	0	98.8	74.5	121	9.75	1.32	20.9	
Toluene	9.01	1.0	10	0	90.1	73	122	9.3	3.17	19.4	
trans-1,2-Dichloroethene	9.21	1.0	10	0	92.1	69.1	133	9.7	5.18	16.1	
Trichloroethene	9.09	1.0	10	0	90.9	71.1	126	8.94	1.66	16.6	
Vinyl chloride	11.42	1.0	10	0	114	65	137	12.06	5.45	20.5	
Xylenes, Total	28.61	1.0	30	0.38	94.1	72	130	26.98	5.86	16.1	
Surr: 1,2-Dichloroethane-d4	46.48	5.0	50	0	93	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	51.66	5.0	50	0	103	76.5	125	0	0	0	
Surr: Toluene-d8	50.55	5.0	50	0	101	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

mblk

SeqNo: **2702125** TestNo: **SW8260C** RunNo: **175463**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.27	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.24	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.35	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.83	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.37	1.0									J
Surr: 1,2-Dichloroethane-d4	46.84	5.0	50	0	93.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.27	5.0	50	0	98.5	76.5	125	0	0		
Surr: Toluene-d8	49.35	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190916053
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

lcs	SeqNo: **2702123**	TestNo: **SW8260C**	RunNo: **175463**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.39	1.0	10	0	93.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.16	1.0	10	0	81.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.25	1.0	10	0	92.5	73.1	123	0	0		
1,1-Dichloroethane	9.45	1.0	10	0	94.5	73.2	127	0	0		
1,1-Dichloroethene	9.98	1.0	10	0	99.8	70.3	128	0	0		
1,2,3-Trichloropropane	3.93	1.0	5	0	78.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	71	124	0	0		
1,2-Dichloroethane	8.93	1.0	10	0	89.3	72.5	127	0	0		
1,3-Dichlorobenzene	8.78	1.0	10	0	87.8	72.2	121	0	0		
1,3-Dichloropropane	4.91	1.0	5	0	98.2	76	122	0	0		
1,4-Dichlorobenzene	8.5	1.0	10	0	85	71.7	127	0	0		
2-Butanone	8.21	5.0	10	0	82.1	65.1	132	0	0		
4-Methyl-2-pentanone	8.78	5.0	10	0	87.8	68.7	118	0	0		
Acetone	10.45	5.0	10	0	104	69.2	133	0	0		
Benzene	9.11	1.0	10	0	91.1	71.2	122	0	0		
Carbon disulfide	4.08	1.0	5	0	81.6	67.8	134	0	0		
Carbon tetrachloride	9.36	1.0	10	0	93.6	74.5	122	0	0		
Chlorobenzene	8.83	1.0	10	0	88.3	72.7	124	0	0		
Chloroethane	10	1.0	10	0	100	72.3	136	0	0		
Chloroform	9.63	1.0	10	0	96.3	71.6	133	0	0		
Dibromochloromethane	8.71	1.0	10	0	87.1	70.6	124	0	0		
Ethylbenzene	9.73	1.0	10	0	97.3	70.9	126	0	0		
Methylene chloride	9.71	1.0	10	0	97.1	66.3	130	0	0		
Tetrachloroethene	9.99	1.0	10	0	99.9	72.4	119	0	0		
Toluene	9.1	1.0	10	0	91	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	9.18	1.0	10	0	91.8	73	127	0	0		
Vinyl chloride	11.18	1.0	10	0	112	65.2	134	0	0		
Xylenes, Total	28.58	1.0	30	0	95.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.55	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.07	5.0	50	0	96.1	76.5	125	0	0		
Surr: Toluene-d8	49.54	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

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CHAIN OF CUSTODY RECORD

AES Work Order # 190916053

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091619-01-SW-U-C-1	9/16/19	0855	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A P	↓		↓	1	TSS
002	091619-02-SW-A-A-1	9/16/19	0905	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A P	↓		↓	1	TSS
003	091619-03-SW-D-C-1	9/16/19	0930	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A P	↓		↓	1	TSS
004	091619-04-SW-B-C-1	9/16/19	0835	A	W		✓	2	PCBs
	↓	↓	↓	P	↓		↓	2	VOCs
	↓	↓	↓	A P	↓		↓	1	TSS
005	091619-05-SW-B-C-1	9/16/19	0950	A P	W		✓	1	TSS
006	091619-01-SW-U-C-3	9/16/19	1130	A P	W		✓	2	PCBs

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/16/19 405 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/16/19 4:52 pm

Temperature: Ambient or (Chilled) 5°C
Notes:_____

AES Bottles: Y (☒) N (☐)

Properly Preserved: (Y) N
Notes:_____

Received Within Holding Times: (Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Demo
190916053

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19091605 3

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Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Gehan
Client Phone No: 978-905-2124	**Client Email:** john.bleiler@aecom.com	**PO Number:** 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	091619-01-SW-U-C-3	9/16/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	091619-TB01			A/P	TB				trip blank Lot# VOA-F4611
008	091619-TB02			A/P	TB				trip blank Lot# VOA-F4552
				A/P					JM 9/16/19
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					
				A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 9/16/19 4:05pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 9/16/19 4:52P

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled) 5°C	Y ☒ N ☐	(Y) N	(Y) N
Notes:_____		Notes:_____	Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190916053

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/18/2019

9/16/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
190916053-001	091619-01-SW-U-C-1	Water	9/16/2019	9/18/2019	C	B	A				
190916053-002	091619-02-SW-A-A-1	Water	9/16/2019	9/18/2019	C	B	A				
190916053-003	091619-03-SW-D-C-1	Water	9/16/2019	9/18/2019	C	B	A				
190916053-004	091619-04-SW-B-C-1	Water	9/16/2019	9/18/2019	C	B	A				
190916053-005	091619-05-SW-B-C-1	Water	9/16/2019	9/18/2019			A				
190916053-006	091619-01-SW-U-C-3	Water	9/16/2019	9/18/2019	C	B	A				
190916053-007	091619-TB01	Trip Blank	9/16/2019	9/18/2019		A					
190916053-008	091619-TB02	Trip Blank	9/16/2019	9/18/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/17/19 – 9/23/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 9/17/19 through 9/23/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of metals. Whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. The initial metals sample were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one exceedance of the water quality criteria (chlorobenzene). The chlorobenzene exceedance (6.3 µg/l vs threshold of 5 µg/l) on 9/19/19 was at the downstream (Buoy 3) location. The sample was collected approximately 3 hours before low tide. The data received for the next day's sample set (9/20/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 13 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 15 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically in the low teens and never higher than 35 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
091719-01-SW-U-A-1	08:05	BENZENE	N	ug/l	10	0.6	J		U	18	1.47	3.1	High Tide	4.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-01-SW-U-A-1	08:05	CHLOROBENZENE	N	ug/l	5	3.3			U	18	1.47	3.1	High Tide	4.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-01-SW-U-A-1	08:05	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	2			U	18	1.47	3.1	High Tide	4.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-02-SW-A-A-1	08:20	BENZENE	N	ug/l	10	0.5	J		A	23	1.37	2.81	High Tide	4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-02-SW-A-A-1	08:20	CHLOROBENZENE	N	ug/l	5	2.7			A	23	1.37	2.81	High Tide	4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-02-SW-A-A-1	08:20	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	1			A	23	1.37	2.81	High Tide	4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-03-SW-D-A-1	08:35	BENZENE	N	ug/l	10	0.8	J		D	34	3.14	2.53	High Tide	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-03-SW-D-A-1	08:35	CHLOROBENZENE	N	ug/l	5	3.6			D	34	3.14	2.53	High Tide	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-03-SW-D-A-1	08:35	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	2			D	34	3.14	2.53	High Tide	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-1	07:45	BENZENE	N	ug/l	10	0.5	J		B	18	4.01	3.42	High Tide	2.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-1	07:45	CHLOROBENZENE	N	ug/l	5	2.6			B	18	4.01	3.42	High Tide	2.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-1	07:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	1			B	18	4.01	3.42	High Tide	2.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-2	08:00	BENZENE	N	ug/l	10	0.5	J		B	18	1.61	3.1	High Tide	4.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-2	08:00	CHLOROBENZENE	N	ug/l	5	2.7			B	18	1.61	3.1	High Tide	4.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091719-04-SW-B-A-2	08:00	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.8			B	18	1.61	3.1	High Tide	4.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:25
091819-03-SW-D-A-1	12:45	BENZENE	N	ug/l	10	0.2	J		D	29	4.12	-0.31	Outgoing Tide (Ebb)	9.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:45
091819-03-SW-D-A-1	12:45	CHLOROBENZENE	N	ug/l	5	0.7	J		D	29	4.12	-0.31	Outgoing Tide (Ebb)	9.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:45
091919-01-SW-U-A-1	11:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.9			U	15	3.96	1.33	Outgoing Tide (Ebb)	6.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
091919-02-SW-A-A-1	12:30	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.5			A	20	3.37	0.8	Outgoing Tide (Ebb)	6.7	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
091919-03-SW-D-A-1	12:45	BENZENE	N	ug/l	10	1.4			D	30	8.75	0.6	Outgoing Tide (Ebb)	17.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
091919-03-SW-D-A-1	12:45	CHLOROBENZENE	N	ug/l	5	6.3		X	D	30	8.75	0.6	Outgoing Tide (Ebb)	17.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
091919-03-SW-D-A-1	12:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.8			D	30	8.75	0.6	Outgoing Tide (Ebb)	17.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
091919-04-SW-B-A-1	11:30	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			B	15	1.85	1.52	Outgoing Tide (Ebb)	4.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:20
092019-01-SW-U-A-1	13:20	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			U	14	4.23	0.32	Outgoing Tide (Ebb)	5.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
092019-03-SW-D-B-1	14:30	AROCLOR-1242	N	ug/l	0.2	0.123			D	16	6.97	-0.46	Outgoing Tide (Ebb)	10.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
092019-03-SW-D-B-1	14:30	BENZENE	N	ug/l	10	0.3	J		D	16	6.97	-0.46	Outgoing Tide (Ebb)	10.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
092019-03-SW-D-B-1	14:30	CHLOROBENZENE	N	ug/l	5	1	J		D	16	6.97	-0.46	Outgoing Tide (Ebb)	10.4	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00
092319-01-SW-D-A-1	08:45	AROCLOR-1242	N	ug/l	0.2	0.064	J		D	20	2.72	3.57	Low Tide	8.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
092319-03-SW-U-B-1	09:25	AROCLOR-1242	N	ug/l	0.2	0.037	J		U	18	12.56	4.03	Incoming Tide (Flood)	35.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
092319-04-SW-B-C-1	08:35	AROCLOR-1242	N	ug/l	0.2	0.056	J		B	3	2.16	3.27	Low Tide	7.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30

J: Analyte detected below quantitation limit

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
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September 19, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190917061
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*19-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190917061		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-01-SW-U-A-1
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	9/18/2019 2:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 2:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Benzene	**0.6**	1.0	J	µg/L	1	9/18/2019 2:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 2:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Chlorobenzene	**3.3**	1.0		µg/L	1	9/18/2019 2:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 2:05:00 PM
1,2-Dichlorobenzene	**1.0**	1.0		µg/L	1	9/18/2019 2:05:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/18/2019 2:05:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/18/2019 2:05:00 PM
Surr: 1,2-Dichloroethane-d4	**95.5**	80.9-122		%REC	1	9/18/2019 2:05:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	9/18/2019 2:05:00 PM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	9/18/2019 2:05:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.7**	1.1		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-02-SW-A-A-1
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Acetone	**ND**	5.0		µg/L	1	9/18/2019 2:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 2:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Benzene	**0.5**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 2:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Chlorobenzene	**2.7**	1.0		µg/L	1	9/18/2019 2:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 2:26:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
1,2-Dichlorobenzene	**0.8**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/18/2019 2:26:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	9/18/2019 2:26:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/18/2019 2:26:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	9/18/2019 2:26:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.0**	1.1		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-03-SW-D-A-1
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Acetone	**ND**	5.0		µg/L	1	9/18/2019 2:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/18/2019 2:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 2:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Benzene	**0.8**	1.0	J	µg/L	1	9/18/2019 2:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 2:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Chlorobenzene	**3.6**	1.0		µg/L	1	9/18/2019 2:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 2:47:00 PM
1,2-Dichlorobenzene	**1.0**	1.0		µg/L	1	9/18/2019 2:47:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/18/2019 2:47:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/18/2019 2:47:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	9/18/2019 2:47:00 PM
Surr: 4-Bromofluorobenzene	**98.4**	76.5-125		%REC	1	9/18/2019 2:47:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	9/18/2019 2:47:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.2**	1.1		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-04-SW-B-A-1
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Acetone	**ND**	5.0		µg/L	1	9/18/2019 3:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 3:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Benzene	**0.5**	1.0	J	µg/L	1	9/18/2019 3:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 3:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Chlorobenzene	**2.6**	1.0		µg/L	1	9/18/2019 3:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:09:00 PM
1,2-Dichlorobenzene	**0.9**	1.0	J	µg/L	1	9/18/2019 3:09:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/18/2019 3:09:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	9/18/2019 3:09:00 PM
Surr: 1,2-Dichloroethane-d4	**95.3**	80.9-122		%REC	1	9/18/2019 3:09:00 PM
Surr: 4-Bromofluorobenzene	**98.6**	76.5-125		%REC	1	9/18/2019 3:09:00 PM
Surr: Toluene-d8	**97.6**	80.4-121		%REC	1	9/18/2019 3:09:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**2.9**	1.0		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-05-SW-B-A-1
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/18/2019)						
TSS (Residue, Non-Filterable)	**6.3**	1.1		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-04-SW-B-A-2
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Acetone	**ND**	5.0		µg/L	1	9/18/2019 3:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/18/2019 3:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 3:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Benzene	**0.5**	1.0	J	µg/L	1	9/18/2019 3:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 3:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Chlorobenzene	**2.7**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
1,2-Dichlorobenzene	**0.8**	1.0	J	µg/L	1	9/18/2019 3:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:30:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	9/18/2019 3:30:00 PM
Surr: 1,2-Dichloroethane-d4	**94.6**	80.9-122		%REC	1	9/18/2019 3:30:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/18/2019 3:30:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	9/18/2019 3:30:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.1**	1.1		mg/L	1	9/18/2019

Adirondack Environmental Services, Inc

Date: *19-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091719-TB01
Work Order:	**190917061**	**Collection Date:**	9/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190917061-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Methylene chloride	**1.5**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Acetone	**5.1**	5.0		µg/L	1	9/18/2019 3:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/18/2019 3:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/18/2019 3:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Benzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/18/2019 3:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Toluene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/18/2019 3:52:00 PM
Surr: 1,2-Dichloroethane-d4	**97.2**	80.9-122		%REC	1	9/18/2019 3:52:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/18/2019 3:52:00 PM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	9/18/2019 3:52:00 PM

CLIENT: AECOM Environment
Work Order: 190917061
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75648

LCS

SeqNo: **2703056** **PrepDate:9/18/2019** TestNo: **SM2540D** RunNo: **175519**
Samp ID: **LCS-75648** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	512	40.0	497	0	103	86.5	114	0	0		

DUP

SeqNo: **2703064** **PrepDate:9/18/2019** TestNo: **SM2540D** RunNo: **175519**
Samp ID: **190912039-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	14.67	3.30	0	0	0	0	0	15	2.25	10	

DUP

SeqNo: **2703067** **PrepDate:9/18/2019** TestNo: **SM2540D** RunNo: **175519**
Samp ID: **190912053-008** **PrepRef:** Units: **mg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	2980	67.0	0	0	0	0	0	2787	6.71	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190917061
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

mblk

SeqNo: **2702125** TestNo: **SW8260C** RunNo: **175463**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.27	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.24	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.35	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.83	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.37	1.0									J
Surr: 1,2-Dichloroethane-d4	46.84	5.0	50	0	93.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.27	5.0	50	0	98.5	76.5	125	0	0		
Surr: Toluene-d8	49.35	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190917061
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

lcs

SeqNo: **2702123** TestNo: **SW8260C** RunNo: **175463**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.39	1.0	10	0	93.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.16	1.0	10	0	81.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.25	1.0	10	0	92.5	73.1	123	0	0		
1,1-Dichloroethane	9.45	1.0	10	0	94.5	73.2	127	0	0		
1,1-Dichloroethene	9.98	1.0	10	0	99.8	70.3	128	0	0		
1,2,3-Trichloropropane	3.93	1.0	5	0	78.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	71	124	0	0		
1,2-Dichloroethane	8.93	1.0	10	0	89.3	72.5	127	0	0		
1,3-Dichlorobenzene	8.78	1.0	10	0	87.8	72.2	121	0	0		
1,3-Dichloropropane	4.91	1.0	5	0	98.2	76	122	0	0		
1,4-Dichlorobenzene	8.5	1.0	10	0	85	71.7	127	0	0		
2-Butanone	8.21	5.0	10	0	82.1	65.1	132	0	0		
4-Methyl-2-pentanone	8.78	5.0	10	0	87.8	68.7	118	0	0		
Acetone	10.45	5.0	10	0	104	69.2	133	0	0		
Benzene	9.11	1.0	10	0	91.1	71.2	122	0	0		
Carbon disulfide	4.08	1.0	5	0	81.6	67.8	134	0	0		
Carbon tetrachloride	9.36	1.0	10	0	93.6	74.5	122	0	0		
Chlorobenzene	8.83	1.0	10	0	88.3	72.7	124	0	0		
Chloroethane	10	1.0	10	0	100	72.3	136	0	0		
Chloroform	9.63	1.0	10	0	96.3	71.6	133	0	0		
Dibromochloromethane	8.71	1.0	10	0	87.1	70.6	124	0	0		
Ethylbenzene	9.73	1.0	10	0	97.3	70.9	126	0	0		
Methylene chloride	9.71	1.0	10	0	97.1	66.3	130	0	0		
Tetrachloroethene	9.99	1.0	10	0	99.9	72.4	119	0	0		
Toluene	9.1	1.0	10	0	91	71.8	116	0	0		
trans-1,2-Dichloroethene	9.32	1.0	10	0	93.2	70.3	120	0	0		
Trichloroethene	9.18	1.0	10	0	91.8	73	127	0	0		
Vinyl chloride	11.18	1.0	10	0	112	65.2	134	0	0		
Xylenes, Total	28.58	1.0	30	0	95.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.55	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.07	5.0	50	0	96.1	76.5	125	0	0		
Surr: Toluene-d8	49.54	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190917061
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

ms	SeqNo: **2702633**	TestNo: **SW8260C**	RunNo: **175463**
	Samp ID: **190917061-004b (091719-04-SW-B-**	Units: **µg/L**	Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.8	1.0	10	0	98	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.33	1.0	10	0	73.3	70.1	123	0	0		
1,1,2-Trichloroethane	8.8	1.0	10	0	88	72.1	119	0	0		
1,1-Dichloroethane	9.05	1.0	10	0	90.5	70.4	126	0	0		
1,1-Dichloroethene	9.63	1.0	10	0	96.3	70.2	125	0	0		
1,2,3-Trichloropropane	3.49	1.0	5	0	69.8	53.7	101	0	0		
1,2-Dichlorobenzene	8.72	1.0	10	0.87	78.5	70.2	123	0	0		
1,2-Dichloroethane	8.42	1.0	10	0	84.2	73.5	126	0	0		
1,3-Dichlorobenzene	8.49	1.0	10	0	84.9	70.4	124	0	0		
1,3-Dichloropropane	4.62	1.0	5	0	92.4	64	125	0	0		
1,4-Dichlorobenzene	8.08	1.0	10	0.24	78.4	70.8	127	0	0		
2-Butanone	7.77	5.0	10	0	77.7	60.5	123	0	0		
4-Methyl-2-pentanone	7.61	5.0	10	0	76.1	52.8	133	0	0		
Acetone	8.77	5.0	10	0	87.7	56.3	135	0	0		
Benzene	9.6	1.0	10	0.51	90.9	70.2	127	0	0		
Carbon disulfide	3.83	1.0	5	0	76.6	62.2	130	0	0		
Carbon tetrachloride	9.74	1.0	10	0	97.4	56.4	137	0	0		
Chlorobenzene	11.95	1.0	10	2.56	93.9	72.7	128	0	0		
Chloroethane	8.8	1.0	10	0	88	71.3	135	0	0		
Chloroform	8.87	1.0	10	0	88.7	70.2	125	0	0		
Dibromochloromethane	8.43	1.0	10	0	84.3	69.5	123	0	0		
Ethylbenzene	10.3	1.0	10	0	103	71.9	129	0	0		
Methylene chloride	8.77	1.0	10	0	87.7	65.3	123	0	0		
Tetrachloroethene	9.93	1.0	10	0	99.3	74.5	121	0	0		
Toluene	9.3	1.0	10	0	93	73	122	0	0		
trans-1,2-Dichloroethene	9.25	1.0	10	0	92.5	69.1	133	0	0		
Trichloroethene	8.93	1.0	10	0	89.3	71.1	126	0	0		
Vinyl chloride	8.5	1.0	10	0	85	65	137	0	0		
Xylenes, Total	29.65	1.0	30	0.29	97.9	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.42	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.59	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	50.18	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190917061
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175463

msd

SeqNo: **2702634** TestNo: **SW8260C** RunNo: **175463**
Samp ID: **190917061-004b (091719-04-SW-B-** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.02	1.0	10	0	90.2	71.6	126	9.8	8.29	20.4	
1,1,2,2-Tetrachloroethane	7.48	1.0	10	0	74.8	70.1	123	7.33	2.03	18.6	
1,1,2-Trichloroethane	8.3	1.0	10	0	83	72.1	119	8.8	5.85	20	
1,1-Dichloroethane	8.69	1.0	10	0	86.9	70.4	126	9.05	4.06	19.2	
1,1-Dichloroethene	9.15	1.0	10	0	91.5	70.2	125	9.63	5.11	16.1	
1,2,3-Trichloropropane	3.47	1.0	5	0	69.4	53.7	101	3.49	0.575	20	
1,2-Dichlorobenzene	9.42	1.0	10	0.87	85.5	70.2	123	8.72	7.72	17.9	
1,2-Dichloroethane	8.2	1.0	10	0	82	73.5	126	8.42	2.65	15.6	
1,3-Dichlorobenzene	8.6	1.0	10	0	86	70.4	124	8.49	1.29	14.3	
1,3-Dichloropropane	4.34	1.0	5	0	86.8	64	125	4.62	6.25	0	
1,4-Dichlorobenzene	8.67	1.0	10	0.24	84.3	70.8	127	8.08	7.04	14.4	
2-Butanone	7.57	5.0	10	0	75.7	60.5	123	7.77	2.61	15	
4-Methyl-2-pentanone	7.46	5.0	10	0	74.6	52.8	133	7.61	1.99	11.9	
Acetone	10.07	5.0	10	0	101	56.3	135	8.77	13.8	10.6	Z
Benzene	9.15	1.0	10	0.51	86.4	70.2	127	9.6	4.80	18.4	
Carbon disulfide	3.75	1.0	5	0	75	62.2	130	3.83	2.11	13.1	
Carbon tetrachloride	9.34	1.0	10	0	93.4	56.4	137	9.74	4.19	20.3	
Chlorobenzene	11.14	1.0	10	2.56	85.8	72.7	128	11.95	7.02	19.6	
Chloroethane	8.25	1.0	10	0	82.5	71.3	135	8.8	6.45	27.8	
Chloroform	8.56	1.0	10	0	85.6	70.2	125	8.87	3.56	20.3	
Dibromochloromethane	8.29	1.0	10	0	82.9	69.5	123	8.43	1.67	18.8	
Ethylbenzene	9.36	1.0	10	0	93.6	71.9	129	10.3	9.56	16.3	
Methylene chloride	8.52	1.0	10	0	85.2	65.3	123	8.77	2.89	21.4	
Tetrachloroethene	9.55	1.0	10	0	95.5	74.5	121	9.93	3.90	20.9	
Toluene	8.84	1.0	10	0	88.4	73	122	9.3	5.07	19.4	
trans-1,2-Dichloroethene	8.92	1.0	10	0	89.2	69.1	133	9.25	3.63	16.1	
Trichloroethene	8.91	1.0	10	0	89.1	71.1	126	8.93	0.224	16.6	
Vinyl chloride	8.35	1.0	10	0	83.5	65	137	8.5	1.78	20.5	
Xylenes, Total	27.29	1.0	30	0.29	90	72	130	29.65	8.29	16.1	
Surr: 1,2-Dichloroethane-d4	48.54	5.0	50	0	97.1	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.06	5.0	50	0	98.1	76.5	125	0	0	0	
Surr: Toluene-d8	49.48	5.0	50	0	99	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190917061

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.Heiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091719-01-SW-U-A-1	9/17/19	0805	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
002	091719-02-SW-A-A-1	9/17/19	0820	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
003	091719-03-SW-D-A-1	9/17/19	0835	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
004	091719-04-SW-B-A-1	9/17/19	0745	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
005	091719-05-SW-B-A-1	9/17/19	0850	A	W		✓	1	TSS
				P					
006	091719-04-SW-B-A-2	9/17/19	0800	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
007	091719-TB01			A	TB			1	trip blank Lot # 60A-P460
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/17/19 16:10
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/17/19 4:28 PM

Temperature: Ambient or (Chilled) Notes: 4°C

AES Bottles: (Y) ☐ N

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190917061

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 20, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190918063
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/18/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*20-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190918063		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT: AECOM Environment
Work Order: **190918063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091819-01-SW-U-A-1
Collection Date: 9/18/2019
Lab Sample ID: 190918063-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A **(Prep: SW3535A - 9/18/2019)**						Analyst: **KF**
Aroclor 1016	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
PCB, Total	**ND**	0.065		µg/L	1	9/18/2019 7:03:18 PM
Surr: Decachlorobiphenyl	**69.2**	57.1-135		%REC	1	9/18/2019 7:03:18 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Acetone	**ND**	5.0		µg/L	1	9/19/2019 12:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/19/2019 12:41:00 PM
2-Butanone	**ND**	5.0	S	µg/L	1	9/19/2019 12:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Benzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0	N	µg/L	1	9/19/2019 12:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Toluene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-01-SW-U-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/19/2019 12:41:00 PM
Surr: 1,2-Dichloroethane-d4	**98.9**	80.9-122		%REC	1	9/19/2019 12:41:00 PM
Surr: 4-Bromofluorobenzene	**95.1**	76.5-125		%REC	1	9/19/2019 12:41:00 PM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	9/19/2019 12:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/19/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.7**	1.0		mg/L	1	9/19/2019

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-02-SW-A-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
PCB, Total	**ND**	0.065		µg/L	1	9/18/2019 7:16:40 PM
Surr: Decachlorobiphenyl	**81.8**	57.1-135		%REC	1	9/18/2019 7:16:40 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Acetone	**2.7**	5.0	J	µg/L	1	9/19/2019 1:03:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
2-Butanone	**ND**	5.0	S	µg/L	1	9/19/2019 1:03:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Benzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/19/2019 1:03:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Toluene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-02-SW-A-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/19/2019 1:03:00 PM
Surr: 1,2-Dichloroethane-d4	**97.8**	80.9-122		%REC	1	9/19/2019 1:03:00 PM
Surr: 4-Bromofluorobenzene	**97.6**	76.5-125		%REC	1	9/19/2019 1:03:00 PM
Surr: Toluene-d8	**98.2**	80.4-121		%REC	1	9/19/2019 1:03:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/19/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.4**	1.0		mg/L	1	9/19/2019

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-03-SW-D-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
PCB, Total	**ND**	0.065		µg/L	1	9/18/2019 7:30:00 PM
Surr: Decachlorobiphenyl	**76.2**	57.1-135		%REC	1	9/18/2019 7:30:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Acetone	**3.5**	5.0	J	µg/L	1	9/19/2019 1:24:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
2-Butanone	**ND**	5.0	S	µg/L	1	9/19/2019 1:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	9/19/2019 1:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/19/2019 1:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Toluene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Chlorobenzene	**0.7**	1.0	J	µg/L	1	9/19/2019 1:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-03-SW-D-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/19/2019 1:24:00 PM
Surr: 1,2-Dichloroethane-d4	**97.8**	80.9-122		%REC	1	9/19/2019 1:24:00 PM
Surr: 4-Bromofluorobenzene	**99.6**	76.5-125		%REC	1	9/19/2019 1:24:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	9/19/2019 1:24:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/19/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.8**	1.1		mg/L	1	9/19/2019

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT: AECOM Environment
Work Order: **190918063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091819-04-SW-B-A-1
Collection Date: 9/18/2019
Lab Sample ID: 190918063-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
PCB, Total	**ND**	0.065		µg/L	1	9/18/2019 7:52:40 PM
Surr: Decachlorobiphenyl	**75.2**	57.1-135		%REC	1	9/18/2019 7:52:40 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Acetone	**ND**	5.0		µg/L	1	9/19/2019 1:46:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
2-Butanone	**ND**	5.0	S	µg/L	1	9/19/2019 1:46:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Benzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/19/2019 1:46:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Toluene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-04-SW-B-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/19/2019 1:46:00 PM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	9/19/2019 1:46:00 PM
Surr: 4-Bromofluorobenzene	**98.5**	76.5-125		%REC	1	9/19/2019 1:46:00 PM
Surr: Toluene-d8	**97.6**	80.4-121		%REC	1	9/19/2019 1:46:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/19/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.3**	1.1		mg/L	1	9/19/2019

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091819-05-SW-B-A-1
Work Order:	**190918063**	**Collection Date:**	9/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190918063-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/19/2019)						
TSS (Residue, Non-Filterable)	**6.3**	1.0		mg/L	1	9/19/2019

Adirondack Environmental Services, Inc

Date: *20-Sep-19*

CLIENT: AECOM Environment
Work Order: **190918063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 091819-TB01
Collection Date: 9/18/2019
Lab Sample ID: 190918063-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Methylene chloride	**2.1**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Acetone	**5.0**	5.0	J	µg/L	1	9/19/2019 2:07:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/19/2019 2:07:00 PM
2-Butanone	**ND**	5.0	S	µg/L	1	9/19/2019 2:07:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Benzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/19/2019 2:07:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Toluene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/19/2019 2:07:00 PM
Surr: 1,2-Dichloroethane-d4	**98.8**	80.9-122		%REC	1	9/19/2019 2:07:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/19/2019 2:07:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	9/19/2019 2:07:00 PM

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75668

mblk

SeqNo: **2702568** PrepDate:**9/18/2019** TestNo: **SW8082A** RunNo: **175489**
Samp ID: **mb-75668** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0788	0	0.1	0	78.8	57.1	135	0	0		

lcs

SeqNo: **2702569** PrepDate:**9/18/2019** TestNo: **SW8082A** RunNo: **175489**
Samp ID: **lcs-75668** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5356	0.0650	0.5	0	107	60	140	0	0		
PCB, Total	0.5356	0.0650	0.5	0	107	60	140	0	0		
Surr: Decachlorobiphenyl	0.0866	0	0.1	0	86.6	57.1	135	0	0		

lcsd

SeqNo: **2702570** PrepDate:**9/18/2019** TestNo: **SW8082A** RunNo: **175489**
Samp ID: **lcsd-75668** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5712	0.0650	0.5	0	114	60	140	0.5356	6.43	30	
PCB, Total	0.5712	0.0650	0.5	0	114	60	140	0.5356	6.43	30	
Surr: Decachlorobiphenyl	0.0816	0	0.1	0	81.6	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75697

LCS

SeqNo: **2703652** **PrepDate:9/19/2019** TestNo: **SM2540D** RunNo: **175554**
Samp ID: **LCS-75697** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	544	40.0	497	0	109	86.5	114	0	0		

DUP

SeqNo: **2703655** **PrepDate:9/19/2019** TestNo: **SM2540D** RunNo: **175554**
Samp ID: **190912076-003** **PrepRef:** Units: **mg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	52	10.0	0	0	0	0	0	57	9.17	10	

DUP

SeqNo: **2703661** **PrepDate:9/19/2019** TestNo: **SM2540D** RunNo: **175554**
Samp ID: **190913043-003** **PrepRef:** Units: **mg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	344	20.0	0	0	0	0	0	338	1.76	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175539

mblk

SeqNo: **2703410** TestNo: **SW8260C** RunNo: **175539**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.14	1.0									J
1,3-Dichlorobenzene	0.15	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.2	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.9	5.0	50	0	97.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.54	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	48.34	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175539

lcs

SeqNo: **2703407** TestNo: **SW8260C** RunNo: **175539**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.31	1.0	10	0	93.1	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.18	1.0	10	0	91.8	72.3	118	0	0		
1,1,2-Trichloroethane	8.46	1.0	10	0	84.6	73.1	123	0	0		
1,1-Dichloroethane	8.75	1.0	10	0	87.5	73.2	127	0	0		
1,1-Dichloroethene	9.5	1.0	10	0	95	70.3	128	0	0		
1,2,3-Trichloropropane	3.88	1.0	5	0	77.6	68.4	115	0	0		
1,2-Dichlorobenzene	8.4	1.0	10	0	84	71	124	0	0		
1,2-Dichloroethane	8.35	1.0	10	0	83.5	72.5	127	0	0		
1,3-Dichlorobenzene	8.68	1.0	10	0	86.8	72.2	121	0	0		
1,3-Dichloropropane	4.46	1.0	5	0	89.2	76	122	0	0		
1,4-Dichlorobenzene	8.59	1.0	10	0	85.9	71.7	127	0	0		
2-Butanone	5.27	5.0	10	0	52.7	65.1	132	0	0		S
4-Methyl-2-pentanone	17.34	5.0	20	0	86.7	68.7	118	0	0		
Acetone	10.02	5.0	10	0	100	69.2	133	0	0		
Benzene	8.52	1.0	10	0	85.2	71.2	122	0	0		
Carbon disulfide	4.11	1.0	5	0	82.2	67.8	134	0	0		
Carbon tetrachloride	9.34	1.0	10	0	93.4	74.5	122	0	0		
Chlorobenzene	8.95	1.0	10	0	89.5	72.7	124	0	0		
Chloroethane	8.17	1.0	10	0	81.7	72.3	136	0	0		
Chloroform	8.81	1.0	10	0	88.1	71.6	133	0	0		
Dibromochloromethane	8.74	1.0	10	0	87.4	70.6	124	0	0		
Ethylbenzene	9.67	1.0	10	0	96.7	70.9	126	0	0		
Methylene chloride	8.31	1.0	10	0	83.1	66.3	130	0	0		
Tetrachloroethene	9.73	1.0	10	0	97.3	72.4	119	0	0		
Toluene	8.63	1.0	10	0	86.3	71.8	116	0	0		
trans-1,2-Dichloroethene	9.15	1.0	10	0	91.5	70.3	120	0	0		
Trichloroethene	8.23	1.0	10	0	82.3	73	127	0	0		
Vinyl chloride	7.73	1.0	10	0	77.3	65.2	134	0	0		
Xylenes, Total	50.55	1.0	50	0	101	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.24	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49.17	5.0	50	0	98.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175539

lcsd

SeqNo: **2703409** TestNo: **SW8260C** RunNo: **175539**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.58	1.0	10	0	95.8	72.3	121	9.31	2.86	25	
1,1,2,2-Tetrachloroethane	9.94	1.0	10	0	99.4	72.3	118	9.18	7.95	25	
1,1,2-Trichloroethane	9.23	1.0	10	0	92.3	73.1	123	8.46	8.71	25	
1,1-Dichloroethane	9.4	1.0	10	0	94	73.2	127	8.75	7.16	25	
1,1-Dichloroethene	9.81	1.0	10	0	98.1	70.3	128	9.5	3.21	25	
1,2,3-Trichloropropane	4.25	1.0	5	0	85	68.4	115	3.88	9.10	25	
1,2-Dichlorobenzene	9.24	1.0	10	0	92.4	71	124	8.4	9.52	25	
1,2-Dichloroethane	9.44	1.0	10	0	94.4	72.5	127	8.35	12.3	25	
1,3-Dichlorobenzene	9.48	1.0	10	0	94.8	72.2	121	8.68	8.81	25	
1,3-Dichloropropane	4.9	1.0	5	0	98	76	122	4.46	9.40	0	
1,4-Dichlorobenzene	9.52	1.0	10	0	95.2	71.7	127	8.59	10.3	25	
2-Butanone	5.06	5.0	10	0	50.6	65.1	132	5.27	4.07	25	S
4-Methyl-2-pentanone	19.75	5.0	20	0	98.8	68.7	118	17.34	13.0	25	
Acetone	10.52	5.0	10	0	105	69.2	133	10.02	4.87	25	
Benzene	9.21	1.0	10	0	92.1	71.2	122	8.52	7.78	25	
Carbon disulfide	4.29	1.0	5	0	85.8	67.8	134	4.11	4.29	25	
Carbon tetrachloride	9.73	1.0	10	0	97.3	74.5	122	9.34	4.09	25	
Chlorobenzene	9.15	1.0	10	0	91.5	72.7	124	8.95	2.21	25	
Chloroethane	8.75	1.0	10	0	87.5	72.3	136	8.17	6.86	25	
Chloroform	9.24	1.0	10	0	92.4	71.6	133	8.81	4.76	25	
Dibromochloromethane	9.2	1.0	10	0	92	70.6	124	8.74	5.13	25	
Ethylbenzene	10.07	1.0	10	0	101	70.9	126	9.67	4.05	25	
Methylene chloride	9.05	1.0	10	0	90.5	66.3	130	8.31	8.53	25	
Tetrachloroethene	10.23	1.0	10	0	102	72.4	119	9.73	5.01	25	
Toluene	9.36	1.0	10	0	93.6	71.8	116	8.63	8.12	25	
trans-1,2-Dichloroethene	10.07	1.0	10	0	101	70.3	120	9.15	9.57	25	
Trichloroethene	8.73	1.0	10	0	87.3	73	127	8.23	5.90	25	
Vinyl chloride	8.33	1.0	10	0	83.3	65.2	134	7.73	7.47	25	
Xylenes, Total	52.08	1.0	50	0	104	72.1	124	50.55	2.98	25	
Surr: 1,2-Dichloroethane-d4	50.25	5.0	50	0	101	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.01	5.0	50	0	98	76.5	125	0	0	25	
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175539

ms	SeqNo: **2703633**	TestNo: **SW8260C**	RunNo: **175539**
	Samp ID: **190918063-001b (091819-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.63	1.0	10	0	86.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.23	1.0	10	0	82.3	70.1	123	0	0		
1,1,2-Trichloroethane	8.48	1.0	10	0	84.8	72.1	119	0	0		
1,1-Dichloroethane	8.33	1.0	10	0	83.3	70.4	126	0	0		
1,1-Dichloroethene	8.46	1.0	10	0	84.6	70.2	125	0	0		
1,2,3-Trichloropropane	3.66	1.0	5	0	73.2	53.7	101	0	0		
1,2-Dichlorobenzene	7.76	1.0	10	0	77.6	70.2	123	0	0		
1,2-Dichloroethane	8.35	1.0	10	0.12	82.3	73.5	126	0	0		
1,3-Dichlorobenzene	7.99	1.0	10	0	79.9	70.4	124	0	0		
1,3-Dichloropropane	4.28	1.0	5	0	85.6	64	125	0	0		
1,4-Dichlorobenzene	7.64	1.0	10	0	76.4	70.8	127	0	0		
2-Butanone	8.36	5.0	10	0	83.6	60.5	123	0	0		
4-Methyl-2-pentanone	7.4	5.0	10	0	74	52.8	133	0	0		
Acetone	11.87	5.0	10	0	119	56.3	135	0	0		
Benzene	8.23	1.0	10	0	82.3	70.2	127	0	0		
Carbon disulfide	3.51	1.0	5	0	70.2	62.2	130	0	0		
Carbon tetrachloride	8.71	1.0	10	0	87.1	56.4	137	0	0		
Chlorobenzene	8.89	1.0	10	0	88.9	72.7	128	0	0		
Chloroethane	8.91	1.0	10	0	89.1	71.3	135	0	0		
Chloroform	8.12	1.0	10	0	81.2	70.2	125	0	0		
Dibromochloromethane	8.56	1.0	10	0	85.6	69.5	123	0	0		
Ethylbenzene	9.52	1.0	10	0	95.2	71.9	129	0	0		
Methylene chloride	7.78	1.0	10	0	77.8	65.3	123	0	0		
Tetrachloroethene	9.11	1.0	10	0	91.1	74.5	121	0	0		
Toluene	8.79	1.0	10	0	87.9	73	122	0	0		
trans-1,2-Dichloroethene	8.71	1.0	10	0	87.1	69.1	133	0	0		
Trichloroethene	8.27	1.0	10	0	82.7	71.1	126	0	0		
Vinyl chloride	7.32	1.0	10	0	73.2	65	137	0	0		
Xylenes, Total	27.32	1.0	30	0	91.1	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.03	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.61	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	49.56	5.0	50	0	99.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190918063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175539

msd

SeqNo: **2703634** TestNo: **SW8260C** RunNo: **175539**
Samp ID: **190918063-001b (091819-01-SW-U-** Units: **µg/L** Analysis Date: **9/19/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.49	1.0	10	0	84.9	71.6	126	8.63	1.64	20.4	
1,1,2,2-Tetrachloroethane	7.54	1.0	10	0	75.4	70.1	123	8.23	8.75	18.6	
1,1,2-Trichloroethane	8.07	1.0	10	0	80.7	72.1	119	8.48	4.95	20	
1,1-Dichloroethane	8.02	1.0	10	0	80.2	70.4	126	8.33	3.79	19.2	
1,1-Dichloroethene	8.37	1.0	10	0	83.7	70.2	125	8.46	1.07	16.1	
1,2,3-Trichloropropane	3.61	1.0	5	0	72.2	53.7	101	3.66	1.38	20	
1,2-Dichlorobenzene	7.99	1.0	10	0	79.9	70.2	123	7.76	2.92	17.9	
1,2-Dichloroethane	8.21	1.0	10	0.12	80.9	73.5	126	8.35	1.69	15.6	
1,3-Dichlorobenzene	7.89	1.0	10	0	78.9	70.4	124	7.99	1.26	14.3	
1,3-Dichloropropane	4.14	1.0	5	0	82.8	64	125	4.28	3.33	0	
1,4-Dichlorobenzene	7.88	1.0	10	0	78.8	70.8	127	7.64	3.09	14.4	
2-Butanone	8.59	5.0	10	0	85.9	60.5	123	8.36	2.71	15	
4-Methyl-2-pentanone	7.4	5.0	10	0	74	52.8	133	7.4	0	11.9	
Acetone	12.28	5.0	10	0	123	56.3	135	11.87	3.40	10.6	
Benzene	7.93	1.0	10	0	79.3	70.2	127	8.23	3.71	18.4	
Carbon disulfide	3.51	1.0	5	0	70.2	62.2	130	3.51	0	13.1	
Carbon tetrachloride	8.46	1.0	10	0	84.6	56.4	137	8.71	2.91	20.3	
Chlorobenzene	7.52	1.0	10	0	75.2	72.7	128	8.89	16.7	19.6	
Chloroethane	7.49	1.0	10	0	74.9	71.3	135	8.91	17.3	27.8	
Chloroform	7.75	1.0	10	0	77.5	70.2	125	8.12	4.66	20.3	
Dibromochloromethane	8.23	1.0	10	0	82.3	69.5	123	8.56	3.93	18.8	
Ethylbenzene	7.83	1.0	10	0	78.3	71.9	129	9.52	19.5	16.3	Z
Methylene chloride	7.75	1.0	10	0	77.5	65.3	123	7.78	0.386	21.4	
Tetrachloroethene	8.92	1.0	10	0	89.2	74.5	121	9.11	2.11	20.9	
Toluene	8.13	1.0	10	0	81.3	73	122	8.79	7.80	19.4	
trans-1,2-Dichloroethene	8.3	1.0	10	0	83	69.1	133	8.71	4.82	16.1	
Trichloroethene	8.16	1.0	10	0	81.6	71.1	126	8.27	1.34	16.6	
Vinyl chloride	7.44	1.0	10	0	74.4	65	137	7.32	1.63	20.5	
Xylenes, Total	22.95	1.0	30	0	76.5	72	130	27.32	17.4	16.1	Z
Surr: 1,2-Dichloroethane-d4	50.87	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	45.71	5.0	50	0	91.4	76.5	125	0	0	0	
Surr: Toluene-d8	48.21	5.0	50	0	96.4	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190918063

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091819-01-SW-U-A-1	9/18/19	1210	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
002	091819-02-SW-A-A-1	9/18/19	1230	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
003	091819-03-SW-D-A-1	9/18/19	1245	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
004	091819-04-SW-B-A-1	9/18/19	1150	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
005	091819-05-SW-B-A-1	9/18/19	1300	A/P	W		✓	1	TSS
006	091819-TB01 Lot# VOA-F46.1			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:
J.M. 9/18/19

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		9/18/19 405 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	J M	9/18/19 4:38 pm

Temperature: Ambient or (Chilled) 6°C
Notes:_____

AES Bottles: Y (☒) N (☐)

Properly Preserved: (Y) N
Notes:_____

Received Within Holding Times: (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190918063

Adirondack Environmental Services Inc.
Experience is the solution
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 23, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190919071
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/19/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *23-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190919071	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-01-SW-U-A-1
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 4:01:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 4:01:00 AM
Carbon disulfide	**0.1**	1.0	JS	µg/L	1	9/21/2019 4:01:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/21/2019 4:01:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 4:01:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 4:01:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/21/2019 4:01:00 AM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 4:01:00 AM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/21/2019 4:01:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 4:01:00 AM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	9/21/2019 4:01:00 AM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/21/2019 4:01:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	9/21/2019 4:01:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/20/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.4**	1.1		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-02-SW-A-A-1
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 4:22:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 4:22:00 AM
Carbon disulfide	**0.1**	1.0	JS	µg/L	1	9/21/2019 4:22:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/21/2019 4:22:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 4:22:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 4:22:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 4:22:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/21/2019 4:22:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 4:22:00 AM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	9/21/2019 4:22:00 AM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	9/21/2019 4:22:00 AM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	9/21/2019 4:22:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/20/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.7**	1.1		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-03-SW-D-A-1
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 4:44:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 4:44:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 4:44:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/21/2019 4:44:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 4:44:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Benzene	**1.4**	1.0		µg/L	1	9/21/2019 4:44:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 4:44:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Chlorobenzene	**6.3**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 4:44:00 AM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 4:44:00 AM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	9/21/2019 4:44:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 4:44:00 AM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	9/21/2019 4:44:00 AM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/21/2019 4:44:00 AM
Surr: Toluene-d8	**98.9**	80.4-121		%REC	1	9/21/2019 4:44:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/20/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**17.3**	1.1		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-04-SW-B-A-1
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 5:05:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 5:05:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 5:05:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/21/2019 5:05:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 5:05:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 5:05:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 5:05:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 5:05:00 AM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	9/21/2019 5:05:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	9/21/2019 5:05:00 AM
Surr: Toluene-d8	**99.4**	80.4-121		%REC	1	9/21/2019 5:05:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/20/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.3**	1.1		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-05-SW-B-B-1
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/20/2019)						
TSS (Residue, Non-Filterable)	**6.5**	1.1		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-01-SW-U-A-3
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 5:27:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 5:27:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 5:27:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Chloroform	**2.5**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 5:27:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 5:27:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 5:27:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 5:27:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 5:27:00 AM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	9/21/2019 5:27:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/21/2019 5:27:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	9/21/2019 5:27:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/20/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	9/20/2019

Adirondack Environmental Services, Inc

Date: *23-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	091919-TB01
Work Order:	**190919071**	**Collection Date:**	9/19/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190919071-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 5:48:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Methylene chloride	**2.8**	1.0	B	µg/L	1	9/21/2019 5:48:00 AM
Acetone	**7.6**	5.0		µg/L	1	9/21/2019 5:48:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 5:48:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/21/2019 5:48:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 5:48:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 5:48:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 5:48:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/21/2019 5:48:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 5:48:00 AM
Surr: 1,2-Dichloroethane-d4	**98.5**	80.9-122		%REC	1	9/21/2019 5:48:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	9/21/2019 5:48:00 AM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/21/2019 5:48:00 AM

CLIENT: AECOM Environment
Work Order: 190919071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75730

LCS

SeqNo: **2705191** **PrepDate:9/20/2019** TestNo: **SM2540D** RunNo: **175620**
Samp ID: **LCS-75730** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	497	0	94.2	86.5	114	0	0		

DUP

SeqNo: **2705194** **PrepDate:9/20/2019** TestNo: **SM2540D** RunNo: **175620**
Samp ID: **190917014-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	7	3.30	0	0	0	0	0	7.333	4.65	10	

DUP

SeqNo: **2705196** **PrepDate:9/20/2019** TestNo: **SM2540D** RunNo: **175620**
Samp ID: **190917018-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	326	20.0	0	0	0	0	0	358	9.36	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190919071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

mblk

SeqNo: **2705083** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.3	1.0									J
1,2-Dichloroethane	0.17	1.0									J
1,3-Dichlorobenzene	0.31	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.44	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	3.7	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.77	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.12	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	48.88	5.0	50	0	97.8	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190919071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

lcs

SeqNo: **2705081** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.54	1.0	10	0	75.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.61	1.0	10	0	76.1	72.3	118	0	0		
1,1,2-Trichloroethane	7.79	1.0	10	0	77.9	73.1	123	0	0		
1,1-Dichloroethane	7.54	1.0	10	0	75.4	73.2	127	0	0		
1,1-Dichloroethene	7.24	1.0	10	0	72.4	70.3	128	0	0		
1,2,3-Trichloropropane	3.3	1.0	5	0	66	68.4	115	0	0		S
1,2-Dichlorobenzene	7.57	1.0	10	0	75.7	71	124	0	0		
1,2-Dichloroethane	7.7	1.0	10	0	77	72.5	127	0	0		
1,3-Dichlorobenzene	7.58	1.0	10	0	75.8	72.2	121	0	0		
1,3-Dichloropropane	3.98	1.0	5	0	79.6	76	122	0	0		
1,4-Dichlorobenzene	8.05	1.0	10	0	80.5	71.7	127	0	0		
2-Butanone	2.26	5.0	10	0	22.6	65.1	132	0	0		JS
4-Methyl-2-pentanone	6.93	5.0	10	0	69.3	68.7	118	0	0		
Acetone	10.74	5.0	10	0	107	69.2	133	0	0		
Benzene	7.44	1.0	10	0	74.4	71.2	122	0	0		
Carbon disulfide	3.01	1.0	5	0	60.2	67.8	134	0	0		S
Carbon tetrachloride	7.36	1.0	10	0	73.6	74.5	122	0	0		S
Chlorobenzene	7.4	1.0	10	0	74	72.7	124	0	0		
Chloroethane	7.91	1.0	10	0	79.1	72.3	136	0	0		
Chloroform	7.52	1.0	10	0	75.2	71.6	133	0	0		
Dibromochloromethane	7.73	1.0	10	0	77.3	70.6	124	0	0		
Ethylbenzene	7.85	1.0	10	0	78.5	70.9	126	0	0		
Methylene chloride	10.51	1.0	10	0	105	66.3	130	0	0		B
Tetrachloroethene	7.89	1.0	10	0	78.9	72.4	119	0	0		
Toluene	7.7	1.0	10	0	77	71.8	116	0	0		
trans-1,2-Dichloroethene	7.83	1.0	10	0	78.3	70.3	120	0	0		
Trichloroethene	7.32	1.0	10	0	73.2	73	127	0	0		
Vinyl chloride	6.83	1.0	10	0	68.3	65.2	134	0	0		
Xylenes, Total	22.72	1.0	30	0	75.7	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.54	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.38	5.0	50	0	96.8	76.5	125	0	0		
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190919071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

ms	SeqNo: **2705110**	TestNo: **SW8260C**	RunNo: **175614**
	Samp ID: **190920070-001b**	Units: **µg/L**	Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	6.55	1.0	10	0	65.5	71.6	126	0	0		S
1,1,2,2-Tetrachloroethane	5.84	1.0	10	0	58.4	70.1	123	0	0		S
1,1,2-Trichloroethane	6.57	1.0	10	0	65.7	72.1	119	0	0		S
1,1-Dichloroethane	6.66	1.0	10	0	66.6	70.4	126	0	0		S
1,1-Dichloroethene	6.64	1.0	10	0	66.4	70.2	125	0	0		S
1,2,3-Trichloropropane	3.05	1.0	5	0	61	53.7	101	0	0		
1,2-Dichlorobenzene	6.06	1.0	10	0	60.6	70.2	123	0	0		S
1,2-Dichloroethane	6.16	1.0	10	0.16	60	73.5	126	0	0		S
1,3-Dichlorobenzene	5.8	1.0	10	0	58	70.4	124	0	0		S
1,3-Dichloropropane	3.19	1.0	5	0	63.8	64	125	0	0		S
1,4-Dichlorobenzene	5.92	1.0	10	0.2	57.2	70.8	127	0	0		S
2-Butanone	3.38	5.0	10	0	33.8	60.5	123	0	0		JS
4-Methyl-2-pentanone	5.46	5.0	10	0	54.6	52.8	133	0	0		
Acetone	13.56	5.0	10	0	136	56.3	135	0	0		S
Benzene	6.39	1.0	10	0	63.9	70.2	127	0	0		S
Carbon disulfide	2.6	1.0	5	0	52	62.2	130	0	0		S
Carbon tetrachloride	6.46	1.0	10	0	64.6	56.4	137	0	0		
Chlorobenzene	6.13	1.0	10	0	61.3	72.7	128	0	0		S
Chloroethane	7.34	1.0	10	0	73.4	71.3	135	0	0		
Chloroform	6.52	1.0	10	0	65.2	70.2	125	0	0		S
Dibromochloromethane	6.19	1.0	10	0	61.9	69.5	123	0	0		S
Ethylbenzene	6.51	1.0	10	0	65.1	71.9	129	0	0		S
Methylene chloride	6.45	1.0	10	0	64.5	65.3	123	0	0		BS
Tetrachloroethene	6.77	1.0	10	0	67.7	74.5	121	0	0		S
Toluene	6.8	1.0	10	0	68	73	122	0	0		S
trans-1,2-Dichloroethene	6.56	1.0	10	0	65.6	69.1	133	0	0		S
Trichloroethene	6.35	1.0	10	0	63.5	71.1	126	0	0		S
Vinyl chloride	6.74	1.0	10	0	67.4	65	137	0	0		
Xylenes, Total	18.7	1.0	30	0	62.3	72	130	0	0		S
Surr: 1,2-Dichloroethane-d4	49.94	5.0	50	0	99.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.49	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	48.87	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190919071
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

msd

SeqNo: **2705111** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **190920070-001b** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.27	1.0	10	0	72.7	71.6	126	6.55	10.4	20.4	
1,1,2,2-Tetrachloroethane	7.03	1.0	10	0	70.3	70.1	123	5.84	18.5	18.6	
1,1,2-Trichloroethane	7.22	1.0	10	0	72.2	72.1	119	6.57	9.43	20	
1,1-Dichloroethane	7.31	1.0	10	0	73.1	70.4	126	6.66	9.31	19.2	
1,1-Dichloroethene	7.11	1.0	10	0	71.1	70.2	125	6.64	6.84	16.1	
1,2,3-Trichloropropane	3.35	1.0	5	0	67	53.7	101	3.05	9.38	20	
1,2-Dichlorobenzene	7.11	1.0	10	0	71.1	70.2	123	6.06	15.9	17.9	
1,2-Dichloroethane	6.93	1.0	10	0.16	67.7	73.5	126	6.16	11.8	15.6	S
1,3-Dichlorobenzene	7.02	1.0	10	0	70.2	70.4	124	5.8	19.0	14.3	SZ
1,3-Dichloropropane	3.66	1.0	5	0	73.2	64	125	3.19	13.7	0	
1,4-Dichlorobenzene	7.02	1.0	10	0.2	68.2	70.8	127	5.92	17.0	14.4	SZ
2-Butanone	4.38	5.0	10	0	43.8	60.5	123	3.38	0	15	JS
4-Methyl-2-pentanone	6.83	5.0	10	0	68.3	52.8	133	5.46	22.3	11.9	Z
Acetone	14.33	5.0	10	0	143	56.3	135	13.56	5.52	10.6	S
Benzene	7.16	1.0	10	0	71.6	70.2	127	6.39	11.4	18.4	
Carbon disulfide	2.89	1.0	5	0	57.8	62.2	130	2.6	10.6	13.1	S
Carbon tetrachloride	7.12	1.0	10	0	71.2	56.4	137	6.46	9.72	20.3	
Chlorobenzene	7.16	1.0	10	0	71.6	72.7	128	6.13	15.5	19.6	S
Chloroethane	8.07	1.0	10	0	80.7	71.3	135	7.34	9.47	27.8	
Chloroform	7.12	1.0	10	0	71.2	70.2	125	6.52	8.80	20.3	
Dibromochloromethane	7.16	1.0	10	0	71.6	69.5	123	6.19	14.5	18.8	
Ethylbenzene	7.74	1.0	10	0	77.4	71.9	129	6.51	17.3	16.3	Z
Methylene chloride	6.94	1.0	10	0	69.4	65.3	123	6.45	7.32	21.4	B
Tetrachloroethene	7.64	1.0	10	0	76.4	74.5	121	6.77	12.1	20.9	
Toluene	7.4	1.0	10	0	74	73	122	6.8	8.45	19.4	
trans-1,2-Dichloroethene	7.49	1.0	10	0	74.9	69.1	133	6.56	13.2	16.1	
Trichloroethene	7.05	1.0	10	0	70.5	71.1	126	6.35	10.4	16.6	S
Vinyl chloride	7.22	1.0	10	0	72.2	65	137	6.74	6.88	20.5	
Xylenes, Total	21.92	1.0	30	0	73.1	72	130	18.7	15.9	16.1	
Surr: 1,2-Dichloroethane-d4	50.2	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.97	5.0	50	0	99.9	76.5	125	0	0	0	
Surr: Toluene-d8	48.59	5.0	50	0	97.2	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order #: 190919071

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	091919-01-SW-U-A-1	9/19/19	1145	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	091919-02-SW-A-A-1	9/19/19	1230	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	091919-03-SW-D-A-1	9/19/19	1245	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	091919-04-SW-B-A-1	9/19/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	091919-05-SW-B-B-1	9/19/19	1305	A	W		✓	1	TSS
006	091919-01-SW-U-A-3	9/19/19	0830	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	091919-TB01 Lot# VOA-1466.1			A	TB				trip blank
	JA 9/19/19			P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/19/19 405 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/19/19 4:46 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

Demo
190919071

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 24, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190920070
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/20/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*24-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190920070		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT: AECOM Environment
Work Order: **190920070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092019-01-SW-U-A-1
Collection Date: 9/20/2019
Lab Sample ID: 190920070-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
PCB, Total	**ND**	0.065		µg/L	1	9/20/2019 8:23:12 PM
Surr: Decachlorobiphenyl	**69.6**	57.1-135		%REC	1	9/20/2019 8:23:12 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 6:10:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Acetone	**ND**	5.0	N	µg/L	1	9/21/2019 6:10:00 AM
Carbon disulfide	**ND**	1.0	SN	µg/L	1	9/21/2019 6:10:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,2-Dichloroethane	**0.2**	1.0	JN	µg/L	1	9/21/2019 6:10:00 AM
2-Butanone	**ND**	5.0	SN	µg/L	1	9/21/2019 6:10:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Trichloroethene	**ND**	1.0	N	µg/L	1	9/21/2019 6:10:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 6:10:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Chlorobenzene	**ND**	1.0	N	µg/L	1	9/21/2019 6:10:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,3-Dichlorobenzene	**ND**	1.0	N	µg/L	1	9/21/2019 6:10:00 AM

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-01-SW-U-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	JN	µg/L	1	9/21/2019 6:10:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 6:10:00 AM
Surr: 1,2-Dichloroethane-d4	**97.0**	80.9-122		%REC	1	9/21/2019 6:10:00 AM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/21/2019 6:10:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/21/2019 6:10:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/23/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**5.4**	1.0		mg/L	1	9/23/2019

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-02-SW-A-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
PCB, Total	**ND**	0.065		µg/L	1	9/20/2019 8:36:30 PM
Surr: Decachlorobiphenyl	**75.0**	57.1-135		%REC	1	9/20/2019 8:36:30 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 6:31:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Acetone	**ND**	5.0		µg/L	1	9/21/2019 6:31:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 6:31:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/21/2019 6:31:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 6:31:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 6:31:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-02-SW-A-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 6:31:00 AM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	9/21/2019 6:31:00 AM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/21/2019 6:31:00 AM
Surr: Toluene-d8	**96.8**	80.4-121		%REC	1	9/21/2019 6:31:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/23/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**3.5**	1.0		mg/L	1	9/23/2019

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-03-SW-D-B-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1242	**0.123**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/20/2019 8:09:52 PM
PCB, Total	**0.123**	0.065		µg/L	1	9/20/2019 8:09:52 PM
Surr: Decachlorobiphenyl	**64.2**	57.1-135		%REC	1	9/20/2019 8:09:52 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 6:53:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Acetone	**3.5**	5.0	J	µg/L	1	9/21/2019 6:53:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 6:53:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/21/2019 6:53:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 6:53:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Benzene	**0.3**	1.0	J	µg/L	1	9/21/2019 6:53:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 6:53:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Chlorobenzene	**1.0**	1.0	J	µg/L	1	9/21/2019 6:53:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-03-SW-D-B-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 6:53:00 AM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	9/21/2019 6:53:00 AM
Surr: 4-Bromofluorobenzene	**99.6**	76.5-125		%REC	1	9/21/2019 6:53:00 AM
Surr: Toluene-d8	**96.2**	80.4-121		%REC	1	9/21/2019 6:53:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/23/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**10.4**	1.0		mg/L	1	9/23/2019

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-04-SW-B-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/20/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
PCB, Total	**ND**	0.065		µg/L	1	9/20/2019 7:56:32 PM
Surr: Decachlorobiphenyl	**58.4**	57.1-135		%REC	1	9/20/2019 7:56:32 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 7:14:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Acetone	**3.8**	5.0	J	µg/L	1	9/21/2019 7:14:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 7:14:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 7:14:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 7:14:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-04-SW-B-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 7:14:00 AM
Surr: 1,2-Dichloroethane-d4	**98.2**	80.9-122		%REC	1	9/21/2019 7:14:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/21/2019 7:14:00 AM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	9/21/2019 7:14:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/23/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**4.6**	1.0		mg/L	1	9/23/2019

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-05-SW-B-A-1
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **NK**
(Prep: Gen Prep - 9/23/2019)						
TSS (Residue, Non-Filterable)	**10.9**	1.0		mg/L	1	9/23/2019

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT: AECOM Environment
Work Order: **190920070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092019-TB01
Collection Date: 9/20/2019
Lab Sample ID: 190920070-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 7:36:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Methylene chloride	**3.0**	1.0	B	µg/L	1	9/21/2019 7:36:00 AM
Acetone	**8.8**	5.0		µg/L	1	9/21/2019 7:36:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 7:36:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 7:36:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 7:36:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 7:36:00 AM
Surr: 1,2-Dichloroethane-d4	**97.9**	80.9-122		%REC	1	9/21/2019 7:36:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	9/21/2019 7:36:00 AM
Surr: Toluene-d8	**96.0**	80.4-121		%REC	1	9/21/2019 7:36:00 AM

Adirondack Environmental Services, Inc

Date: *24-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092019-TB02
Work Order:	**190920070**	**Collection Date:**	9/20/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190920070-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0	S	µg/L	1	9/21/2019 7:58:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Methylene chloride	**1.6**	1.0	B	µg/L	1	9/21/2019 7:58:00 AM
Acetone	**6.8**	5.0		µg/L	1	9/21/2019 7:58:00 AM
Carbon disulfide	**ND**	1.0	S	µg/L	1	9/21/2019 7:58:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/21/2019 7:58:00 AM
2-Butanone	**ND**	5.0	S	µg/L	1	9/21/2019 7:58:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Benzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/21/2019 7:58:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Toluene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/21/2019 7:58:00 AM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	9/21/2019 7:58:00 AM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/21/2019 7:58:00 AM
Surr: Toluene-d8	**98.2**	80.4-121		%REC	1	9/21/2019 7:58:00 AM

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75702

MBLK

SeqNo: **2705215** **PrepDate:9/20/2019** TestNo: **SW8082A** RunNo: **175619**
Samp ID: **MB-75702** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.082	0	0.1	0	82	57.1	135	0	0		

LCS

SeqNo: **2705216** **PrepDate:9/20/2019** TestNo: **SW8082A** RunNo: **175619**
Samp ID: **LCS-75702** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4372	0.0650	0.5	0	87.4	60	140	0	0		
PCB, Total	0.4372	0.0650	0.5	0	87.4	60	140	0	0		
Surr: Decachlorobiphenyl	0.0714	0	0.1	0	71.4	57.1	135	0	0		

MS

SeqNo: **2705231** **PrepDate:9/20/2019** TestNo: **SW8082A** RunNo: **175619**
Samp ID: **190920070-001 (092019-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5154	0.0650	0.5	0	103	46.7	130	0	0		
Surr: Decachlorobiphenyl	0.0734	0.0100	0.1	0	73.4	57.1	135	0	0		

MSD

SeqNo: **2705232** **PrepDate:9/20/2019** TestNo: **SW8082A** RunNo: **175619**
Samp ID: **190920070-001 (092019-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5282	0.0650	0.5	0	106	46.7	130	0.5154	2.45	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75702

MSD						
SeqNo: **2705232**	**PrepDate:9/20/2019**	TestNo: **SW8082A**	RunNo: **175619**
Samp ID: **190920070-001 (092019-01-SW-U-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **9/20/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0742	0.0100	0.1	0	74.2	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75751

LCS

SeqNo: **2706511** **PrepDate:9/23/2019** TestNo: **SM2540D** RunNo: **175678**
Samp ID: **LCS-75751** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	516	40.0	497	0	104	86.5	114	0	0		

DUP

SeqNo: **2706515** **PrepDate:9/23/2019** TestNo: **SM2540D** RunNo: **175678**
Samp ID: **190920070-001a** **PrepRef:** Units: **mg/L** Analysis Date: **9/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	5.1	1.00	0	0	0	0	0	5.4	5.71	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

mblk

SeqNo: **2705083** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.3	1.0									J
1,2-Dichloroethane	0.17	1.0									J
1,3-Dichlorobenzene	0.31	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.44	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	3.7	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.77	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.12	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	48.88	5.0	50	0	97.8	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

lcs

SeqNo: **2705081** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.54	1.0	10	0	75.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.61	1.0	10	0	76.1	72.3	118	0	0		
1,1,2-Trichloroethane	7.79	1.0	10	0	77.9	73.1	123	0	0		
1,1-Dichloroethane	7.54	1.0	10	0	75.4	73.2	127	0	0		
1,1-Dichloroethene	7.24	1.0	10	0	72.4	70.3	128	0	0		
1,2,3-Trichloropropane	3.3	1.0	5	0	66	68.4	115	0	0		S
1,2-Dichlorobenzene	7.57	1.0	10	0	75.7	71	124	0	0		
1,2-Dichloroethane	7.7	1.0	10	0	77	72.5	127	0	0		
1,3-Dichlorobenzene	7.58	1.0	10	0	75.8	72.2	121	0	0		
1,3-Dichloropropane	3.98	1.0	5	0	79.6	76	122	0	0		
1,4-Dichlorobenzene	8.05	1.0	10	0	80.5	71.7	127	0	0		
2-Butanone	2.26	5.0	10	0	22.6	65.1	132	0	0		JS
4-Methyl-2-pentanone	6.93	5.0	10	0	69.3	68.7	118	0	0		
Acetone	10.74	5.0	10	0	107	69.2	133	0	0		
Benzene	7.44	1.0	10	0	74.4	71.2	122	0	0		
Carbon disulfide	3.01	1.0	5	0	60.2	67.8	134	0	0		S
Carbon tetrachloride	7.36	1.0	10	0	73.6	74.5	122	0	0		S
Chlorobenzene	7.4	1.0	10	0	74	72.7	124	0	0		
Chloroethane	7.91	1.0	10	0	79.1	72.3	136	0	0		
Chloroform	7.52	1.0	10	0	75.2	71.6	133	0	0		
Dibromochloromethane	7.73	1.0	10	0	77.3	70.6	124	0	0		
Ethylbenzene	7.85	1.0	10	0	78.5	70.9	126	0	0		
Methylene chloride	10.51	1.0	10	0	105	66.3	130	0	0		B
Tetrachloroethene	7.89	1.0	10	0	78.9	72.4	119	0	0		
Toluene	7.7	1.0	10	0	77	71.8	116	0	0		
trans-1,2-Dichloroethene	7.83	1.0	10	0	78.3	70.3	120	0	0		
Trichloroethene	7.32	1.0	10	0	73.2	73	127	0	0		
Vinyl chloride	6.83	1.0	10	0	68.3	65.2	134	0	0		
Xylenes, Total	22.72	1.0	30	0	75.7	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.54	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.38	5.0	50	0	96.8	76.5	125	0	0		
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

ms	SeqNo: **2705110**	TestNo: **SW8260C**	RunNo: **175614**
	Samp ID: **190920070-001b (092019-01-SW-U-**	Units: **µg/L**	Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	6.55	1.0	10	0	65.5	71.6	126	0	0		S
1,1,2,2-Tetrachloroethane	5.84	1.0	10	0	58.4	70.1	123	0	0		S
1,1,2-Trichloroethane	6.57	1.0	10	0	65.7	72.1	119	0	0		S
1,1-Dichloroethane	6.66	1.0	10	0	66.6	70.4	126	0	0		S
1,1-Dichloroethene	6.64	1.0	10	0	66.4	70.2	125	0	0		S
1,2,3-Trichloropropane	3.05	1.0	5	0	61	53.7	101	0	0		
1,2-Dichlorobenzene	6.06	1.0	10	0	60.6	70.2	123	0	0		S
1,2-Dichloroethane	6.16	1.0	10	0.16	60	73.5	126	0	0		S
1,3-Dichlorobenzene	5.8	1.0	10	0	58	70.4	124	0	0		S
1,3-Dichloropropane	3.19	1.0	5	0	63.8	64	125	0	0		S
1,4-Dichlorobenzene	5.92	1.0	10	0.2	57.2	70.8	127	0	0		S
2-Butanone	3.38	5.0	10	0	33.8	60.5	123	0	0		JS
4-Methyl-2-pentanone	5.46	5.0	10	0	54.6	52.8	133	0	0		
Acetone	13.56	5.0	10	0	136	56.3	135	0	0		S
Benzene	6.39	1.0	10	0	63.9	70.2	127	0	0		S
Carbon disulfide	2.6	1.0	5	0	52	62.2	130	0	0		S
Carbon tetrachloride	6.46	1.0	10	0	64.6	56.4	137	0	0		
Chlorobenzene	6.13	1.0	10	0	61.3	72.7	128	0	0		S
Chloroethane	7.34	1.0	10	0	73.4	71.3	135	0	0		
Chloroform	6.52	1.0	10	0	65.2	70.2	125	0	0		S
Dibromochloromethane	6.19	1.0	10	0	61.9	69.5	123	0	0		S
Ethylbenzene	6.51	1.0	10	0	65.1	71.9	129	0	0		S
Methylene chloride	6.45	1.0	10	0	64.5	65.3	123	0	0		BS
Tetrachloroethene	6.77	1.0	10	0	67.7	74.5	121	0	0		S
Toluene	6.8	1.0	10	0	68	73	122	0	0		S
trans-1,2-Dichloroethene	6.56	1.0	10	0	65.6	69.1	133	0	0		S
Trichloroethene	6.35	1.0	10	0	63.5	71.1	126	0	0		S
Vinyl chloride	6.74	1.0	10	0	67.4	65	137	0	0		
Xylenes, Total	18.7	1.0	30	0	62.3	72	130	0	0		S
Surr: 1,2-Dichloroethane-d4	49.94	5.0	50	0	99.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.49	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	48.87	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190920070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175614

msd

SeqNo: **2705111** TestNo: **SW8260C** RunNo: **175614**
Samp ID: **190920070-001b (092019-01-SW-U-** Units: **µg/L** Analysis Date: **9/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.27	1.0	10	0	72.7	71.6	126	6.55	10.4	20.4	
1,1,2,2-Tetrachloroethane	7.03	1.0	10	0	70.3	70.1	123	5.84	18.5	18.6	
1,1,2-Trichloroethane	7.22	1.0	10	0	72.2	72.1	119	6.57	9.43	20	
1,1-Dichloroethane	7.31	1.0	10	0	73.1	70.4	126	6.66	9.31	19.2	
1,1-Dichloroethene	7.11	1.0	10	0	71.1	70.2	125	6.64	6.84	16.1	
1,2,3-Trichloropropane	3.35	1.0	5	0	67	53.7	101	3.05	9.38	20	
1,2-Dichlorobenzene	7.11	1.0	10	0	71.1	70.2	123	6.06	15.9	17.9	
1,2-Dichloroethane	6.93	1.0	10	0.16	67.7	73.5	126	6.16	11.8	15.6	S
1,3-Dichlorobenzene	7.02	1.0	10	0	70.2	70.4	124	5.8	19.0	14.3	SZ
1,3-Dichloropropane	3.66	1.0	5	0	73.2	64	125	3.19	13.7	0	
1,4-Dichlorobenzene	7.02	1.0	10	0.2	68.2	70.8	127	5.92	17.0	14.4	SZ
2-Butanone	4.38	5.0	10	0	43.8	60.5	123	3.38	0	15	JS
4-Methyl-2-pentanone	6.83	5.0	10	0	68.3	52.8	133	5.46	22.3	11.9	Z
Acetone	14.33	5.0	10	0	143	56.3	135	13.56	5.52	10.6	S
Benzene	7.16	1.0	10	0	71.6	70.2	127	6.39	11.4	18.4	
Carbon disulfide	2.89	1.0	5	0	57.8	62.2	130	2.6	10.6	13.1	S
Carbon tetrachloride	7.12	1.0	10	0	71.2	56.4	137	6.46	9.72	20.3	
Chlorobenzene	7.16	1.0	10	0	71.6	72.7	128	6.13	15.5	19.6	S
Chloroethane	8.07	1.0	10	0	80.7	71.3	135	7.34	9.47	27.8	
Chloroform	7.12	1.0	10	0	71.2	70.2	125	6.52	8.80	20.3	
Dibromochloromethane	7.16	1.0	10	0	71.6	69.5	123	6.19	14.5	18.8	
Ethylbenzene	7.74	1.0	10	0	77.4	71.9	129	6.51	17.3	16.3	Z
Methylene chloride	6.94	1.0	10	0	69.4	65.3	123	6.45	7.32	21.4	B
Tetrachloroethene	7.64	1.0	10	0	76.4	74.5	121	6.77	12.1	20.9	
Toluene	7.4	1.0	10	0	74	73	122	6.8	8.45	19.4	
trans-1,2-Dichloroethene	7.49	1.0	10	0	74.9	69.1	133	6.56	13.2	16.1	
Trichloroethene	7.05	1.0	10	0	70.5	71.1	126	6.35	10.4	16.6	S
Vinyl chloride	7.22	1.0	10	0	72.2	65	137	6.74	6.88	20.5	
Xylenes, Total	21.92	1.0	30	0	73.1	72	130	18.7	15.9	16.1	
Surr: 1,2-Dichloroethane-d4	50.2	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.97	5.0	50	0	99.9	76.5	125	0	0	0	
Surr: Toluene-d8	48.59	5.0	50	0	97.2	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190920070

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Cohan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.blake@aecom.com	224608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092019-01-SW-U-A-1	9/20/19	1320	A	W		✓	6	PCBs
				P				6	VOCs
				A				3	TSS
				P					
002	092019-02-SW-A-A-1	9/20/19	1405	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
003	092019-03-SW-D-B-1	9/20/19	1430	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
004	092019-04-SW-B-A-1	9/20/19	1300	A	W		✓	2	PCBs
				P				2	VOCs
				A				1	TSS
				P					
005	092019-05-SW-B-A-1	9/20/19	1445	A	W		✓	1	TSS
				P					
006	092019-TB01			A	TB				trip blank Lot# 461.
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/20/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/20/19 4:42 pm

Temperature: Ambient or (Chilled) Notes: 6C

AES Bottles: Y ☒ N ☐

Properly Preserved: (Y) N Notes:

Received Within Holding Times: (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
190920070

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 1909200170

Experience is the solution

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	092019-TB02			A	TB				trip blank Lot VOA-F461
				P					
				A					
				P					
				A					
				P					
				A					
				P					
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				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 9/20/19 402pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 9/20/19 4:42pm

TEMPERATURE	AES Bottles		PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y	N	Y N	Y N
Notes: 6°C	☒	☐	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190920070

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo
190920070

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/24/2019

9/20/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
190920070-001	092019-01-SW-U-A-1	Water	9/20/2019	9/24/2019	C	B	A				
190920070-002	092019-02-SW-A-A-1	Water	9/20/2019	9/24/2019	C	B	A				
190920070-003	092019-03-SW-D-B-1	Water	9/20/2019	9/24/2019	C	B	A				
190920070-004	092019-04-SW-B-A-1	Water	9/20/2019	9/24/2019	C	B	A				
190920070-005	092019-05-SW-B-A-1	Water	9/20/2019	9/24/2019			A				
190920070-006	092019-TB01	Trip Blank	9/20/2019	9/24/2019		A					
190920070-007	092019-TB02	Trip Blank	9/20/2019	9/24/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 25, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190923033
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*25-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	190923033		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-01-SW-D-A-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1242	**0.064**	0.065	J	µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/23/2019 6:47:33 PM
PCB, Total	**0.064**	0.065	J	µg/L	1	9/23/2019 6:47:33 PM
Surr: Decachlorobiphenyl	**81.4**	57.1-135		%REC	1	9/23/2019 6:47:33 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Acetone	**ND**	5.0		µg/L	1	9/24/2019 10:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/24/2019 10:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/24/2019 10:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Benzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/24/2019 10:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Toluene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-01-SW-D-A-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:26:00 PM
Xylenes, Total	**0.5**	1.0	J	µg/L	1	9/24/2019 10:26:00 PM
Surr: 1,2-Dichloroethane-d4	**94.9**	80.9-122		%REC	1	9/24/2019 10:26:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	9/24/2019 10:26:00 PM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	9/24/2019 10:26:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/24/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.2**	1.1		mg/L	1	9/24/2019

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-02-SW-A-A-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
PCB, Total	**ND**	0.065		µg/L	1	9/23/2019 7:00:52 PM
Surr: Decachlorobiphenyl	**86.8**	57.1-135		%REC	1	9/23/2019 7:00:52 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	9/24/2019 10:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/24/2019 10:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/24/2019 10:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Benzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/24/2019 10:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Toluene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-02-SW-A-A-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 10:47:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/24/2019 10:47:00 PM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	9/24/2019 10:47:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/24/2019 10:47:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	9/24/2019 10:47:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/24/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.2**	1.1		mg/L	1	9/24/2019

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-03-SW-U-B-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1242	**0.037**	0.065	J	µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/23/2019 7:14:12 PM
PCB, Total	**0.037**	0.065	J	µg/L	1	9/23/2019 7:14:12 PM
Surr: Decachlorobiphenyl	**80.0**	57.1-135		%REC	1	9/23/2019 7:14:12 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Acetone	**ND**	5.0		µg/L	1	9/24/2019 11:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/24/2019 11:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Benzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/24/2019 11:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Toluene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-03-SW-U-B-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:09:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	9/24/2019 11:09:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	9/24/2019 11:09:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	9/24/2019 11:09:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	9/24/2019 11:09:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/24/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**35.1**	1.3		mg/L	1	9/24/2019

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-04-SW-B-C-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1242	**0.056**	0.065	J	µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/23/2019 7:27:32 PM
PCB, Total	**0.056**	0.065	J	µg/L	1	9/23/2019 7:27:32 PM
Surr: Decachlorobiphenyl	**74.6**	57.1-135		%REC	1	9/23/2019 7:27:32 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Acetone	**ND**	5.0		µg/L	1	9/24/2019 11:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/24/2019 11:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/24/2019 11:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Benzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/24/2019 11:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Toluene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-04-SW-B-C-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:30:00 PM
Xylenes, Total	**0.3**	1.0	J	µg/L	1	9/24/2019 11:30:00 PM
Surr: 1,2-Dichloroethane-d4	**95.8**	80.9-122		%REC	1	9/24/2019 11:30:00 PM
Surr: 4-Bromofluorobenzene	**109**	76.5-125		%REC	1	9/24/2019 11:30:00 PM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	9/24/2019 11:30:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/24/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.4**	1.1		mg/L	1	9/24/2019

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-05-SW-B-A-1
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/24/2019)						
TSS (Residue, Non-Filterable)	**7.9**	1.0		mg/L	1	9/24/2019

Adirondack Environmental Services, Inc

Date: *25-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092319-TB01
Work Order:	**190923033**	**Collection Date:**	9/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190923033-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Acetone	**ND**	5.0		µg/L	1	9/24/2019 11:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/24/2019 11:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/24/2019 11:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Benzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/24/2019 11:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Toluene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/24/2019 11:52:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	9/24/2019 11:52:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/24/2019 11:52:00 PM
Surr: Toluene-d8	**98.0**	80.4-121		%REC	1	9/24/2019 11:52:00 PM

CLIENT: AECOM Environment
Work Order: 190923033
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75757

MBLK

SeqNo: **2705757** PrepDate:**9/23/2019** TestNo: **SW8082A** RunNo: **175642**
Samp ID: **MB-75757** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.083	0.0100	0.1	0	83	57.1	135	0	0		

LCS

SeqNo: **2705758** PrepDate:**9/23/2019** TestNo: **SW8082A** RunNo: **175642**
Samp ID: **LCS-75757** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **9/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.465	0.0650	0.5	0	93	60	140	0	0		
PCB, Total	0.465	0.0650	0.5	0	93	60	140	0	0		
Surr: Decachlorobiphenyl	0.0738	0.0100	0.1	0	73.8	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190923033
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75781

LCS

SeqNo: **2707599** **PrepDate:9/24/2019** TestNo: **SM2540D** RunNo: **175729**
Samp ID: **LCS-75781** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	552	40.0	497	0	111	86.5	114	0	0		

DUP

SeqNo: **2707602** **PrepDate:9/24/2019** TestNo: **SM2540D** RunNo: **175729**
Samp ID: **190918072-001** **PrepRef:** Units: **mg/L** Analysis Date: **9/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1095	10.0	0	0	0	0	0	1116	1.90	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190923033
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175704

mblk

SeqNo: **2707126** TestNo: **SW8260C** RunNo: **175704**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.32	1.0									J
1,2-Dichloroethane	0.17	1.0									J
1,3-Dichlorobenzene	0.31	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.42	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.72	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	1.64	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.36	1.0									J
Surr: 1,2-Dichloroethane-d4	48.29	5.0	50	0	96.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.31	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	49.1	5.0	50	0	98.2	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190923033
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175704

lcs	SeqNo: **2707125**	TestNo: **SW8260C**	RunNo: **175704**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **9/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	56.24	1.0	50	0	112	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	46.44	1.0	50	0	92.9	72.3	118	0	0		
1,1,2-Trichloroethane	54.66	1.0	50	0	109	73.1	123	0	0		
1,1-Dichloroethane	59.4	1.0	50	0	119	73.2	127	0	0		
1,1-Dichloroethene	58.29	1.0	50	0	117	70.3	128	0	0		
1,2,3-Trichloropropane	22.45	1.0	25	0	89.8	68.4	115	0	0		
1,2-Dichlorobenzene	54.4	1.0	50	0	109	71	124	0	0		
1,2-Dichloroethane	53.5	1.0	50	0	107	72.5	127	0	0		
1,3-Dichlorobenzene	57.27	1.0	50	0	115	72.2	121	0	0		
1,3-Dichloropropane	29.55	1.0	25	0	118	76	122	0	0		
1,4-Dichlorobenzene	55.7	1.0	50	0	111	71.7	127	0	0		
2-Butanone	54.66	5.0	50	0	109	65.1	132	0	0		
4-Methyl-2-pentanone	50.65	5.0	50	0	101	68.7	118	0	0		
Acetone	50.73	5.0	50	0	101	69.2	133	0	0		
Benzene	56.02	1.0	50	0	112	71.2	122	0	0		
Carbon disulfide	27.11	1.0	25	0	108	67.8	134	0	0		
Carbon tetrachloride	56.39	1.0	50	0	113	74.5	122	0	0		
Chlorobenzene	50.72	1.0	50	0	101	72.7	124	0	0		
Chloroethane	47.59	1.0	50	0	95.2	72.3	136	0	0		
Chloroform	55.23	1.0	50	0	110	71.6	133	0	0		
Dibromochloromethane	56.28	1.0	50	0	113	70.6	124	0	0		
Ethylbenzene	54.87	1.0	50	0	110	70.9	126	0	0		
Methylene chloride	63.06	1.0	50	0	126	66.3	130	0	0		B
Tetrachloroethene	60.85	1.0	50	0	122	72.4	119	0	0		S
Toluene	56.63	1.0	50	0	113	71.8	116	0	0		
trans-1,2-Dichloroethene	61.64	1.0	50	0	123	70.3	120	0	0		S
Trichloroethene	54.59	1.0	50	0	109	73	127	0	0		
Vinyl chloride	55.83	1.0	50	0	112	65.2	134	0	0		
Xylenes, Total	160	1.0	150	0	107	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.61	5.0	50	0	95.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.88	5.0	50	0	91.8	76.5	125	0	0		
Surr: Toluene-d8	48.35	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190923033

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092319-01-SW-B-A-1	9/23/19	0845	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	092319-02-SW-A-A-1	9/23/19	0900	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	092319-03-SW-U-B-1	9/23/19	0925	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	092319-04-SW-B-C-1	9/23/19	0835	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	092319-05-SW-B-A-1	9/23/19	0940	A	W		✓	1	TSS
006	092319-TB01 Lot# VQ4-F4 5.2 JM 9/20			A	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/23/19 405
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/23/19 4:28pm

TEMPERATURE Ambient or (Chilled) 9°C Notes:_____

AES Bottles Y (X) N ( )

PROPERLY PRESERVED (Y) N Notes:_____

RECEIVED WITHIN HOLDING TIMES (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

Demo
190923033

Adirondack Environmental Services, Inc

190923033

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



190923033

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 9/25/2019

9/23/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
190923033-001	092319-01-SW-D-A-1	Water	9/23/2019	9/25/2019	C	B	A				
190923033-002	092319-02-SW-A-A-1	Water	9/23/2019	9/25/2019	C	B	A				
190923033-003	092319-03-SW-U-B-1	Water	9/23/2019	9/25/2019	C	B	A				
190923033-004	092319-04-SW-B-C-1	Water	9/23/2019	9/25/2019	C	B	A				
190923033-005	092319-05-SW-B-A-1	Water	9/23/2019	9/25/2019			A				
190923033-006	092319-TB01	Trip Blank	9/23/2019	9/25/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/24/19 – 9/30/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 9/24/19 through 9/30/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one exceedance of the water quality criteria (chlorobenzene). The chlorobenzene exceedance (8.2 µg/l vs threshold of 5 µg/l) on 9/25/19 was at the background (Buoy 4) location. The sample was collected at low tide. The data received for the next day's sample set (9/26/19) samples came back without any exceedances.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 11 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically in the low teens and never higher than 18 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
092519-01-SW-D-A-1	10:30	AROCLOR-1242	N	ug/l	0.2	0.055	J		D	16	5.28	3.03	Incoming Tide (Flood)	7.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-01-SW-D-A-1	10:30	BENZENE	N	ug/l	10	0.4	J		D	16	5.28	3.03	Incoming Tide (Flood)	7.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-01-SW-D-A-1	10:30	CHLOROBENZENE	N	ug/l	5	2.8			D	16	5.28	3.03	Incoming Tide (Flood)	7.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-01-SW-D-A-1	10:30	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.6			D	16	5.28	3.03	Incoming Tide (Flood)	7.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-02-SW-A-A-1	10:45	BENZENE	N	ug/l	10	0.2	J		A	20	2.32	3.28	Incoming Tide (Flood)	8.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-02-SW-A-A-1	10:45	CHLOROBENZENE	N	ug/l	5	1.8			A	20	2.32	3.28	Incoming Tide (Flood)	8.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-02-SW-A-A-1	10:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.5			A	20	2.32	3.28	Incoming Tide (Flood)	8.9	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-03-SW-U-A-1	11:00	BENZENE	N	ug/l	10	0.3	J		U	33	2.72	3.51	Incoming Tide (Flood)	4.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-03-SW-U-A-1	11:00	CHLOROBENZENE	N	ug/l	5	2.3			U	33	2.72	3.51	Incoming Tide (Flood)	4.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-03-SW-U-A-1	11:00	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.5			U	33	2.72	3.51	Incoming Tide (Flood)	4.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-04-SW-B-A-1	10:05	AROCLOR-1242	N	ug/l	0.2	0.103			B	14	5.73	2.37	Low Tide	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-04-SW-B-A-1	10:05	BENZENE	N	ug/l	10	0.9	J		B	14	5.73	2.37	Low Tide	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-04-SW-B-A-1	10:05	CHLOROBENZENE	N	ug/l	5	8.2		X	B	14	5.73	2.37	Low Tide	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092519-04-SW-B-A-1	10:05	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	2.6			B	14	5.73	2.37	Low Tide	15.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
092719-04-SW-B-A-1	12:25	AROCLOR-1242	N	ug/l	0.2	0.12			B	16	8.02	3.73	Incoming Tide (Flood)	18	Moon Pool, Double Silt Curtain, Bubble Curtain	7:50
092719-04-SW-B-A-1	12:25	CHLOROBENZENE	N	ug/l	5	0.8	J		B	16	8.02	3.73	Incoming Tide (Flood)	18	Moon Pool, Double Silt Curtain, Bubble Curtain	7:50
093019-03-SW-D-A-1	09:55	AROCLOR-1242	N	ug/l	0.2	0.038	J		D	31	4.36	0.49	Outgoing Tide (Ebb)	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30

J: Analyte detected below quantitation limit

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 26, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190924069
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 9/24/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *26-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190924069	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-01-SW-U-C-1
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 11:30:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 11:30:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 11:30:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 11:30:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 11:30:00 AM
Surr: 1,2-Dichloroethane-d4	**99.6**	80.9-122		%REC	1	9/26/2019 11:30:00 AM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/26/2019 11:30:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	9/26/2019 11:30:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**2.7**	1.1		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT: AECOM Environment
Work Order: **190924069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092419-02-SW-A-B-1
Collection Date: 9/24/2019
Lab Sample ID: 190924069-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Acetone	**2.5**	5.0	J	µg/L	1	9/26/2019 11:51:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 11:51:00 AM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 11:51:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 11:51:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 11:51:00 AM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/26/2019 11:51:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/26/2019 11:51:00 AM
Surr: Toluene-d8	**99.9**	80.4-121		%REC	1	9/26/2019 11:51:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**3.1**	1.0		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-03-SW-U-A-1
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 12:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 12:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 12:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 12:13:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/26/2019 12:13:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	9/26/2019 12:13:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/26/2019 12:13:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.0**	1.0		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-04-SW-B-B-1
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 12:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 12:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 12:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 12:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 12:34:00 PM
Surr: 1,2-Dichloroethane-d4	**98.8**	80.9-122		%REC	1	9/26/2019 12:34:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/26/2019 12:34:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	9/26/2019 12:34:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.2**	1.1		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-05-SW-B-A-1
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/25/2019)						
TSS (Residue, Non-Filterable)	**12.3**	1.1		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-01-SW-U-C-3
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 12:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Chloroform	**13**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 12:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 12:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 12:56:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/26/2019 12:56:00 PM
Surr: 4-Bromofluorobenzene	**99.5**	76.5-125		%REC	1	9/26/2019 12:56:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/26/2019 12:56:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.1		mg/L	1	9/25/2019

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT: AECOM Environment
Work Order: **190924069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092419-TB01
Collection Date: 9/24/2019
Lab Sample ID: 190924069-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	9/26/2019 1:17:00 PM
Acetone	**3.1**	5.0	J	µg/L	1	9/26/2019 1:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 1:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 1:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 1:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 1:17:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/26/2019 1:17:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	9/26/2019 1:17:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/26/2019 1:17:00 PM

Adirondack Environmental Services, Inc

Date: *26-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092419-04-SW-B-B-2
Work Order:	**190924069**	**Collection Date:**	9/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190924069-008
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 1:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 1:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 1:39:00 PM
Acetone	**3.4**	5.0	J	µg/L	1	9/26/2019 1:39:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 1:39:00 PM
Surr: 1,2-Dichloroethane-d4	**99.6**	80.9-122		%REC	1	9/26/2019 1:39:00 PM
Surr: 4-Bromofluorobenzene	**97.8**	76.5-125		%REC	1	9/26/2019 1:39:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	9/26/2019 1:39:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/25/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.0**	1.0		mg/L	1	9/25/2019

CLIENT: AECOM Environment
Work Order: 190924069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75808

LCS

SeqNo: **2708292** **PrepDate:9/25/2019** TestNo: **SM2540D** RunNo: **175765**
Samp ID: **LCS-75808** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	552	40.0	497	0	111	86.5	114	0	0		

DUP

SeqNo: **2708294** **PrepDate:9/25/2019** TestNo: **SM2540D** RunNo: **175765**
Samp ID: **190924047-002A** **PrepRef:** Units: **mg/L** Analysis Date: **9/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	174	20.0	0	0	0	0	0	186	6.67	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190924069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

mblk

SeqNo: **2708671** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.19	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.8	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.52	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.2	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49	5.0	50	0	98	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190924069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

lcs

SeqNo: **2708669** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.68	1.0	10	0	96.8	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.41	1.0	10	0	94.1	72.3	118	0	0		
1,1,2-Trichloroethane	9.65	1.0	10	0	96.5	73.1	123	0	0		
1,1-Dichloroethane	9.86	1.0	10	0	98.6	73.2	127	0	0		
1,1-Dichloroethene	10.09	1.0	10	0	101	70.3	128	0	0		
1,2,3-Trichloropropane	3.93	1.0	5	0	78.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.24	1.0	10	0	92.4	71	124	0	0		
1,2-Dichloroethane	9.35	1.0	10	0	93.5	72.5	127	0	0		
1,3-Dichlorobenzene	9.06	1.0	10	0	90.6	72.2	121	0	0		
1,3-Dichloropropane	4.7	1.0	5	0	94	76	122	0	0		
1,4-Dichlorobenzene	8.74	1.0	10	0	87.4	71.7	127	0	0		
2-Butanone	7.19	5.0	10	0	71.9	65.1	132	0	0		
4-Methyl-2-pentanone	8.95	5.0	10	0	89.5	68.7	118	0	0		
Acetone	12.64	5.0	10	0	126	69.2	133	0	0		
Benzene	9.57	1.0	10	0	95.7	71.2	122	0	0		
Carbon disulfide	4.5	1.0	5	0	90	67.8	134	0	0		
Carbon tetrachloride	9.78	1.0	10	0	97.8	74.5	122	0	0		
Chlorobenzene	8.95	1.0	10	0	89.5	72.7	124	0	0		
Chloroethane	9.05	1.0	10	0	90.5	72.3	136	0	0		
Chloroform	10.48	1.0	10	0	105	71.6	133	0	0		
Dibromochloromethane	9.43	1.0	10	0	94.3	70.6	124	0	0		
Ethylbenzene	9.4	1.0	10	0	94	70.9	126	0	0		
Methylene chloride	9.66	1.0	10	0	96.6	66.3	130	0	0		
Tetrachloroethene	9.91	1.0	10	0	99.1	72.4	119	0	0		
Toluene	9.52	1.0	10	0	95.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.91	1.0	10	0	99.1	70.3	120	0	0		
Trichloroethene	8.93	1.0	10	0	89.3	73	127	0	0		
Vinyl chloride	9.99	1.0	10	0	99.9	65.2	134	0	0		
Xylenes, Total	27.63	1.0	30	0	92.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.6	5.0	50	0	99.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.23	5.0	50	0	96.5	76.5	125	0	0		
Surr: Toluene-d8	49.71	5.0	50	0	99.4	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order #: 190924069

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehen
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092419-01-SW-U-C-1	9/24/19	0830	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	092419-02-SW-A-B-1	9/24/19	0845	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	092419-03-SW-U-A-1	9/24/19	0920	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	092419-04-SW-B-B-1	9/24/19	0800	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	092419-05-SW-B-A-1	9/24/19	0935	A	W		✓	1	TSS
006	092419-01-SW-U-C-3	9/24/19	1300	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	092419-TB01 Lot# WO1-F46.3	9/24		A	TB			1	trip blank
				P					
008	092419-04-SW-B-B-2	9/24/19	0810	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/24/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/24/19 4:44pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Ser

Demo
190924069

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 27, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190925064
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/25/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *27-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190925064	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-01-SW-D-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/25/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1242	**0.055**	0.065	J	µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/25/2019 7:08:04 PM
PCB, Total	**0.055**	0.065	J	µg/L	1	9/25/2019 7:08:04 PM
Surr: Decachlorobiphenyl	**65.8**	57.1-135		%REC	1	9/25/2019 7:08:04 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 2:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,2-Dichloroethane	**0.8**	1.0	J	µg/L	1	9/26/2019 2:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 2:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Benzene	**0.4**	1.0	J	µg/L	1	9/26/2019 2:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 2:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Chlorobenzene	**2.8**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-01-SW-D-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.6**	1.0	J	µg/L	1	9/26/2019 2:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 2:01:00 PM
Surr: 1,2-Dichloroethane-d4	**97.7**	80.9-122		%REC	1	9/26/2019 2:01:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	9/26/2019 2:01:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/26/2019 2:01:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/26/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.2**	1.1		mg/L	1	9/26/2019

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-02-SW-A-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/25/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
PCB, Total	**ND**	0.065		µg/L	1	9/25/2019 7:51:42 PM
Surr: Decachlorobiphenyl	**77.2**	57.1-135		%REC	1	9/25/2019 7:51:42 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 2:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,2-Dichloroethane	**0.6**	1.0	J	µg/L	1	9/26/2019 2:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 2:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	9/26/2019 2:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 2:22:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Chlorobenzene	**1.8**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-02-SW-A-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	9/26/2019 2:22:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 2:22:00 PM
Surr: 1,2-Dichloroethane-d4	**98.9**	80.9-122		%REC	1	9/26/2019 2:22:00 PM
Surr: 4-Bromofluorobenzene	**99.7**	76.5-125		%REC	1	9/26/2019 2:22:00 PM
Surr: Toluene-d8	**98.2**	80.4-121		%REC	1	9/26/2019 2:22:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/26/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.9**	1.1		mg/L	1	9/26/2019

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-03-SW-U-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/25/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
PCB, Total	**ND**	0.065		µg/L	1	9/25/2019 8:05:05 PM
Surr: Decachlorobiphenyl	**95.2**	57.1-135		%REC	1	9/25/2019 8:05:05 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Acetone	**ND**	5.0		µg/L	1	9/26/2019 2:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,2-Dichloroethane	**0.7**	1.0	J	µg/L	1	9/26/2019 2:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 2:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Benzene	**0.3**	1.0	J	µg/L	1	9/26/2019 2:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 2:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Chlorobenzene	**2.3**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-03-SW-U-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	9/26/2019 2:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 2:43:00 PM
Surr: 1,2-Dichloroethane-d4	**98.2**	80.9-122		%REC	1	9/26/2019 2:43:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	9/26/2019 2:43:00 PM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	9/26/2019 2:43:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/26/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.6**	1.0		mg/L	1	9/26/2019

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-04-SW-B-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/25/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1242	**0.103**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/25/2019 8:18:25 PM
PCB, Total	**0.103**	0.065		µg/L	1	9/25/2019 8:18:25 PM
Surr: Decachlorobiphenyl	**75.0**	57.1-135		%REC	1	9/25/2019 8:18:25 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Acetone	**2.5**	5.0	J	µg/L	1	9/26/2019 3:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,2-Dichloroethane	**1.4**	1.0		µg/L	1	9/26/2019 3:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 3:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Benzene	**0.9**	1.0	J	µg/L	1	9/26/2019 3:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 3:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Chlorobenzene	**8.2**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	9/26/2019 3:05:00 PM

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-04-SW-B-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**2.1**	1.0		µg/L	1	9/26/2019 3:05:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	9/26/2019 3:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 3:05:00 PM
Surr: 1,2-Dichloroethane-d4	**98.8**	80.9-122		%REC	1	9/26/2019 3:05:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	9/26/2019 3:05:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	9/26/2019 3:05:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/26/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**15.5**	1.1		mg/L	1	9/26/2019

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092519-05.-SW-B-A-1
Work Order:	**190925064**	**Collection Date:**	9/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190925064-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/26/2019)						
TSS (Residue, Non-Filterable)	**6.5**	1.1		mg/L	1	9/26/2019

Adirondack Environmental Services, Inc

Date: *27-Sep-19*

CLIENT: AECOM Environment
Work Order: **190925064**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092519-TB01
Collection Date: 9/25/2019
Lab Sample ID: 190925064-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Acetone	**3.2**	5.0	J	µg/L	1	9/26/2019 3:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/26/2019 3:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/26/2019 3:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Benzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/26/2019 3:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Toluene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/26/2019 3:26:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/26/2019 3:26:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/26/2019 3:26:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/26/2019 3:26:00 PM

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75784

MBLK

SeqNo: **2707932** **PrepDate:9/25/2019** TestNo: **SW8082A** RunNo: **175747**
Samp ID: **MB-75784** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0836	0.0100	0.1	0	83.6	57.1	135	0	0		

LCS

SeqNo: **2707933** **PrepDate:9/25/2019** TestNo: **SW8082A** RunNo: **175747**
Samp ID: **LCS-75784** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1444	0.0650	0.1	0	144	60	140	0	0		S
PCB, Total	0.1444	0.0650	0.1	0	144	60	140	0	0		S
Surr: Decachlorobiphenyl	0.1022	0.0100	0.1	0	102	57.1	135	0	0		

LCSD

SeqNo: **2707934** **PrepDate:9/25/2019** TestNo: **SW8082A** RunNo: **175747**
Samp ID: **LCSD-75784** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.092	0.0650	0.1	0	92	60	140	0.1444	44.3	30	Z
PCB, Total	0.092	0.0650	0.1	0	92	60	140	0.1444	44.3	30	Z
Surr: Decachlorobiphenyl	0.0832	0.0100	0.1	0	83.2	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75829

LCS

SeqNo: **2709338** PrepDate:**9/26/2019** TestNo: **SM2540D** RunNo: **175816**
Samp ID: **LCS-75829** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	540	40.0	497	0	109	86.5	114	0	0		

DUP

SeqNo: **2709349** PrepDate:**9/26/2019** TestNo: **SM2540D** RunNo: **175816**
Samp ID: **190926037-001** PrepRef: Units: **mg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	29.6	4.00	0	0	0	0	0	31.6	6.54	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

mblk

SeqNo: **2708671** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.19	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.8	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.52	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.2	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49	5.0	50	0	98	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

lcs

SeqNo: **2708669** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.68	1.0	10	0	96.8	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.41	1.0	10	0	94.1	72.3	118	0	0		
1,1,2-Trichloroethane	9.65	1.0	10	0	96.5	73.1	123	0	0		
1,1-Dichloroethane	9.86	1.0	10	0	98.6	73.2	127	0	0		
1,1-Dichloroethene	10.09	1.0	10	0	101	70.3	128	0	0		
1,2,3-Trichloropropane	3.93	1.0	5	0	78.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.24	1.0	10	0	92.4	71	124	0	0		
1,2-Dichloroethane	9.35	1.0	10	0	93.5	72.5	127	0	0		
1,3-Dichlorobenzene	9.06	1.0	10	0	90.6	72.2	121	0	0		
1,3-Dichloropropane	4.7	1.0	5	0	94	76	122	0	0		
1,4-Dichlorobenzene	8.74	1.0	10	0	87.4	71.7	127	0	0		
2-Butanone	7.19	5.0	10	0	71.9	65.1	132	0	0		
4-Methyl-2-pentanone	8.95	5.0	10	0	89.5	68.7	118	0	0		
Acetone	12.64	5.0	10	0	126	69.2	133	0	0		
Benzene	9.57	1.0	10	0	95.7	71.2	122	0	0		
Carbon disulfide	4.5	1.0	5	0	90	67.8	134	0	0		
Carbon tetrachloride	9.78	1.0	10	0	97.8	74.5	122	0	0		
Chlorobenzene	8.95	1.0	10	0	89.5	72.7	124	0	0		
Chloroethane	9.05	1.0	10	0	90.5	72.3	136	0	0		
Chloroform	10.48	1.0	10	0	105	71.6	133	0	0		
Dibromochloromethane	9.43	1.0	10	0	94.3	70.6	124	0	0		
Ethylbenzene	9.4	1.0	10	0	94	70.9	126	0	0		
Methylene chloride	9.66	1.0	10	0	96.6	66.3	130	0	0		
Tetrachloroethene	9.91	1.0	10	0	99.1	72.4	119	0	0		
Toluene	9.52	1.0	10	0	95.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.91	1.0	10	0	99.1	70.3	120	0	0		
Trichloroethene	8.93	1.0	10	0	89.3	73	127	0	0		
Vinyl chloride	9.99	1.0	10	0	99.9	65.2	134	0	0		
Xylenes, Total	27.63	1.0	30	0	92.1	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.6	5.0	50	0	99.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.23	5.0	50	0	96.5	76.5	125	0	0		
Surr: Toluene-d8	49.71	5.0	50	0	99.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

lcsd

SeqNo: **2708670** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.36	1.0	10	0	83.6	72.3	121	9.68	14.6	25	
1,1,2,2-Tetrachloroethane	10.59	1.0	10	0	106	72.3	118	9.41	11.8	25	
1,1,2-Trichloroethane	9.61	1.0	10	0	96.1	73.1	123	9.65	0.415	25	
1,1-Dichloroethane	8.6	1.0	10	0	86	73.2	127	9.86	13.7	25	
1,1-Dichloroethene	8.33	1.0	10	0	83.3	70.3	128	10.09	19.1	25	
1,2,3-Trichloropropane	4.31	1.0	5	0	86.2	68.4	115	3.93	9.22	25	
1,2-Dichlorobenzene	9.19	1.0	10	0	91.9	71	124	9.24	0.543	25	
1,2-Dichloroethane	8.86	1.0	10	0	88.6	72.5	127	9.35	5.38	25	
1,3-Dichlorobenzene	9.03	1.0	10	0	90.3	72.2	121	9.06	0.332	25	
1,3-Dichloropropane	5	1.0	5	0	100	76	122	4.7	6.19	0	
1,4-Dichlorobenzene	9	1.0	10	0	90	71.7	127	8.74	2.93	25	
2-Butanone	6.67	5.0	10	0	66.7	65.1	132	7.19	7.50	25	
4-Methyl-2-pentanone	9.97	5.0	10	0	99.7	68.7	118	8.95	10.8	25	
Acetone	11.26	5.0	10	0	113	69.2	133	12.64	11.5	25	
Benzene	8.57	1.0	10	0	85.7	71.2	122	9.57	11.0	25	
Carbon disulfide	3.81	1.0	5	0	76.2	67.8	134	4.5	16.6	25	
Carbon tetrachloride	8.14	1.0	10	0	81.4	74.5	122	9.78	18.3	25	
Chlorobenzene	8.72	1.0	10	0	87.2	72.7	124	8.95	2.60	25	
Chloroethane	9.64	1.0	10	0	96.4	72.3	136	9.05	6.31	25	
Chloroform	10.24	1.0	10	0	102	71.6	133	10.48	2.32	25	
Dibromochloromethane	9.34	1.0	10	0	93.4	70.6	124	9.43	0.959	25	
Ethylbenzene	8.93	1.0	10	0	89.3	70.9	126	9.4	5.13	25	
Methylene chloride	8.61	1.0	10	0	86.1	66.3	130	9.66	11.5	25	
Tetrachloroethene	8.69	1.0	10	0	86.9	72.4	119	9.91	13.1	25	
Toluene	8.31	1.0	10	0	83.1	71.8	116	9.52	13.6	25	
trans-1,2-Dichloroethene	8.71	1.0	10	0	87.1	70.3	120	9.91	12.9	25	
Trichloroethene	7.98	1.0	10	0	79.8	73	127	8.93	11.2	25	
Vinyl chloride	10.37	1.0	10	0	104	65.2	134	9.99	3.73	25	
Xylenes, Total	25.8	1.0	30	0	86	72.1	124	27.63	6.85	25	
Surr: 1,2-Dichloroethane-d4	50.35	5.0	50	0	101	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.53	5.0	50	0	99.1	76.5	125	0	0	25	
Surr: Toluene-d8	50.26	5.0	50	0	101	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

ms	SeqNo: **2708990**	TestNo: **SW8260C**	RunNo: **175779**
	Samp ID: **190925064-001b (092519-01-SW-D-**	Units: **µg/L**	Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.34	1.0	10	0	103	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.19	1.0	10	0	91.9	70.1	123	0	0		
1,1,2-Trichloroethane	9.66	1.0	10	0	96.6	72.1	119	0	0		
1,1-Dichloroethane	10.26	1.0	10	0	103	70.4	126	0	0		
1,1-Dichloroethene	10.58	1.0	10	0	106	70.2	125	0	0		
1,2,3-Trichloropropane	4.21	1.0	5	0	84.2	53.7	101	0	0		
1,2-Dichlorobenzene	9.38	1.0	10	0.59	87.9	70.2	123	0	0		
1,2-Dichloroethane	10	1.0	10	0.84	91.6	73.5	126	0	0		
1,3-Dichlorobenzene	9.34	1.0	10	0	93.4	70.4	124	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	64	125	0	0		
1,4-Dichlorobenzene	9.17	1.0	10	0	91.7	70.8	127	0	0		
2-Butanone	6.21	5.0	10	0	62.1	60.5	123	0	0		
4-Methyl-2-pentanone	8.14	5.0	10	0	81.4	52.8	133	0	0		
Acetone	9.57	5.0	10	0	95.7	56.3	135	0	0		
Benzene	10.64	1.0	10	0.35	103	70.2	127	0	0		
Carbon disulfide	4.62	1.0	5	0	92.4	62.2	130	0	0		
Carbon tetrachloride	10.44	1.0	10	0	104	56.4	137	0	0		
Chlorobenzene	12.97	1.0	10	2.76	102	72.7	128	0	0		
Chloroethane	9.57	1.0	10	0	95.7	71.3	135	0	0		
Chloroform	9.65	1.0	10	0	96.5	70.2	125	0	0		
Dibromochloromethane	9.64	1.0	10	0	96.4	69.5	123	0	0		
Ethylbenzene	11.32	1.0	10	0	113	71.9	129	0	0		
Methylene chloride	10.09	1.0	10	0	101	65.3	123	0	0		
Tetrachloroethene	10.73	1.0	10	0	107	74.5	121	0	0		
Toluene	10.08	1.0	10	0	101	73	122	0	0		
trans-1,2-Dichloroethene	10.06	1.0	10	0	101	69.1	133	0	0		
Trichloroethene	10.11	1.0	10	0	101	71.1	126	0	0		
Vinyl chloride	9.86	1.0	10	0	98.6	65	137	0	0		
Xylenes, Total	31.66	1.0	30	0	106	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.4	5.0	50	0	98.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.38	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	50.98	5.0	50	0	102	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190925064
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175779

msd

SeqNo: **2708992** TestNo: **SW8260C** RunNo: **175779**
Samp ID: **190925064-001b (092519-01-SW-D-** Units: **µg/L** Analysis Date: **9/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.26	1.0	10	0	103	71.6	126	10.34	0.777	20.4	
1,1,2,2-Tetrachloroethane	9.68	1.0	10	0	96.8	70.1	123	9.19	5.19	18.6	
1,1,2-Trichloroethane	9.73	1.0	10	0	97.3	72.1	119	9.66	0.722	20	
1,1-Dichloroethane	10.01	1.0	10	0	100	70.4	126	10.26	2.47	19.2	
1,1-Dichloroethene	10.23	1.0	10	0	102	70.2	125	10.58	3.36	16.1	
1,2,3-Trichloropropane	4.43	1.0	5	0	88.6	53.7	101	4.21	5.09	20	
1,2-Dichlorobenzene	10.27	1.0	10	0.59	96.8	70.2	123	9.38	9.06	17.9	
1,2-Dichloroethane	9.67	1.0	10	0.84	88.3	73.5	126	10	3.36	15.6	
1,3-Dichlorobenzene	10.11	1.0	10	0	101	70.4	124	9.34	7.92	14.3	
1,3-Dichloropropane	4.91	1.0	5	0	98.2	64	125	5.09	3.60	0	
1,4-Dichlorobenzene	10.22	1.0	10	0	102	70.8	127	9.17	10.8	14.4	
2-Butanone	6.54	5.0	10	0	65.4	60.5	123	6.21	5.18	15	
4-Methyl-2-pentanone	8.84	5.0	10	0	88.4	52.8	133	8.14	8.24	11.9	
Acetone	10.03	5.0	10	0	100	56.3	135	9.57	4.69	10.6	
Benzene	10.72	1.0	10	0.35	104	70.2	127	10.64	0.749	18.4	
Carbon disulfide	4.55	1.0	5	0	91	62.2	130	4.62	1.53	13.1	
Carbon tetrachloride	10.43	1.0	10	0	104	56.4	137	10.44	0.0958	20.3	
Chlorobenzene	13.63	1.0	10	2.76	109	72.7	128	12.97	4.96	19.6	
Chloroethane	9.62	1.0	10	0	96.2	71.3	135	9.57	0.521	27.8	
Chloroform	9.34	1.0	10	0	93.4	70.2	125	9.65	3.26	20.3	
Dibromochloromethane	9.95	1.0	10	0	99.5	69.5	123	9.64	3.16	18.8	
Ethylbenzene	11.99	1.0	10	0	120	71.9	129	11.32	5.75	16.3	
Methylene chloride	9.95	1.0	10	0	99.5	65.3	123	10.09	1.40	21.4	
Tetrachloroethene	10.79	1.0	10	0	108	74.5	121	10.73	0.558	20.9	
Toluene	10.08	1.0	10	0	101	73	122	10.08	0	19.4	
trans-1,2-Dichloroethene	9.95	1.0	10	0	99.5	69.1	133	10.06	1.10	16.1	
Trichloroethene	10.03	1.0	10	0	100	71.1	126	10.11	0.794	16.6	
Vinyl chloride	9.54	1.0	10	0	95.4	65	137	9.86	3.30	20.5	
Xylenes, Total	33.73	1.0	30	0	112	72	130	31.66	6.33	16.1	
Surr: 1,2-Dichloroethane-d4	50.6	5.0	50	0	101	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	54.13	5.0	50	0	108	76.5	125	0	0	0	
Surr: Toluene-d8	51.6	5.0	50	0	103	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190925064

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092519-01-SW-D-A-1	9/25/19	1030	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	092519-02-SW-A-A-1	9/25/19	1045	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	092519-03-SW-U-A-1	9/25/19	1100	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	092519-04-SW-B-A-1	9/25/19	1005	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	092519-05-SW-B-A-1	9/25/19	1120	A/P	W		✓	1	TSS
006	092519-TB01			A/P	TB			1	trip blank

Lot # 345-2

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan		9/25/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
		9-25-19 4:43pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	Y N	Y N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

Demo
190925064

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Experience is the solution
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

September 30, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190926065
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 9/26/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *30-Sep-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190926065	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092619-01-SW-D-C-1
Work Order:	**190926065**	**Collection Date:**	9/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190926065-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Acetone	**ND**	5.0		µg/L	1	9/27/2019 6:03:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 6:03:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 6:03:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 6:03:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 6:03:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	9/27/2019 6:03:00 PM
Surr: 4-Bromofluorobenzene	**97.9**	76.5-125		%REC	1	9/27/2019 6:03:00 PM
Surr: Toluene-d8	**100**	80.4-121		%REC	1	9/27/2019 6:03:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/27/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.7**	1.0		mg/L	1	9/27/2019

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT: AECOM Environment
Work Order: **190926065**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092619-02-SW-A-A-1
Collection Date: 9/26/2019
Lab Sample ID: 190926065-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Acetone	**2.9**	5.0	J	µg/L	1	9/27/2019 6:24:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 6:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 6:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 6:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 6:24:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/27/2019 6:24:00 PM
Surr: 4-Bromofluorobenzene	**99.0**	76.5-125		%REC	1	9/27/2019 6:24:00 PM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	9/27/2019 6:24:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/27/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.4**	1.1		mg/L	1	9/27/2019

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT: AECOM Environment
Work Order: **190926065**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092619-03-SW-U-B-1
Collection Date: 9/26/2019
Lab Sample ID: 190926065-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Acetone	**3.9**	5.0	J	µg/L	1	9/27/2019 6:46:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 6:46:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 6:46:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 6:46:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 6:46:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/27/2019 6:46:00 PM
Surr: 4-Bromofluorobenzene	**99.8**	76.5-125		%REC	1	9/27/2019 6:46:00 PM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	9/27/2019 6:46:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/27/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.8**	1.1		mg/L	1	9/27/2019

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT: AECOM Environment
Work Order: **190926065**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092619-04-SW-B-A-1
Collection Date: 9/26/2019
Lab Sample ID: 190926065-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Acetone	**2.8**	5.0	J	µg/L	1	9/27/2019 7:07:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/27/2019 7:07:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 7:07:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 7:07:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 7:07:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/27/2019 7:07:00 PM
Surr: 4-Bromofluorobenzene	**97.7**	76.5-125		%REC	1	9/27/2019 7:07:00 PM
Surr: Toluene-d8	**99.4**	80.4-121		%REC	1	9/27/2019 7:07:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/27/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.9**	1.1		mg/L	1	9/27/2019

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092619-05-SW-B-B-1
Work Order:	**190926065**	**Collection Date:**	9/26/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190926065-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/27/2019)						
TSS (Residue, Non-Filterable)	**9.7**	1.1		mg/L	1	9/27/2019

Adirondack Environmental Services, Inc

Date: *30-Sep-19*

CLIENT: AECOM Environment
Work Order: **190926065**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 092619-TB01
Collection Date: 9/26/2019
Lab Sample ID: 190926065-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Acetone	**3.2**	5.0	J	µg/L	1	9/27/2019 7:29:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/27/2019 7:29:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 7:29:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 7:29:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 7:29:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	9/27/2019 7:29:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	9/27/2019 7:29:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	9/27/2019 7:29:00 PM

CLIENT: AECOM Environment
Work Order: 190926065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75845

LCS

SeqNo: **2709881** **PrepDate:9/27/2019** TestNo: **SM2540D** RunNo: **175850**
Samp ID: **LCS-75845** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	516	40.0	496	0	104	86.5	114	0	0		

DUP

SeqNo: **2709883** **PrepDate:9/27/2019** TestNo: **SM2540D** RunNo: **175850**
Samp ID: **190925039-001A** **PrepRef:** Units: **mg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	334	4.00	0	0	0	0	0	336.4	0.716	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190926065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

mblk

SeqNo: **2709523** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.32	1.0									J
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	0.3	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.44	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.59	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.14	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.73	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.23	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.79	5.0	50	0	99.6	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190926065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

lcs

SeqNo: **2709522** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	52.42	1.0	50	0	105	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	57.18	1.0	50	0	114	72.3	118	0	0		
1,1,2-Trichloroethane	54.69	1.0	50	0	109	73.1	123	0	0		
1,1-Dichloroethane	55.06	1.0	50	0	110	73.2	127	0	0		
1,1-Dichloroethene	54.39	1.0	50	0	109	70.3	128	0	0		
1,2,3-Trichloropropane	25.39	1.0	25	0	102	68.4	115	0	0		
1,2-Dichlorobenzene	53.24	1.0	50	0	106	71	124	0	0		
1,2-Dichloroethane	52.66	1.0	50	0	105	72.5	127	0	0		
1,3-Dichlorobenzene	56.09	1.0	50	0	112	72.2	121	0	0		
1,3-Dichloropropane	30.09	1.0	25	0	120	76	122	0	0		
1,4-Dichlorobenzene	54.46	1.0	50	0	109	71.7	127	0	0		
2-Butanone	60.04	5.0	50	0	120	65.1	132	0	0		
4-Methyl-2-pentanone	60.43	5.0	50	0	121	68.7	118	0	0		S
Acetone	57.94	5.0	50	0	116	69.2	133	0	0		
Benzene	52.72	1.0	50	0	105	71.2	122	0	0		
Carbon disulfide	25.56	1.0	25	0	102	67.8	134	0	0		
Carbon tetrachloride	54.42	1.0	50	0	109	74.5	122	0	0		
Chlorobenzene	48.47	1.0	50	0	96.9	72.7	124	0	0		
Chloroethane	45.16	1.0	50	0	90.3	72.3	136	0	0		
Chloroform	51.34	1.0	50	0	103	71.6	133	0	0		
Dibromochloromethane	59.15	1.0	50	0	118	70.6	124	0	0		
Ethylbenzene	52.83	1.0	50	0	106	70.9	126	0	0		
Methylene chloride	56.04	1.0	50	0	112	66.3	130	0	0		
Tetrachloroethene	55.62	1.0	50	0	111	72.4	119	0	0		
Toluene	52.89	1.0	50	0	106	71.8	116	0	0		
trans-1,2-Dichloroethene	56.37	1.0	50	0	113	70.3	120	0	0		
Trichloroethene	49	1.0	50	0	98	73	127	0	0		
Vinyl chloride	50.33	1.0	50	0	101	65.2	134	0	0		
Xylenes, Total	150.3	1.0	150	0	100	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.28	5.0	50	0	98.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.2	5.0	50	0	92.4	76.5	125	0	0		
Surr: Toluene-d8	48.35	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190926065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

ms

SeqNo: **2709777** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **190927058-003b** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.61	1.0	10	0	106	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	11.96	1.0	10	0	120	70.1	123	0	0		
1,1,2-Trichloroethane	10.25	1.0	10	0	103	72.1	119	0	0		
1,1-Dichloroethane	10.58	1.0	10	0	106	70.4	126	0	0		
1,1-Dichloroethene	10.84	1.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	4.99	1.0	5	0	99.8	53.7	101	0	0		
1,2-Dichlorobenzene	9.6	1.0	10	0	96	70.2	123	0	0		
1,2-Dichloroethane	9.98	1.0	10	0.2	97.8	73.5	126	0	0		
1,3-Dichlorobenzene	9.61	1.0	10	0	96.1	70.4	124	0	0		
1,3-Dichloropropane	5.56	1.0	5	0	111	64	125	0	0		
1,4-Dichlorobenzene	9.6	1.0	10	0	96	70.8	127	0	0		
2-Butanone	8.71	5.0	10	0	87.1	60.5	123	0	0		
4-Methyl-2-pentanone	10.69	5.0	10	0	107	52.8	133	0	0		
Acetone	15.51	5.0	10	0	155	56.3	135	0	0		S
Benzene	10.43	1.0	10	0	104	70.2	127	0	0		
Carbon disulfide	4.8	1.0	5	0	96	62.2	130	0	0		
Carbon tetrachloride	10.81	1.0	10	0	108	56.4	137	0	0		
Chlorobenzene	10.2	1.0	10	0	102	72.7	128	0	0		
Chloroethane	8.8	1.0	10	0	88	71.3	135	0	0		
Chloroform	9.96	1.0	10	0	99.6	70.2	125	0	0		
Dibromochloromethane	10.58	1.0	10	0	106	69.5	123	0	0		
Ethylbenzene	10.94	1.0	10	0	109	71.9	129	0	0		
Methylene chloride	10.21	1.0	10	0	102	65.3	123	0	0		
Tetrachloroethene	11.12	1.0	10	0	111	74.5	121	0	0		
Toluene	10.3	1.0	10	0	103	73	122	0	0		
trans-1,2-Dichloroethene	10.84	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	9.35	1.0	10	0	93.5	71.1	126	0	0		
Vinyl chloride	9.47	1.0	10	0	94.7	65	137	0	0		
Xylenes, Total	30.59	1.0	30	0	102	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	53.03	5.0	50	0	106	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.81	5.0	50	0	99.6	76.5	125	0	0		
Surr: Toluene-d8	49.12	5.0	50	0	98.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190926065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

msd

SeqNo: **2709778** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **190927058-003b** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	12.03	1.0	10	0	120	71.6	126	10.61	12.5	20.4	
1,1,2,2-Tetrachloroethane	12.13	1.0	10	0	121	70.1	123	11.96	1.41	18.6	
1,1,2-Trichloroethane	11.06	1.0	10	0	111	72.1	119	10.25	7.60	20	
1,1-Dichloroethane	10.8	1.0	10	0	108	70.4	126	10.58	2.06	19.2	
1,1-Dichloroethene	11.32	1.0	10	0	113	70.2	125	10.84	4.33	16.1	
1,2,3-Trichloropropane	5.04	1.0	5	0	101	53.7	101	4.99	0.997	20	
1,2-Dichlorobenzene	10.07	1.0	10	0	101	70.2	123	9.6	4.78	17.9	
1,2-Dichloroethane	9.75	1.0	10	0.2	95.5	73.5	126	9.98	2.33	15.6	
1,3-Dichlorobenzene	10.06	1.0	10	0	101	70.4	124	9.61	4.58	14.3	
1,3-Dichloropropane	5.74	1.0	5	0	115	64	125	5.56	3.19	0	
1,4-Dichlorobenzene	9.98	1.0	10	0	99.8	70.8	127	9.6	3.88	14.4	
2-Butanone	8.06	5.0	10	0	80.6	60.5	123	8.71	7.75	15	
4-Methyl-2-pentanone	11.83	5.0	10	0	118	52.8	133	10.69	10.1	11.9	
Acetone	13.38	5.0	10	0	134	56.3	135	15.51	14.7	10.6	Z
Benzene	11.32	1.0	10	0	113	70.2	127	10.43	8.18	18.4	
Carbon disulfide	4.84	1.0	5	0	96.8	62.2	130	4.8	0.830	13.1	
Carbon tetrachloride	12.12	1.0	10	0	121	56.4	137	10.81	11.4	20.3	
Chlorobenzene	10.62	1.0	10	0	106	72.7	128	10.2	4.03	19.6	
Chloroethane	9.74	1.0	10	0	97.4	71.3	135	8.8	10.1	27.8	
Chloroform	10.04	1.0	10	0	100	70.2	125	9.96	0.800	20.3	
Dibromochloromethane	10.98	1.0	10	0	110	69.5	123	10.58	3.71	18.8	
Ethylbenzene	11.48	1.0	10	0	115	71.9	129	10.94	4.82	16.3	
Methylene chloride	9.78	1.0	10	0	97.8	65.3	123	10.21	4.30	21.4	
Tetrachloroethene	11.43	1.0	10	0	114	74.5	121	11.12	2.75	20.9	
Toluene	10.81	1.0	10	0	108	73	122	10.3	4.83	19.4	
trans-1,2-Dichloroethene	10.9	1.0	10	0	109	69.1	133	10.84	0.552	16.1	
Trichloroethene	10.37	1.0	10	0	104	71.1	126	9.35	10.3	16.6	
Vinyl chloride	9.95	1.0	10	0	99.5	65	137	9.47	4.94	20.5	
Xylenes, Total	32.77	1.0	30	0	109	72	130	30.59	6.88	16.1	
Surr: 1,2-Dichloroethane-d4	50.88	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.24	5.0	50	0	100	76.5	125	0	0	0	
Surr: Toluene-d8	53.04	5.0	50	0	106	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190926065

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092619-01-SW-D-C-1	9/26/19	1050	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	092619-02-SW-A-A-1	9/26/19	1055	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	092619-03-SW-U-B-1	9/26/19	1115	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	092619-04-SW-B-A-1	9/26/19	1025	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	092619-05-SW-B-B-1	9/26/19	1130	A	W		✓	1	TSS
006	092619-TB01 Lot#WOA-F45-2			A	TB			1	trip blank
	J.m. 9/26/19			P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 9/26/19 410 pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 9/26/19 4:41 pm

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 10°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190926065

Adirondack Environmental Services, Inc

190926065

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

9/26/2019

Demo
190926065

TAT: **2**

DateDue: 9/30/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
190926065-001	092619-01-SW-D-C-1	Water	9/26/2019	9/30/2019	B	A					
190926065-002	092619-02-SW-A-A-1	Water	9/26/2019	9/30/2019	B	A					
190926065-003	092619-03-SW-U-B-1	Water	9/26/2019	9/30/2019	B	A					
190926065-004	092619-04-SW-B-A-1	Water	9/26/2019	9/30/2019	B	A					
190926065-005	092619-05-SW-B-B-1	Water	9/26/2019	9/30/2019		A					
190926065-006	092619-TB01	Trip Blank	9/26/2019	9/30/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 01, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190927058
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 9/27/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *01-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190927058	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-01-SW-D-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
PCB, Total	**ND**	0.065		µg/L	1	9/27/2019 6:17:04 PM
Surr: Decachlorobiphenyl	**83.0**	57.1-135		%REC	1	9/27/2019 6:17:04 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Acetone	**3.2**	5.0	J	µg/L	1	9/27/2019 8:12:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 8:12:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 8:12:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-01-SW-D-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 8:12:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/27/2019 8:12:00 PM
Surr: 4-Bromofluorobenzene	**95.2**	76.5-125		%REC	1	9/27/2019 8:12:00 PM
Surr: Toluene-d8	**97.8**	80.4-121		%REC	1	9/27/2019 8:12:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.3**	1.1		mg/L	1	9/30/2019

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-02-SW-A-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
PCB, Total	**ND**	0.065		µg/L	1	9/27/2019 6:30:28 PM
Surr: Decachlorobiphenyl	**75.2**	57.1-135		%REC	1	9/27/2019 6:30:28 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Acetone	**3.5**	5.0	J	µg/L	1	9/27/2019 8:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 8:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 8:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 8:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-02-SW-A-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 8:34:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/27/2019 8:34:00 PM
Surr: 4-Bromofluorobenzene	**98.2**	76.5-125		%REC	1	9/27/2019 8:34:00 PM
Surr: Toluene-d8	**99.9**	80.4-121		%REC	1	9/27/2019 8:34:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.0**	1.1		mg/L	1	9/30/2019

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-03-SW-U-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
PCB, Total	**ND**	0.065		µg/L	1	9/27/2019 6:46:18 PM
Surr: Decachlorobiphenyl	**86.8**	57.1-135		%REC	1	9/27/2019 6:46:18 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Acetone	**ND**	5.0		µg/L	1	9/27/2019 8:55:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 8:55:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 8:55:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 8:55:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-03-SW-U-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 8:55:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/27/2019 8:55:00 PM
Surr: 4-Bromofluorobenzene	**99.5**	76.5-125		%REC	1	9/27/2019 8:55:00 PM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	9/27/2019 8:55:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.7**	1.0		mg/L	1	9/30/2019

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-04-SW-B-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/27/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1242	**0.120**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/27/2019 6:59:42 PM
PCB, Total	**0.120**	0.065		µg/L	1	9/27/2019 6:59:42 PM
Surr: Decachlorobiphenyl	**84.2**	57.1-135		%REC	1	9/27/2019 6:59:42 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Acetone	**3.2**	5.0	J	µg/L	1	9/27/2019 9:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	9/27/2019 9:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 9:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 9:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Chlorobenzene	**0.8**	1.0	J	µg/L	1	9/27/2019 9:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-04-SW-B-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 9:17:00 PM
Surr: 1,2-Dichloroethane-d4	**104**	80.9-122		%REC	1	9/27/2019 9:17:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	9/27/2019 9:17:00 PM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	9/27/2019 9:17:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 9/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.0**	1.1		mg/L	1	9/30/2019

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-05-SW-B-A-1
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 9/30/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	9/30/2019

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-TB01
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Acetone	**5.5**	5.0		µg/L	1	9/27/2019 9:38:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 9:38:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 9:38:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 9:38:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	9/27/2019 9:38:00 PM
Surr: 4-Bromofluorobenzene	**94.1**	76.5-125		%REC	1	9/27/2019 9:38:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	9/27/2019 9:38:00 PM

Adirondack Environmental Services, Inc

Date: *01-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	092719-TB02
Work Order:	**190927058**	**Collection Date:**	9/27/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190927058-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Methylene chloride	**0.4**	1.0	J	µg/L	1	9/27/2019 10:00:00 PM
Acetone	**5.0**	5.0	J	µg/L	1	9/27/2019 10:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	9/27/2019 10:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	9/27/2019 10:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Benzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	9/27/2019 10:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Toluene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	9/27/2019 10:00:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	9/27/2019 10:00:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	9/27/2019 10:00:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	9/27/2019 10:00:00 PM

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75846

MBLK

SeqNo: **2709566** **PrepDate:9/27/2019** TestNo: **SW8082A** RunNo: **175828**
Samp ID: **MB-75846** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0874	0.0100	0.1	0	87.4	57.1	135	0	0		

LCS

SeqNo: **2709567** **PrepDate:9/27/2019** TestNo: **SW8082A** RunNo: **175828**
Samp ID: **LCS-75846** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4736	0.0650	0.5	0	94.7	60	140	0	0		
PCB, Total	0.4736	0.0650	0.5	0	94.7	60	140	0	0		
Surr: Decachlorobiphenyl	0.0884	0.0100	0.1	0	88.4	57.1	135	0	0		

MS

SeqNo: **2709576** **PrepDate:9/27/2019** TestNo: **SW8082A** RunNo: **175828**
Samp ID: **190927058-003 (092719-03-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5282	0.0650	0.5	0	106	46.7	130	0	0		
PCB, Total	0.5282	0.0650	0.5	0	106	51	150	0	0		
Surr: Decachlorobiphenyl	0.0792	0.0100	0.1	0	79.2	57.1	135	0	0		

MSD

SeqNo: **2709577** **PrepDate:9/27/2019** TestNo: **SW8082A** RunNo: **175828**
Samp ID: **190927058-003 (092719-03-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75846

MSD

SeqNo: **2709577** **PrepDate:9/27/2019** TestNo: **SW8082A** RunNo: **175828**
Samp ID: **190927058-003 (092719-03-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.496	0.0650	0.5	0	99.2	46.7	130	0.5282	6.29	30	
PCB, Total	0.496	0.0650	0.5	0	99.2	51	150	0.5282	6.29	30	
Surr: Decachlorobiphenyl	0.0836	0.0100	0.1	0	83.6	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75857

LCS

SeqNo: **2711265** **PrepDate:9/30/2019** TestNo: **SM2540D** RunNo: **175913**
Samp ID: **LCS-75857** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	492	40.0	496	0	99.2	86.5	114	0	0		

DUP

SeqNo: **2711277** **PrepDate:9/30/2019** TestNo: **SM2540D** RunNo: **175913**
Samp ID: **190925026-001A** **PrepRef:** Units: **mg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1553	67.0	0	0	0	0	0	1507	3.05	10	

DUP

SeqNo: **2711285** **PrepDate:9/30/2019** TestNo: **SM2540D** RunNo: **175913**
Samp ID: **190927058-003A** **PrepRef:** Units: **mg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	9	1.00	0	0	0	0	0	9.7	7.49	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

mblk

SeqNo: **2709523** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.32	1.0									J
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	0.3	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.44	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	2.59	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.14	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.73	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.23	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.79	5.0	50	0	99.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

lcs

SeqNo: **2709522** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	52.42	1.0	50	0	105	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	57.18	1.0	50	0	114	72.3	118	0	0		
1,1,2-Trichloroethane	54.69	1.0	50	0	109	73.1	123	0	0		
1,1-Dichloroethane	55.06	1.0	50	0	110	73.2	127	0	0		
1,1-Dichloroethene	54.39	1.0	50	0	109	70.3	128	0	0		
1,2,3-Trichloropropane	25.39	1.0	25	0	102	68.4	115	0	0		
1,2-Dichlorobenzene	53.24	1.0	50	0	106	71	124	0	0		
1,2-Dichloroethane	52.66	1.0	50	0	105	72.5	127	0	0		
1,3-Dichlorobenzene	56.09	1.0	50	0	112	72.2	121	0	0		
1,3-Dichloropropane	30.09	1.0	25	0	120	76	122	0	0		
1,4-Dichlorobenzene	54.46	1.0	50	0	109	71.7	127	0	0		
2-Butanone	60.04	5.0	50	0	120	65.1	132	0	0		
4-Methyl-2-pentanone	60.43	5.0	50	0	121	68.7	118	0	0		S
Acetone	57.94	5.0	50	0	116	69.2	133	0	0		
Benzene	52.72	1.0	50	0	105	71.2	122	0	0		
Carbon disulfide	25.56	1.0	25	0	102	67.8	134	0	0		
Carbon tetrachloride	54.42	1.0	50	0	109	74.5	122	0	0		
Chlorobenzene	48.47	1.0	50	0	96.9	72.7	124	0	0		
Chloroethane	45.16	1.0	50	0	90.3	72.3	136	0	0		
Chloroform	51.34	1.0	50	0	103	71.6	133	0	0		
Dibromochloromethane	59.15	1.0	50	0	118	70.6	124	0	0		
Ethylbenzene	52.83	1.0	50	0	106	70.9	126	0	0		
Methylene chloride	56.04	1.0	50	0	112	66.3	130	0	0		
Tetrachloroethene	55.62	1.0	50	0	111	72.4	119	0	0		
Toluene	52.89	1.0	50	0	106	71.8	116	0	0		
trans-1,2-Dichloroethene	56.37	1.0	50	0	113	70.3	120	0	0		
Trichloroethene	49	1.0	50	0	98	73	127	0	0		
Vinyl chloride	50.33	1.0	50	0	101	65.2	134	0	0		
Xylenes, Total	150.3	1.0	150	0	100	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.28	5.0	50	0	98.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.2	5.0	50	0	92.4	76.5	125	0	0		
Surr: Toluene-d8	48.35	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

ms

SeqNo: **2709777** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **190927058-003b (092719-03-SW-U-** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.61	1.0	10	0	106	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	11.96	1.0	10	0	120	70.1	123	0	0		
1,1,2-Trichloroethane	10.25	1.0	10	0	103	72.1	119	0	0		
1,1-Dichloroethane	10.58	1.0	10	0	106	70.4	126	0	0		
1,1-Dichloroethene	10.84	1.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	4.99	1.0	5	0	99.8	53.7	101	0	0		
1,2-Dichlorobenzene	9.6	1.0	10	0	96	70.2	123	0	0		
1,2-Dichloroethane	9.98	1.0	10	0.2	97.8	73.5	126	0	0		
1,3-Dichlorobenzene	9.61	1.0	10	0	96.1	70.4	124	0	0		
1,3-Dichloropropane	5.56	1.0	5	0	111	64	125	0	0		
1,4-Dichlorobenzene	9.6	1.0	10	0	96	70.8	127	0	0		
2-Butanone	8.71	5.0	10	0	87.1	60.5	123	0	0		
4-Methyl-2-pentanone	10.69	5.0	10	0	107	52.8	133	0	0		
Acetone	15.51	5.0	10	0	155	56.3	135	0	0		S
Benzene	10.43	1.0	10	0	104	70.2	127	0	0		
Carbon disulfide	4.8	1.0	5	0	96	62.2	130	0	0		
Carbon tetrachloride	10.81	1.0	10	0	108	56.4	137	0	0		
Chlorobenzene	10.2	1.0	10	0	102	72.7	128	0	0		
Chloroethane	8.8	1.0	10	0	88	71.3	135	0	0		
Chloroform	9.96	1.0	10	0	99.6	70.2	125	0	0		
Dibromochloromethane	10.58	1.0	10	0	106	69.5	123	0	0		
Ethylbenzene	10.94	1.0	10	0	109	71.9	129	0	0		
Methylene chloride	10.21	1.0	10	0	102	65.3	123	0	0		
Tetrachloroethene	11.12	1.0	10	0	111	74.5	121	0	0		
Toluene	10.3	1.0	10	0	103	73	122	0	0		
trans-1,2-Dichloroethene	10.84	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	9.35	1.0	10	0	93.5	71.1	126	0	0		
Vinyl chloride	9.47	1.0	10	0	94.7	65	137	0	0		
Xylenes, Total	30.59	1.0	30	0	102	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	53.03	5.0	50	0	106	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.81	5.0	50	0	99.6	76.5	125	0	0		
Surr: Toluene-d8	49.12	5.0	50	0	98.2	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190927058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175825

msd

SeqNo: **2709778** TestNo: **SW8260C** RunNo: **175825**
Samp ID: **190927058-003b (092719-03-SW-U-** Units: **µg/L** Analysis Date: **9/27/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	12.03	1.0	10	0	120	71.6	126	10.61	12.5	20.4	
1,1,2,2-Tetrachloroethane	12.13	1.0	10	0	121	70.1	123	11.96	1.41	18.6	
1,1,2-Trichloroethane	11.06	1.0	10	0	111	72.1	119	10.25	7.60	20	
1,1-Dichloroethane	10.8	1.0	10	0	108	70.4	126	10.58	2.06	19.2	
1,1-Dichloroethene	11.32	1.0	10	0	113	70.2	125	10.84	4.33	16.1	
1,2,3-Trichloropropane	5.04	1.0	5	0	101	53.7	101	4.99	0.997	20	
1,2-Dichlorobenzene	10.07	1.0	10	0	101	70.2	123	9.6	4.78	17.9	
1,2-Dichloroethane	9.75	1.0	10	0.2	95.5	73.5	126	9.98	2.33	15.6	
1,3-Dichlorobenzene	10.06	1.0	10	0	101	70.4	124	9.61	4.58	14.3	
1,3-Dichloropropane	5.74	1.0	5	0	115	64	125	5.56	3.19	0	
1,4-Dichlorobenzene	9.98	1.0	10	0	99.8	70.8	127	9.6	3.88	14.4	
2-Butanone	8.06	5.0	10	0	80.6	60.5	123	8.71	7.75	15	
4-Methyl-2-pentanone	11.83	5.0	10	0	118	52.8	133	10.69	10.1	11.9	
Acetone	13.38	5.0	10	0	134	56.3	135	15.51	14.7	10.6	Z
Benzene	11.32	1.0	10	0	113	70.2	127	10.43	8.18	18.4	
Carbon disulfide	4.84	1.0	5	0	96.8	62.2	130	4.8	0.830	13.1	
Carbon tetrachloride	12.12	1.0	10	0	121	56.4	137	10.81	11.4	20.3	
Chlorobenzene	10.62	1.0	10	0	106	72.7	128	10.2	4.03	19.6	
Chloroethane	9.74	1.0	10	0	97.4	71.3	135	8.8	10.1	27.8	
Chloroform	10.04	1.0	10	0	100	70.2	125	9.96	0.800	20.3	
Dibromochloromethane	10.98	1.0	10	0	110	69.5	123	10.58	3.71	18.8	
Ethylbenzene	11.48	1.0	10	0	115	71.9	129	10.94	4.82	16.3	
Methylene chloride	9.78	1.0	10	0	97.8	65.3	123	10.21	4.30	21.4	
Tetrachloroethene	11.43	1.0	10	0	114	74.5	121	11.12	2.75	20.9	
Toluene	10.81	1.0	10	0	108	73	122	10.3	4.83	19.4	
trans-1,2-Dichloroethene	10.9	1.0	10	0	109	69.1	133	10.84	0.552	16.1	
Trichloroethene	10.37	1.0	10	0	104	71.1	126	9.35	10.3	16.6	
Vinyl chloride	9.95	1.0	10	0	99.5	65	137	9.47	4.94	20.5	
Xylenes, Total	32.77	1.0	30	0	109	72	130	30.59	6.88	16.1	
Surr: 1,2-Dichloroethane-d4	50.88	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.24	5.0	50	0	100	76.5	125	0	0	0	
Surr: Toluene-d8	53.04	5.0	50	0	106	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

CHAIN OF CUSTODY RECORD

AES Work Order # 190927058

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	092719-01-SW-D-A-1	9/27/19	1245	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
002	092719-02-SW-A-A-1	9/27/19	1305	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
003	092719-03-SW-U-A-1	9/27/19	1320	A/P	W		✓	6	PCBs
				A/P				6	VOCs
				A/P				3	TSS
004	092719-04-SW-B-A-1	9/27/19	1225	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
005	092719-05-SW-B-A-1	9/27/19	1355	A/P	W		✓	1	TSS
006	092719-TB01 Lot # VOA-F4603			A/P	TB			1	trip blank

Jan. 9/27/19

Shipment Arrived Via:

FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		9/27/19 4:03pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		9/27/19 4:25pm

Temperature

Ambient or (Chilled)

Notes: 6°C

AES Bottles

Y	N
☒	☐

Properly Preserved

(Y) N

Notes: _____

Received Within Holding Times

(Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
190927058

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19092705 8

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Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan	
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	092719-TB02 Lot# VOA-F463 J.M. 9/27/19		A P	TB				trip blank
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal

☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 9/27/19 4:03pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 9/27/19 4:25pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190927058

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

190927058

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/1/2019

9/27/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
190927058-001	092719-01-SW-D-A-1	Water	9/27/2019	10/1/2019	C	B	A				
190927058-002	092719-02-SW-A-A-1	Water	9/27/2019	10/1/2019	C	B	A				
190927058-003	092719-03-SW-U-A-1	Water	9/27/2019	10/1/2019	C	B	A				
190927058-004	092719-04-SW-B-A-1	Water	9/27/2019	10/1/2019	C	B	A				
190927058-005	092719-05-SW-B-A-1	Water	9/27/2019	10/1/2019			A				
190927058-006	092719-TB01	Trip Blank	9/27/2019	10/1/2019		A					
190927058-007	092719-TB02	Trip Blank	9/27/2019	10/1/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 04, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 190930045
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 9/30/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *04-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	190930045	

Sample containers were supplied by Adirondack Environmental Services.

This report has been revised to include the correct QC.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-01-SW-U-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
PCB, Total	**ND**	0.065		µg/L	1	9/30/2019 7:05:35 PM
Surr: Decachlorobiphenyl	**76.6**	57.1-135		%REC	1	9/30/2019 7:05:35 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Acetone	**4.5**	5.0	J	µg/L	1	10/2/2019 12:23:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	10/2/2019 12:23:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 12:23:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 12:23:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-01-SW-U-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 12:23:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/2/2019 12:23:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/2/2019 12:23:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	10/2/2019 12:23:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.7**	1.0		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-02-SW-A-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
PCB, Total	**ND**	0.065		µg/L	1	9/30/2019 7:18:57 PM
Surr: Decachlorobiphenyl	**94.8**	57.1-135		%REC	1	9/30/2019 7:18:57 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Acetone	**4.9**	5.0	J	µg/L	1	10/2/2019 12:44:00 PM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	10/2/2019 12:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 12:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 12:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-02-SW-A-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 12:44:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/2/2019 12:44:00 PM
Surr: 4-Bromofluorobenzene	**98.2**	76.5-125		%REC	1	10/2/2019 12:44:00 PM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	10/2/2019 12:44:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.7**	1.1		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-03-SW-D-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1242	**0.038**	0.065	J	µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/30/2019 7:32:18 PM
PCB, Total	**0.038**	0.065	J	µg/L	1	9/30/2019 7:32:18 PM
Surr: Decachlorobiphenyl	**66.2**	57.1-135		%REC	1	9/30/2019 7:32:18 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Acetone	**4.0**	5.0	JS+	µg/L	1	10/1/2019 11:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/1/2019 11:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/1/2019 11:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Benzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/1/2019 11:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Toluene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-03-SW-D-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/1/2019 11:41:00 PM
Surr: 1,2-Dichloroethane-d4	**99.2**	80.9-122		%REC	1	10/1/2019 11:41:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/1/2019 11:41:00 PM
Surr: Toluene-d8	**99.7**	80.4-121		%REC	1	10/1/2019 11:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.9**	1.1		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-04-SW-B-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
PCB, Total	**ND**	0.065		µg/L	1	9/30/2019 7:58:58 PM
Surr: Decachlorobiphenyl	**88.6**	57.1-135		%REC	1	9/30/2019 7:58:58 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Acetone	**3.8**	5.0	J	µg/L	1	10/2/2019 1:06:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/2/2019 1:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 1:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 1:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-04-SW-B-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 1:06:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/2/2019 1:06:00 PM
Surr: 4-Bromofluorobenzene	**108**	76.5-125		%REC	1	10/2/2019 1:06:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	10/2/2019 1:06:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.6**	1.1		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-05-SW-B-A-1
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/1/2019)						
TSS (Residue, Non-Filterable)	**4.1**	1.0		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-01-SW-U-A-3
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 9/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1221	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1232	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1242	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1248	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1254	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1260	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1262	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Aroclor 1268	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
PCB, Total	**ND**	0.065		µg/L	1	9/30/2019 8:25:38 PM
Surr: Decachlorobiphenyl	**49.0**	57.1-135	S	%REC	1	9/30/2019 8:25:38 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Acetone	**ND**	5.0		µg/L	1	10/2/2019 12:24:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Chloroform	**28**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/2/2019 12:24:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 12:24:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 12:24:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	093019-01-SW-U-A-3
Work Order:	**190930045**	**Collection Date:**	9/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	190930045-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 12:24:00 AM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/2/2019 12:24:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/2/2019 12:24:00 AM
Surr: Toluene-d8	**99.9**	80.4-121		%REC	1	10/2/2019 12:24:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**1.3**	1.0		mg/L	1	10/1/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **190930045**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 093019-TB01
Collection Date: 9/30/2019
Lab Sample ID: 190930045-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Methylene chloride	**0.3**	1.0	J	µg/L	1	10/2/2019 12:46:00 AM
Acetone	**4.5**	5.0	JS+	µg/L	1	10/2/2019 12:46:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 12:46:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 12:46:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 12:46:00 AM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/2/2019 12:46:00 AM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	10/2/2019 12:46:00 AM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	10/2/2019 12:46:00 AM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **190930045**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 093019-TB02
Collection Date: 9/30/2019
Lab Sample ID: 190930045-008
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Methylene chloride	**0.8**	1.0	J	µg/L	1	10/2/2019 1:07:00 AM
Acetone	**3.6**	5.0	JS+	µg/L	1	10/2/2019 1:07:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 1:07:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 1:07:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 1:07:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 1:07:00 AM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	10/2/2019 1:07:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/2/2019 1:07:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	10/2/2019 1:07:00 AM

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75879

MBLK

SeqNo: **2710666** **PrepDate:9/30/2019** TestNo: **SW8082A** RunNo: **175884**
Samp ID: **MB-75879** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0774	0.0100	0.1	0	77.4	57.1	135	0	0		

LCS

SeqNo: **2710667** **PrepDate:9/30/2019** TestNo: **SW8082A** RunNo: **175884**
Samp ID: **LCS-75879** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4806	0.0650	0.5	0	96.1	60	140	0	0		
PCB, Total	0.4806	0.0650	0.5	0	96.1	60	140	0	0		
Surr: Decachlorobiphenyl	0.0826	0.0100	0.1	0	82.6	57.1	135	0	0		

LCSD

SeqNo: **2710668** **PrepDate:9/30/2019** TestNo: **SW8082A** RunNo: **175884**
Samp ID: **LCSD-75879** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **9/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5266	0.0650	0.5	0	105	60	140	0.4806	9.13	30	
PCB, Total	0.5266	0.0650	0.5	0	105	60	140	0.4806	9.13	30	
Surr: Decachlorobiphenyl	0.0868	0.0100	0.1	0	86.8	57.1	135	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75897

LCS

SeqNo: **2711946** **PrepDate:10/1/2019** TestNo: **SM2540D** RunNo: **175949**
Samp ID: **LCS-75897** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	496	0	94.4	86.5	114	0	0		

DUP

SeqNo: **2711948** **PrepDate:10/1/2019** TestNo: **SM2540D** RunNo: **175949**
Samp ID: **190927032-001A** **PrepRef:** Units: **mg/L** Analysis Date: **10/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	260	10.0	0	0	0	0	0	278	6.69	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175942

mblk

SeqNo: **2711747** TestNo: **SW8260C** RunNo: **175942**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.15	1.0									J
1,3-Dichlorobenzene	0.18	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	3.39	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.36	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.58	5.0	50	0	99.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.07	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	54.73	5.0	50	0	109	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175942

lcs

SeqNo: **2711745** TestNo: **SW8260C** RunNo: **175942**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.81	1.0	10	0	108	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	11.51	1.0	10	0	115	72.3	118	0	0		
1,1,2-Trichloroethane	10.7	1.0	10	0	107	73.1	123	0	0		
1,1-Dichloroethane	10.74	1.0	10	0	107	73.2	127	0	0		
1,1-Dichloroethene	10.56	1.0	10	0	106	70.3	128	0	0		
1,2,3-Trichloropropane	4.67	1.0	5	0	93.4	68.4	115	0	0		
1,2-Dichlorobenzene	9.58	1.0	10	0	95.8	71	124	0	0		
1,2-Dichloroethane	9.96	1.0	10	0	99.6	72.5	127	0	0		
1,3-Dichlorobenzene	9.74	1.0	10	0	97.4	72.2	121	0	0		
1,3-Dichloropropane	5.68	1.0	5	0	114	76	122	0	0		
1,4-Dichlorobenzene	8.79	1.0	10	0	87.9	71.7	127	0	0		
2-Butanone	7.85	5.0	10	0	78.5	65.1	132	0	0		
4-Methyl-2-pentanone	9.65	5.0	10	0	96.5	68.7	118	0	0		
Acetone	13.37	5.0	10	0	134	69.2	133	0	0		S
Benzene	10.54	1.0	10	0	105	71.2	122	0	0		
Carbon disulfide	4.91	1.0	5	0	98.2	67.8	134	0	0		
Carbon tetrachloride	10.53	1.0	10	0	105	74.5	122	0	0		
Chlorobenzene	10.73	1.0	10	0	107	72.7	124	0	0		
Chloroethane	12.31	1.0	10	0	123	72.3	136	0	0		
Chloroform	10.04	1.0	10	0	100	71.6	133	0	0		
Dibromochloromethane	11.34	1.0	10	0	113	70.6	124	0	0		
Ethylbenzene	11.59	1.0	10	0	116	70.9	126	0	0		
Methylene chloride	11.82	1.0	10	0	118	66.3	130	0	0		
Tetrachloroethene	10.97	1.0	10	0	110	72.4	119	0	0		
Toluene	10.42	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	10.45	1.0	10	0	104	70.3	120	0	0		
Trichloroethene	9.4	1.0	10	0	94	73	127	0	0		
Vinyl chloride	11.93	1.0	10	0	119	65.2	134	0	0		
Xylenes, Total	32.65	1.0	30	0	109	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.45	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.29	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	50.32	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175942

lcsd

SeqNo: **2711746** TestNo: **SW8260C** RunNo: **175942**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10	1.0	10	0	100	72.3	121	10.81	7.78	25	
1,1,2,2-Tetrachloroethane	11.21	1.0	10	0	112	72.3	118	11.51	2.64	25	
1,1,2-Trichloroethane	9.78	1.0	10	0	97.8	73.1	123	10.7	8.98	25	
1,1-Dichloroethane	10.03	1.0	10	0	100	73.2	127	10.74	6.84	25	
1,1-Dichloroethene	9.62	1.0	10	0	96.2	70.3	128	10.56	9.32	25	
1,2,3-Trichloropropane	4.55	1.0	5	0	91	68.4	115	4.67	2.60	25	
1,2-Dichlorobenzene	9.65	1.0	10	0	96.5	71	124	9.58	0.728	25	
1,2-Dichloroethane	9.7	1.0	10	0	97	72.5	127	9.96	2.64	25	
1,3-Dichlorobenzene	9.74	1.0	10	0	97.4	72.2	121	9.74	0	25	
1,3-Dichloropropane	5.28	1.0	5	0	106	76	122	5.68	7.30	0	
1,4-Dichlorobenzene	9.04	1.0	10	0	90.4	71.7	127	8.79	2.80	25	
2-Butanone	8.71	5.0	10	0	87.1	65.1	132	7.85	10.4	25	
4-Methyl-2-pentanone	9.66	5.0	10	0	96.6	68.7	118	9.65	0.104	25	
Acetone	13.34	5.0	10	0	133	69.2	133	13.37	0.225	25	S
Benzene	9.78	1.0	10	0	97.8	71.2	122	10.54	7.48	25	
Carbon disulfide	4.51	1.0	5	0	90.2	67.8	134	4.91	8.49	25	
Carbon tetrachloride	9.45	1.0	10	0	94.5	74.5	122	10.53	10.8	25	
Chlorobenzene	9.93	1.0	10	0	99.3	72.7	124	10.73	7.74	25	
Chloroethane	10.22	1.0	10	0	102	72.3	136	12.31	18.6	25	
Chloroform	9.41	1.0	10	0	94.1	71.6	133	10.04	6.48	25	
Dibromochloromethane	10.67	1.0	10	0	107	70.6	124	11.34	6.09	25	
Ethylbenzene	10.35	1.0	10	0	104	70.9	126	11.59	11.3	25	
Methylene chloride	11.6	1.0	10	0	116	66.3	130	11.82	1.88	25	
Tetrachloroethene	10.09	1.0	10	0	101	72.4	119	10.97	8.36	25	
Toluene	9.74	1.0	10	0	97.4	71.8	116	10.42	6.75	25	
trans-1,2-Dichloroethene	10.18	1.0	10	0	102	70.3	120	10.45	2.62	25	
Trichloroethene	9	1.0	10	0	90	73	127	9.4	4.35	25	
Vinyl chloride	11.52	1.0	10	0	115	65.2	134	11.93	3.50	25	
Xylenes, Total	29.39	1.0	30	0	98	72.1	124	32.65	10.5	25	
Surr: 1,2-Dichloroethane-d4	51.21	5.0	50	0	102	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	50.04	5.0	50	0	100	76.5	125	0	0	25	
Surr: Toluene-d8	49.81	5.0	50	0	99.6	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175942

ms	SeqNo: **2711752**	TestNo: **SW8260C**	RunNo: **175942**
	Samp ID: **190916053-002b**	Units: **µg/L**	Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.81	1.0	10	0	98.1	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	10.36	1.0	10	0	104	70.1	123	0	0		
1,1,2-Trichloroethane	9.65	1.0	10	0	96.5	72.1	119	0	0		
1,1-Dichloroethane	9.81	1.0	10	0	98.1	70.4	126	0	0		
1,1-Dichloroethene	9.97	1.0	10	0	99.7	70.2	125	0	0		
1,2,3-Trichloropropane	4.38	1.0	5	0	87.6	53.7	101	0	0		
1,2-Dichlorobenzene	8.78	1.0	10	0.22	85.6	70.2	123	0	0		
1,2-Dichloroethane	9.12	1.0	10	0.12	90	73.5	126	0	0		
1,3-Dichlorobenzene	8.96	1.0	10	0.19	87.7	70.4	124	0	0		
1,3-Dichloropropane	5.05	1.0	5	0	101	64	125	0	0		
1,4-Dichlorobenzene	8.73	1.0	10	0.24	84.9	70.8	127	0	0		
2-Butanone	9.79	5.0	10	0	97.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.89	5.0	10	0	88.9	52.8	133	0	0		
Acetone	11.98	5.0	10	0	120	56.3	135	0	0		
Benzene	10.04	1.0	10	0	100	70.2	127	0	0		
Carbon disulfide	4.79	1.0	5	0	95.8	62.2	130	0	0		
Carbon tetrachloride	9.71	1.0	10	0	97.1	56.4	137	0	0		
Chlorobenzene	9.57	1.0	10	0	95.7	72.7	128	0	0		
Chloroethane	10.32	1.0	10	0	103	71.3	135	0	0		
Chloroform	9.27	1.0	10	0	92.7	70.2	125	0	0		
Dibromochloromethane	9.79	1.0	10	0	97.9	69.5	123	0	0		
Ethylbenzene	11.55	1.0	10	0	116	71.9	129	0	0		
Methylene chloride	9.34	1.0	10	0	93.4	65.3	123	0	0		
Tetrachloroethene	9.96	1.0	10	0	99.6	74.5	121	0	0		
Toluene	10.66	1.0	10	0	107	73	122	0	0		
trans-1,2-Dichloroethene	9.99	1.0	10	0	99.9	69.1	133	0	0		
Trichloroethene	8.71	1.0	10	0	87.1	71.1	126	0	0		
Vinyl chloride	10.07	1.0	10	0	101	65	137	0	0		
Xylenes, Total	31.33	1.0	30	0.51	103	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.13	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.94	5.0	50	0	99.9	76.5	125	0	0		
Surr: Toluene-d8	49.18	5.0	50	0	98.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175942

msd

SeqNo: **2711753** TestNo: **SW8260C** RunNo: **175942**
Samp ID: **190916053-002b** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.71	1.0	10	0	97.1	71.6	126	9.81	1.02	20.4	
1,1,2,2-Tetrachloroethane	10.41	1.0	10	0	104	70.1	123	10.36	0.481	18.6	
1,1,2-Trichloroethane	9.15	1.0	10	0	91.5	72.1	119	9.65	5.32	20	
1,1-Dichloroethane	9.77	1.0	10	0	97.7	70.4	126	9.81	0.409	19.2	
1,1-Dichloroethene	10.03	1.0	10	0	100	70.2	125	9.97	0.600	16.1	
1,2,3-Trichloropropane	4.13	1.0	5	0	82.6	53.7	101	4.38	5.88	20	
1,2-Dichlorobenzene	9.47	1.0	10	0.22	92.5	70.2	123	8.78	7.56	17.9	
1,2-Dichloroethane	8.93	1.0	10	0.12	88.1	73.5	126	9.12	2.11	15.6	
1,3-Dichlorobenzene	9.26	1.0	10	0.19	90.7	70.4	124	8.96	3.29	14.3	
1,3-Dichloropropane	5.06	1.0	5	0	101	64	125	5.05	0.198	0	
1,4-Dichlorobenzene	8.81	1.0	10	0.24	85.7	70.8	127	8.73	0.912	14.4	
2-Butanone	6.48	5.0	10	0	64.8	60.5	123	9.79	40.7	15	Z
4-Methyl-2-pentanone	8.95	5.0	10	0	89.5	52.8	133	8.89	0.673	11.9	
Acetone	12.79	5.0	10	0	128	56.3	135	11.98	6.54	10.6	
Benzene	9.57	1.0	10	0	95.7	70.2	127	10.04	4.79	18.4	
Carbon disulfide	4.61	1.0	5	0	92.2	62.2	130	4.79	3.83	13.1	
Carbon tetrachloride	9.68	1.0	10	0	96.8	56.4	137	9.71	0.309	20.3	
Chlorobenzene	9.32	1.0	10	0	93.2	72.7	128	9.57	2.65	19.6	
Chloroethane	10.21	1.0	10	0	102	71.3	135	10.32	1.07	27.8	
Chloroform	9.13	1.0	10	0	91.3	70.2	125	9.27	1.52	20.3	
Dibromochloromethane	9.86	1.0	10	0	98.6	69.5	123	9.79	0.712	18.8	
Ethylbenzene	10.32	1.0	10	0	103	71.9	129	11.55	11.2	16.3	
Methylene chloride	9.27	1.0	10	0	92.7	65.3	123	9.34	0.752	21.4	
Tetrachloroethene	10.01	1.0	10	0	100	74.5	121	9.96	0.501	20.9	
Toluene	10.04	1.0	10	0	100	73	122	10.66	5.99	19.4	
trans-1,2-Dichloroethene	9.59	1.0	10	0	95.9	69.1	133	9.99	4.09	16.1	
Trichloroethene	8.55	1.0	10	0	85.5	71.1	126	8.71	1.85	16.6	
Vinyl chloride	9.7	1.0	10	0	97	65	137	10.07	3.74	20.5	
Xylenes, Total	29.14	1.0	30	0.51	95.4	72	130	31.33	7.24	16.1	
Surr: 1,2-Dichloroethane-d4	51.03	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.9	5.0	50	0	97.8	76.5	125	0	0	0	
Surr: Toluene-d8	49.17	5.0	50	0	98.3	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

mblk

SeqNo: **2712069** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.65	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.54	5.0	50	0	97.1	76.5	125	0	0		
Surr: Toluene-d8	49.62	5.0	50	0	99.2	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

lcs

SeqNo: **2712067** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.54	1.0	10	0	95.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.99	1.0	10	0	99.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.39	1.0	10	0	93.9	73.1	123	0	0		
1,1-Dichloroethane	9.59	1.0	10	0	95.9	73.2	127	0	0		
1,1-Dichloroethene	9.78	1.0	10	0	97.8	70.3	128	0	0		
1,2,3-Trichloropropane	4	1.0	5	0	80	68.4	115	0	0		
1,2-Dichlorobenzene	8.79	1.0	10	0	87.9	71	124	0	0		
1,2-Dichloroethane	9.22	1.0	10	0	92.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.72	1.0	10	0	87.2	72.2	121	0	0		
1,3-Dichloropropane	4.5	1.0	5	0	90	76	122	0	0		
1,4-Dichlorobenzene	8.26	1.0	10	0	82.6	71.7	127	0	0		
2-Butanone	8.72	5.0	10	0	87.2	65.1	132	0	0		
4-Methyl-2-pentanone	7.99	5.0	10	0	79.9	68.7	118	0	0		
Acetone	11.67	5.0	10	0	117	69.2	133	0	0		
Benzene	9.46	1.0	10	0	94.6	71.2	122	0	0		
Carbon disulfide	4.71	1.0	5	0	94.2	67.8	134	0	0		
Carbon tetrachloride	9.85	1.0	10	0	98.5	74.5	122	0	0		
Chlorobenzene	9.31	1.0	10	0	93.1	72.7	124	0	0		
Chloroethane	9.31	1.0	10	0	93.1	72.3	136	0	0		
Chloroform	8.79	1.0	10	0	87.9	71.6	133	0	0		
Dibromochloromethane	9.09	1.0	10	0	90.9	70.6	124	0	0		
Ethylbenzene	10	1.0	10	0	100	70.9	126	0	0		
Methylene chloride	9	1.0	10	0	90	66.3	130	0	0		
Tetrachloroethene	10.01	1.0	10	0	100	72.4	119	0	0		
Toluene	9.45	1.0	10	0	94.5	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.43	1.0	10	0	84.3	73	127	0	0		
Vinyl chloride	10.02	1.0	10	0	100	65.2	134	0	0		
Xylenes, Total	28.65	1.0	30	0	95.5	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.53	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.08	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.72	5.0	50	0	99.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

lcsd

SeqNo: **2712068** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10	1.0	10	0	100	72.3	121	9.54	4.71	25	
1,1,2,2-Tetrachloroethane	11.34	1.0	10	0	113	72.3	118	9.99	12.7	25	
1,1,2-Trichloroethane	9.76	1.0	10	0	97.6	73.1	123	9.39	3.86	25	
1,1-Dichloroethane	9.87	1.0	10	0	98.7	73.2	127	9.59	2.88	25	
1,1-Dichloroethene	9.95	1.0	10	0	99.5	70.3	128	9.78	1.72	25	
1,2,3-Trichloropropane	4.55	1.0	5	0	91	68.4	115	4	12.9	25	
1,2-Dichlorobenzene	9.76	1.0	10	0	97.6	71	124	8.79	10.5	25	
1,2-Dichloroethane	9.38	1.0	10	0	93.8	72.5	127	9.22	1.72	25	
1,3-Dichlorobenzene	9.57	1.0	10	0	95.7	72.2	121	8.72	9.29	25	
1,3-Dichloropropane	5.12	1.0	5	0	102	76	122	4.5	12.9	0	
1,4-Dichlorobenzene	10.02	1.0	10	0	100	71.7	127	8.26	19.3	25	
2-Butanone	9.73	5.0	10	0	97.3	65.1	132	8.72	10.9	25	
4-Methyl-2-pentanone	9.42	5.0	10	0	94.2	68.7	118	7.99	16.4	25	
Acetone	10.16	5.0	10	0	102	69.2	133	11.67	13.8	25	
Benzene	9.82	1.0	10	0	98.2	71.2	122	9.46	3.73	25	
Carbon disulfide	4.86	1.0	5	0	97.2	67.8	134	4.71	3.13	25	
Carbon tetrachloride	10.17	1.0	10	0	102	74.5	122	9.85	3.20	25	
Chlorobenzene	10.12	1.0	10	0	101	72.7	124	9.31	8.34	25	
Chloroethane	11.79	1.0	10	0	118	72.3	136	9.31	23.5	25	
Chloroform	9.37	1.0	10	0	93.7	71.6	133	8.79	6.39	25	
Dibromochloromethane	10.39	1.0	10	0	104	70.6	124	9.09	13.3	25	
Ethylbenzene	11.09	1.0	10	0	111	70.9	126	10	10.3	25	
Methylene chloride	9.7	1.0	10	0	97	66.3	130	9	7.49	25	
Tetrachloroethene	10.54	1.0	10	0	105	72.4	119	10.01	5.16	25	
Toluene	9.91	1.0	10	0	99.1	71.8	116	9.45	4.75	25	
trans-1,2-Dichloroethene	9.86	1.0	10	0	98.6	70.3	120	9.56	3.09	25	
Trichloroethene	8.97	1.0	10	0	89.7	73	127	8.43	6.21	25	
Vinyl chloride	9.76	1.0	10	0	97.6	65.2	134	10.02	2.63	25	
Xylenes, Total	31.24	1.0	30	0	104	72.1	124	28.65	8.65	25	
Surr: 1,2-Dichloroethane-d4	50.45	5.0	50	0	101	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	51.72	5.0	50	0	103	76.5	125	0	0	25	
Surr: Toluene-d8	49.91	5.0	50	0	99.8	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

ms	SeqNo: **2712647**	TestNo: **SW8260C**	RunNo: **175958**
	Samp ID: **191001055-001b**	Units: **µg/L**	Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.83	1.0	10	0	98.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	11.49	1.0	10	0	115	70.1	123	0	0		
1,1,2-Trichloroethane	9.98	1.0	10	0	99.8	72.1	119	0	0		
1,1-Dichloroethane	10.19	1.0	10	0	102	70.4	126	0	0		
1,1-Dichloroethene	10.32	1.0	10	0	103	70.2	125	0	0		
1,2,3-Trichloropropane	4.62	1.0	5	0	92.4	53.7	101	0	0		
1,2-Dichlorobenzene	9.52	1.0	10	0	95.2	70.2	123	0	0		
1,2-Dichloroethane	9.39	1.0	10	0.15	92.4	73.5	126	0	0		
1,3-Dichlorobenzene	9.43	1.0	10	0	94.3	70.4	124	0	0		
1,3-Dichloropropane	5.19	1.0	5	0	104	64	125	0	0		
1,4-Dichlorobenzene	8.88	1.0	10	0	88.8	70.8	127	0	0		
2-Butanone	8.55	5.0	10	0	85.5	60.5	123	0	0		
4-Methyl-2-pentanone	9.82	5.0	10	0	98.2	52.8	133	0	0		
Acetone	13.37	5.0	10	0	134	56.3	135	0	0		
Benzene	10.06	1.0	10	0	101	70.2	127	0	0		
Carbon disulfide	4.58	1.0	5	0	91.6	62.2	130	0	0		
Carbon tetrachloride	10.09	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	9.84	1.0	10	0	98.4	72.7	128	0	0		
Chloroethane	10.77	1.0	10	0	108	71.3	135	0	0		
Chloroform	9.35	1.0	10	0	93.5	70.2	125	0	0		
Dibromochloromethane	10.04	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	11.32	1.0	10	0	113	71.9	129	0	0		
Methylene chloride	9.61	1.0	10	0	96.1	65.3	123	0	0		
Tetrachloroethene	10.44	1.0	10	0	104	74.5	121	0	0		
Toluene	11.23	1.0	10	0	112	73	122	0	0		
trans-1,2-Dichloroethene	10.37	1.0	10	0	104	69.1	133	0	0		
Trichloroethene	9.25	1.0	10	0	92.5	71.1	126	0	0		
Vinyl chloride	11.35	1.0	10	0	114	65	137	0	0		
Xylenes, Total	33.02	1.0	30	0	110	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.27	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.15	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.51	5.0	50	0	99	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 190930045
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

msd

SeqNo: **2712648** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **191001055-001b** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.26	1.0	10	0	92.6	71.6	126	9.83	5.97	20.4	
1,1,2,2-Tetrachloroethane	11.11	1.0	10	0	111	70.1	123	11.49	3.36	18.6	
1,1,2-Trichloroethane	9.61	1.0	10	0	96.1	72.1	119	9.98	3.78	20	
1,1-Dichloroethane	9.35	1.0	10	0	93.5	70.4	126	10.19	8.60	19.2	
1,1-Dichloroethene	9.42	1.0	10	0	94.2	70.2	125	10.32	9.12	16.1	
1,2,3-Trichloropropane	4.49	1.0	5	0	89.8	53.7	101	4.62	2.85	20	
1,2-Dichlorobenzene	9.12	1.0	10	0	91.2	70.2	123	9.52	4.29	17.9	
1,2-Dichloroethane	8.92	1.0	10	0.15	87.7	73.5	126	9.39	5.13	15.6	
1,3-Dichlorobenzene	9.12	1.0	10	0	91.2	70.4	124	9.43	3.34	14.3	
1,3-Dichloropropane	4.93	1.0	5	0	98.6	64	125	5.19	5.14	0	
1,4-Dichlorobenzene	8.94	1.0	10	0	89.4	70.8	127	8.88	0.673	14.4	
2-Butanone	8.72	5.0	10	0	87.2	60.5	123	8.55	1.97	15	
4-Methyl-2-pentanone	9.81	5.0	10	0	98.1	52.8	133	9.82	0.102	11.9	
Acetone	10.99	5.0	10	0	110	56.3	135	13.37	19.5	10.6	Z
Benzene	9.35	1.0	10	0	93.5	70.2	127	10.06	7.32	18.4	
Carbon disulfide	4.32	1.0	5	0	86.4	62.2	130	4.58	5.84	13.1	
Carbon tetrachloride	9.31	1.0	10	0	93.1	56.4	137	10.09	8.04	20.3	
Chlorobenzene	9.13	1.0	10	0	91.3	72.7	128	9.84	7.49	19.6	
Chloroethane	9.75	1.0	10	0	97.5	71.3	135	10.77	9.94	27.8	
Chloroform	8.71	1.0	10	0	87.1	70.2	125	9.35	7.09	20.3	
Dibromochloromethane	9.45	1.0	10	0	94.5	69.5	123	10.04	6.05	18.8	
Ethylbenzene	10.1	1.0	10	0	101	71.9	129	11.32	11.4	16.3	
Methylene chloride	8.8	1.0	10	0	88	65.3	123	9.61	8.80	21.4	
Tetrachloroethene	9.41	1.0	10	0	94.1	74.5	121	10.44	10.4	20.9	
Toluene	9.78	1.0	10	0	97.8	73	122	11.23	13.8	19.4	
trans-1,2-Dichloroethene	9.49	1.0	10	0	94.9	69.1	133	10.37	8.86	16.1	
Trichloroethene	8.61	1.0	10	0	86.1	71.1	126	9.25	7.17	16.6	
Vinyl chloride	10.37	1.0	10	0	104	65	137	11.35	9.02	20.5	
Xylenes, Total	29.23	1.0	30	0	97.4	72	130	33.02	12.2	16.1	
Surr: 1,2-Dichloroethane-d4	51.07	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.81	5.0	50	0	99.6	76.5	125	0	0	0	
Surr: Toluene-d8	49.79	5.0	50	0	99.6	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 190930045

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleile@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	093019-01-SW-U-A-1	9/30/19	0910 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
002	093019-02-SW-A-A-1	9/30/19	0935 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
003	093019-03-SW-D-A-1	9/30/19	0955 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
004	093019-04-SW-B-A-1	9/30/19	0855 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
005	093019-05-SW-B-A-1	9/30/19	1025 A	W		✓	1	TSS
006	093019-01-SW-U-A-3	9/30/19	0830 A	W		✓	2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 9/30/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:** J. M	**Date/Time** 9/30/19 4:41pm

TEMPERATURE
Ambient or (Chilled)
Notes:_____

AES Bottles
Y ☒ N ☐

PROPERLY PRESERVED
(Y) N
Notes:_____

RECEIVED WITHIN HOLDING TIMES
(Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

Demo
190930045

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Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 190930YS

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Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY		Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
190930YS-01	093019-01-SW-U-A-3	9/30/19	0830	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
-02	093019-TB01 Lot# VOA-F415.2			A	TB			1	trip blank
-03	093019-TB02 Lot# VOA-F416.3			P	TB			1	trip blank
	Tr. 9/30/19			A					
				P					
				A					
				P					
				A					
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				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 9/30/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 9/30/19 4:4

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 5oC		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

190930045

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

9/30/2019

Demo

190930045

TAT: **2**

DateDue: 10/2/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	ClientSampID	Matrix	Collection Date	TestDue	E8082W	E8260W	TSS_W				
190930045-001	093019-01-SW-U-A-1	Water	9/30/2019	10/2/2019	C	B	A				
190930045-002	093019-02-SW-A-A-1	Water	9/30/2019	10/2/2019	C	B	A				
190930045-003	093019-03-SW-D-A-1	Water	9/30/2019	10/2/2019	C	B	A				
190930045-004	093019-04-SW-B-A-1	Water	9/30/2019	10/2/2019	C	B	A				
190930045-005	093019-05-SW-B-A-1	Water	9/30/2019	10/2/2019			A				
190930045-006	093019-01-SW-U-A-3	Water	9/30/2019	10/2/2019	C	B	A				
190930045-007	093019-TB01	Trip Blank	9/30/2019	10/2/2019		A					
190930045-008	093019-TB02	Trip Blank	9/30/2019	10/2/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/1/19 – 10/7/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 10/1/19 through 10/7/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were not any exceedances of the water quality criteria.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 8 NTU, with an occasional spike les than 20 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically less than 10 mg/L and never higher than 22 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
100219-01-SW-U-A-1	09:35	AROCLOR-1242	N	ug/l	0.2	0.032	J		U	18	3.82	2.65	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
100219-03-SW-D-B-1	10:55	AROCLOR-1242	N	ug/l	0.2	0.037	J		D	18	3.43	1.36	Outgoing (Ebb)	8.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
100219-04-SW-B-A-1	10:25	AROCLOR-1242	N	ug/l	0.2	0.04	J		B	16	4.45	1.77	Outgoing (Ebb)	7.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
100319-03-SW-D-B-1	11:10	CHLOROBENZENE	N	ug/l	5	0.7	J		D	18	4.21	2.01	Outgoing (Ebb)	7.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
100419-02-SW-A-A-1	11:45	AROCLOR-1242	N	ug/l	0.2	0.05	J		A	33	16.43	1.8	Outgoing (Ebb)	21.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45
100419-03-SW-D-A-1	12:00	AROCLOR-1242	N	ug/l	0.2	0.04	J		D	34	7.52	1.6	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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October 03, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191001055
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/1/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *03-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191001055	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT: AECOM Environment
Work Order: **191001055**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100119-01-SW-U-A-1
Collection Date: 10/1/2019
Lab Sample ID: 191001055-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Acetone	**ND**	5.0		µg/L	1	10/2/2019 1:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/2/2019 1:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 1:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 1:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 1:27:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/2/2019 1:27:00 PM
Surr: 4-Bromofluorobenzene	**98.8**	76.5-125		%REC	1	10/2/2019 1:27:00 PM
Surr: Toluene-d8	**98.0**	80.4-121		%REC	1	10/2/2019 1:27:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/2/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.3**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100119-02-SW-A-A-1
Work Order:	**191001055**	**Collection Date:**	10/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191001055-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Acetone	**ND**	5.0		µg/L	1	10/2/2019 1:49:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 1:49:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 1:49:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 1:49:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 1:49:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	10/2/2019 1:49:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/2/2019 1:49:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	10/2/2019 1:49:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/2/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.6**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT: AECOM Environment
Work Order: **191001055**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100119-03-SW-D-A-1
Collection Date: 10/1/2019
Lab Sample ID: 191001055-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Acetone	**3.0**	5.0	J	µg/L	1	10/2/2019 2:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 2:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 2:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 2:22:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 2:22:00 PM
Surr: 1,2-Dichloroethane-d4	**78.1**	80.9-122	S	%REC	1	10/2/2019 2:22:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/2/2019 2:22:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	10/2/2019 2:22:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/2/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.0**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100119-04-SW-B-A-1
Work Order:	**191001055**	**Collection Date:**	10/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191001055-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Acetone	**ND**	5.0		µg/L	1	10/2/2019 2:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 2:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 2:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 2:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 2:44:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/2/2019 2:44:00 PM
Surr: 4-Bromofluorobenzene	**94.5**	76.5-125		%REC	1	10/2/2019 2:44:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	10/2/2019 2:44:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/2/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.3**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100119-05-SW-B-B-1
Work Order:	**191001055**	**Collection Date:**	10/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191001055-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/2/2019)						
TSS (Residue, Non-Filterable)	**8.0**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100119-02-SW-A-A-2
Work Order:	**191001055**	**Collection Date:**	10/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191001055-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Acetone	**ND**	5.0		µg/L	1	10/2/2019 3:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 3:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 3:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 3:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 3:05:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/2/2019 3:05:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/2/2019 3:05:00 PM
Surr: Toluene-d8	**98.9**	80.4-121		%REC	1	10/2/2019 3:05:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/2/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.0**	1.1		mg/L	1	10/2/2019

Adirondack Environmental Services, Inc

Date: *03-Oct-19*

CLIENT: AECOM Environment
Work Order: **191001055**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100119-TB01
Collection Date: 10/1/2019
Lab Sample ID: 191001055-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Acetone	**3.8**	5.0	J	µg/L	1	10/2/2019 3:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/2/2019 3:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/2/2019 3:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Benzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/2/2019 3:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Toluene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/2/2019 3:27:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/2/2019 3:27:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/2/2019 3:27:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/2/2019 3:27:00 PM

CLIENT: AECOM Environment
Work Order: 191001055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75923

LCS

SeqNo: **2712872** **PrepDate:10/2/2019** TestNo: **SM2540D** RunNo: **176001**
Samp ID: **LCS-75923** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	476	40.0	496	0	96	86.5	114	0	0		

DUP

SeqNo: **2712891** **PrepDate:10/2/2019** TestNo: **SM2540D** RunNo: **176001**
Samp ID: **191002044-001A** **PrepRef:** Units: **mg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	0	0	0	0	0	472	0.851	10	

DUP

SeqNo: **2712893** **PrepDate:10/2/2019** TestNo: **SM2540D** RunNo: **176001**
Samp ID: **191002068-001A** **PrepRef:** Units: **mg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1820	100	0	0	0	0	0	1760	3.35	10	

CLIENT: AECOM Environment
Work Order: 191001055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

mblk	SeqNo: **2712069**	TestNo: **SW8260C**	RunNo: **175958**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.65	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.54	5.0	50	0	97.1	76.5	125	0	0		
Surr: Toluene-d8	49.62	5.0	50	0	99.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191001055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

lcs

SeqNo: **2712067** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.54	1.0	10	0	95.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.99	1.0	10	0	99.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.39	1.0	10	0	93.9	73.1	123	0	0		
1,1-Dichloroethane	9.59	1.0	10	0	95.9	73.2	127	0	0		
1,1-Dichloroethene	9.78	1.0	10	0	97.8	70.3	128	0	0		
1,2,3-Trichloropropane	4	1.0	5	0	80	68.4	115	0	0		
1,2-Dichlorobenzene	8.79	1.0	10	0	87.9	71	124	0	0		
1,2-Dichloroethane	9.22	1.0	10	0	92.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.72	1.0	10	0	87.2	72.2	121	0	0		
1,3-Dichloropropane	4.5	1.0	5	0	90	76	122	0	0		
1,4-Dichlorobenzene	8.26	1.0	10	0	82.6	71.7	127	0	0		
2-Butanone	8.72	5.0	10	0	87.2	65.1	132	0	0		
4-Methyl-2-pentanone	7.99	5.0	10	0	79.9	68.7	118	0	0		
Acetone	11.67	5.0	10	0	117	69.2	133	0	0		
Benzene	9.46	1.0	10	0	94.6	71.2	122	0	0		
Carbon disulfide	4.71	1.0	5	0	94.2	67.8	134	0	0		
Carbon tetrachloride	9.85	1.0	10	0	98.5	74.5	122	0	0		
Chlorobenzene	9.31	1.0	10	0	93.1	72.7	124	0	0		
Chloroethane	9.31	1.0	10	0	93.1	72.3	136	0	0		
Chloroform	8.79	1.0	10	0	87.9	71.6	133	0	0		
Dibromochloromethane	9.09	1.0	10	0	90.9	70.6	124	0	0		
Ethylbenzene	10	1.0	10	0	100	70.9	126	0	0		
Methylene chloride	9	1.0	10	0	90	66.3	130	0	0		
Tetrachloroethene	10.01	1.0	10	0	100	72.4	119	0	0		
Toluene	9.45	1.0	10	0	94.5	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.43	1.0	10	0	84.3	73	127	0	0		
Vinyl chloride	10.02	1.0	10	0	100	65.2	134	0	0		
Xylenes, Total	28.65	1.0	30	0	95.5	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.53	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.08	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.72	5.0	50	0	99.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191001055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

ms	SeqNo: **2712647**	TestNo: **SW8260C**	RunNo: **175958**
	Samp ID: **191001055-001b (100119-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.83	1.0	10	0	98.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	11.49	1.0	10	0	115	70.1	123	0	0		
1,1,2-Trichloroethane	9.98	1.0	10	0	99.8	72.1	119	0	0		
1,1-Dichloroethane	10.19	1.0	10	0	102	70.4	126	0	0		
1,1-Dichloroethene	10.32	1.0	10	0	103	70.2	125	0	0		
1,2,3-Trichloropropane	4.62	1.0	5	0	92.4	53.7	101	0	0		
1,2-Dichlorobenzene	9.52	1.0	10	0	95.2	70.2	123	0	0		
1,2-Dichloroethane	9.39	1.0	10	0.15	92.4	73.5	126	0	0		
1,3-Dichlorobenzene	9.43	1.0	10	0	94.3	70.4	124	0	0		
1,3-Dichloropropane	5.19	1.0	5	0	104	64	125	0	0		
1,4-Dichlorobenzene	8.88	1.0	10	0	88.8	70.8	127	0	0		
2-Butanone	8.55	5.0	10	0	85.5	60.5	123	0	0		
4-Methyl-2-pentanone	9.82	5.0	10	0	98.2	52.8	133	0	0		
Acetone	13.37	5.0	10	0	134	56.3	135	0	0		
Benzene	10.06	1.0	10	0	101	70.2	127	0	0		
Carbon disulfide	4.58	1.0	5	0	91.6	62.2	130	0	0		
Carbon tetrachloride	10.09	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	9.84	1.0	10	0	98.4	72.7	128	0	0		
Chloroethane	10.77	1.0	10	0	108	71.3	135	0	0		
Chloroform	9.35	1.0	10	0	93.5	70.2	125	0	0		
Dibromochloromethane	10.04	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	11.32	1.0	10	0	113	71.9	129	0	0		
Methylene chloride	9.61	1.0	10	0	96.1	65.3	123	0	0		
Tetrachloroethene	10.44	1.0	10	0	104	74.5	121	0	0		
Toluene	11.23	1.0	10	0	112	73	122	0	0		
trans-1,2-Dichloroethene	10.37	1.0	10	0	104	69.1	133	0	0		
Trichloroethene	9.25	1.0	10	0	92.5	71.1	126	0	0		
Vinyl chloride	11.35	1.0	10	0	114	65	137	0	0		
Xylenes, Total	33.02	1.0	30	0	110	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.27	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.15	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.51	5.0	50	0	99	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191001055
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R175958

msd

SeqNo: **2712648** TestNo: **SW8260C** RunNo: **175958**
Samp ID: **191001055-001b (100119-01-SW-U-** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.26	1.0	10	0	92.6	71.6	126	9.83	5.97	20.4	
1,1,2,2-Tetrachloroethane	11.11	1.0	10	0	111	70.1	123	11.49	3.36	18.6	
1,1,2-Trichloroethane	9.61	1.0	10	0	96.1	72.1	119	9.98	3.78	20	
1,1-Dichloroethane	9.35	1.0	10	0	93.5	70.4	126	10.19	8.60	19.2	
1,1-Dichloroethene	9.42	1.0	10	0	94.2	70.2	125	10.32	9.12	16.1	
1,2,3-Trichloropropane	4.49	1.0	5	0	89.8	53.7	101	4.62	2.85	20	
1,2-Dichlorobenzene	9.12	1.0	10	0	91.2	70.2	123	9.52	4.29	17.9	
1,2-Dichloroethane	8.92	1.0	10	0.15	87.7	73.5	126	9.39	5.13	15.6	
1,3-Dichlorobenzene	9.12	1.0	10	0	91.2	70.4	124	9.43	3.34	14.3	
1,3-Dichloropropane	4.93	1.0	5	0	98.6	64	125	5.19	5.14	0	
1,4-Dichlorobenzene	8.94	1.0	10	0	89.4	70.8	127	8.88	0.673	14.4	
2-Butanone	8.72	5.0	10	0	87.2	60.5	123	8.55	1.97	15	
4-Methyl-2-pentanone	9.81	5.0	10	0	98.1	52.8	133	9.82	0.102	11.9	
Acetone	10.99	5.0	10	0	110	56.3	135	13.37	19.5	10.6	Z
Benzene	9.35	1.0	10	0	93.5	70.2	127	10.06	7.32	18.4	
Carbon disulfide	4.32	1.0	5	0	86.4	62.2	130	4.58	5.84	13.1	
Carbon tetrachloride	9.31	1.0	10	0	93.1	56.4	137	10.09	8.04	20.3	
Chlorobenzene	9.13	1.0	10	0	91.3	72.7	128	9.84	7.49	19.6	
Chloroethane	9.75	1.0	10	0	97.5	71.3	135	10.77	9.94	27.8	
Chloroform	8.71	1.0	10	0	87.1	70.2	125	9.35	7.09	20.3	
Dibromochloromethane	9.45	1.0	10	0	94.5	69.5	123	10.04	6.05	18.8	
Ethylbenzene	10.1	1.0	10	0	101	71.9	129	11.32	11.4	16.3	
Methylene chloride	8.8	1.0	10	0	88	65.3	123	9.61	8.80	21.4	
Tetrachloroethene	9.41	1.0	10	0	94.1	74.5	121	10.44	10.4	20.9	
Toluene	9.78	1.0	10	0	97.8	73	122	11.23	13.8	19.4	
trans-1,2-Dichloroethene	9.49	1.0	10	0	94.9	69.1	133	10.37	8.86	16.1	
Trichloroethene	8.61	1.0	10	0	86.1	71.1	126	9.25	7.17	16.6	
Vinyl chloride	10.37	1.0	10	0	104	65	137	11.35	9.02	20.5	
Xylenes, Total	29.23	1.0	30	0	97.4	72	130	33.02	12.2	16.1	
Surr: 1,2-Dichloroethane-d4	51.07	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.81	5.0	50	0	99.6	76.5	125	0	0	0	
Surr: Toluene-d8	49.79	5.0	50	0	99.6	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191001055

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100119-01-SW-U-A-1	10/1/19	1145	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	100119-02-SW-A-A-1	10/1/19	1200	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	100119-03-SW-D-A-1	10/1/19	1220	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	100119-04-SW-B-A-1	10/1/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	100119-05-SW-B-B-1	10/1/19	1240	A	W		✓	1	TSS
006	100119-02-SW-A-A-2	10/1/19	1215	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	100119-TB01 Lot#VOA-F46.3			A	TB			1	trip blank
		5m 10/1/19		P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/1/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/1/19 4:32

Temperature Ambient or Chilled 6°C
Notes:_____

AES Bottles Y ☒ N ☐

Properly Preserved (Y) N
Notes:_____

Received Within Holding Times (Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

191001055

Adirondack Environmental Services, Inc

191001055

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

191001055

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

10/1/2019

TAT: **2**

DateDue: 10/3/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191001055-001	100119-01-SW-U-A-1	Water	10/1/2019	10/3/2019	B	A					
191001055-002	100119-02-SW-A-A-1	Water	10/1/2019	10/3/2019	B	A					
191001055-003	100119-03-SW-D-A-1	Water	10/1/2019	10/3/2019	B	A					
191001055-004	100119-04-SW-B-A-1	Water	10/1/2019	10/3/2019	B	A					
191001055-005	100119-05-SW-B-B-1	Water	10/1/2019	10/3/2019		A					
191001055-006	100119-02-SW-A-A-2	Water	10/1/2019	10/3/2019	B	A					
191001055-007	100119-TB01	Trip Blank	10/1/2019	10/3/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 04, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191002077
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/2/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *04-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191002077	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **191002077**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100219-01-SW-U-A-1
Collection Date: 10/2/2019
Lab Sample ID: 191002077-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1242	**0.032**	0.065	J	µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/2/2019 7:42:01 PM
PCB, Total	**0.032**	0.065	J	µg/L	1	10/2/2019 7:42:01 PM
Surr: Decachlorobiphenyl	**78.2**	57.1-135		%REC	1	10/2/2019 7:42:01 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Acetone	**ND**	5.0		µg/L	1	10/3/2019 7:59:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/3/2019 7:59:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Benzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/3/2019 7:59:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Toluene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100219-01-SW-U-A-1
Work Order:	**191002077**	**Collection Date:**	10/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191002077-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/3/2019 7:59:00 PM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	10/3/2019 7:59:00 PM
Surr: 4-Bromofluorobenzene	**99.4**	76.5-125		%REC	1	10/3/2019 7:59:00 PM
Surr: Toluene-d8	**98.7**	80.4-121		%REC	1	10/3/2019 7:59:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/3/2019)						
TSS (Residue, Non-Filterable)	**10.1**	1.0		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **191002077**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100219-02-SW-A-A-1
Collection Date: 10/2/2019
Lab Sample ID: 191002077-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
PCB, Total	**ND**	0.065		µg/L	1	10/2/2019 7:55:22 PM
Surr: Decachlorobiphenyl	**95.8**	57.1-135		%REC	1	10/2/2019 7:55:22 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Acetone	**2.7**	5.0	J	µg/L	1	10/3/2019 8:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/3/2019 8:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/3/2019 8:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Benzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/3/2019 8:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Toluene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100219-02-SW-A-A-1
Work Order:	**191002077**	**Collection Date:**	10/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191002077-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/3/2019 8:20:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/3/2019 8:20:00 PM
Surr: 4-Bromofluorobenzene	**96.2**	76.5-125		%REC	1	10/3/2019 8:20:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/3/2019 8:20:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/3/2019)						
TSS (Residue, Non-Filterable)	**8.9**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **191002077**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100219-03-SW-D-B-1
Collection Date: 10/2/2019
Lab Sample ID: 191002077-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1242	**0.037**	0.065	J	µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/2/2019 8:08:41 PM
PCB, Total	**0.037**	0.065	J	µg/L	1	10/2/2019 8:08:41 PM
Surr: Decachlorobiphenyl	**61.0**	57.1-135		%REC	1	10/2/2019 8:08:41 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Acetone	**ND**	5.0		µg/L	1	10/3/2019 8:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/3/2019 8:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/3/2019 8:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Benzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0	N	µg/L	1	10/3/2019 8:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Toluene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100219-03-SW-D-B-1
Work Order:	**191002077**	**Collection Date:**	10/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191002077-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/3/2019 8:42:00 PM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	10/3/2019 8:42:00 PM
Surr: 4-Bromofluorobenzene	**98.9**	76.5-125		%REC	1	10/3/2019 8:42:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/3/2019 8:42:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.3**	1.0		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **191002077**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100219-04-SW-B-A-1
Collection Date: 10/2/2019
Lab Sample ID: 191002077-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/2/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1242	**0.040**	0.065	J	µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/2/2019 8:22:02 PM
PCB, Total	**0.040**	0.065	J	µg/L	1	10/2/2019 8:22:02 PM
Surr: Decachlorobiphenyl	**82.4**	57.1-135		%REC	1	10/2/2019 8:22:02 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Acetone	**ND**	5.0		µg/L	1	10/3/2019 9:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/3/2019 9:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/3/2019 9:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Benzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/3/2019 9:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Toluene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100219-04-SW-B-A-1
Work Order:	**191002077**	**Collection Date:**	10/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191002077-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/3/2019 9:04:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	10/3/2019 9:04:00 PM
Surr: 4-Bromofluorobenzene	**96.3**	76.5-125		%REC	1	10/3/2019 9:04:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	10/3/2019 9:04:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.9**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100219-05-SW-B-B-1
Work Order:	**191002077**	**Collection Date:**	10/2/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191002077-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/3/2019)						
TSS (Residue, Non-Filterable)	**7.1**	1.0		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *04-Oct-19*

CLIENT: AECOM Environment
Work Order: **191002077**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100219-TB01
Collection Date: 10/2/2019
Lab Sample ID: 191002077-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	10/3/2019 9:25:00 PM
Acetone	**6.3**	5.0		µg/L	1	10/3/2019 9:25:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/3/2019 9:25:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/3/2019 9:25:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Benzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/3/2019 9:25:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Toluene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/3/2019 9:25:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/3/2019 9:25:00 PM
Surr: 4-Bromofluorobenzene	**99.8**	76.5-125		%REC	1	10/3/2019 9:25:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/3/2019 9:25:00 PM

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75904

MBLK

SeqNo: **2712449** PrepDate:**10/2/2019** TestNo: **SW8082A** RunNo: **175976**
Samp ID: **MB-75904** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	0.0068	0.0650									J
Surr: Decachlorobiphenyl	0.0814	0.0100	0.1	0	81.4	57.1	135	0	0		

LCS

SeqNo: **2712450** PrepDate:**10/2/2019** TestNo: **SW8082A** RunNo: **175976**
Samp ID: **LCS-75904** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5744	0.0650	0.5	0	115	60	140	0	0		
PCB, Total	0.5744	0.0650	0.5	0	115	60	140	0	0		
Surr: Decachlorobiphenyl	0.0864	0.0100	0.1	0	86.4	57.1	135	0	0		

LCSD

SeqNo: **2712451** PrepDate:**10/2/2019** TestNo: **SW8082A** RunNo: **175976**
Samp ID: **LCSD-75904** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.6156	0.0650	0.5	0	123	60	140	0.5744	6.92	30	
PCB, Total	0.6156	0.0650	0.5	0	123	60	140	0.5744	6.92	30	
Surr: Decachlorobiphenyl	0.0916	0.0100	0.1	0	91.6	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75946

LCS

SeqNo: **2714135** **PrepDate:10/3/2019** TestNo: **SM2540D** RunNo: **176074**
Samp ID: **LCS-75946** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	496	0	94.4	86.5	114	0	0		

DUP

SeqNo: **2714138** **PrepDate:10/3/2019** TestNo: **SM2540D** RunNo: **176074**
Samp ID: **191002048-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1381	6.70	0	0	0	0	0	1392	0.818	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176045

mblk

SeqNo: **2713588** TestNo: **SW8260C** RunNo: **176045**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.14	1.0									J
1,3-Dichlorobenzene	0.15	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.2	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	3.73	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.43	5.0	50	0	98.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.25	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	49	5.0	50	0	98	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176045

lcs

SeqNo: **2713586** TestNo: **SW8260C** RunNo: **176045**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.25	1.0	10	0	82.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.39	1.0	10	0	104	72.3	118	0	0		
1,1,2-Trichloroethane	9.26	1.0	10	0	92.6	73.1	123	0	0		
1,1-Dichloroethane	8.57	1.0	10	0	85.7	73.2	127	0	0		
1,1-Dichloroethene	7.91	1.0	10	0	79.1	70.3	128	0	0		
1,2,3-Trichloropropane	4.3	1.0	5	0	86	68.4	115	0	0		
1,2-Dichlorobenzene	8.6	1.0	10	0	86	71	124	0	0		
1,2-Dichloroethane	8.2	1.0	10	0	82	72.5	127	0	0		
1,3-Dichlorobenzene	8.43	1.0	10	0	84.3	72.2	121	0	0		
1,3-Dichloropropane	4.78	1.0	5	0	95.6	76	122	0	0		
1,4-Dichlorobenzene	8.34	1.0	10	0	83.4	71.7	127	0	0		
2-Butanone	6.72	5.0	10	0	67.2	65.1	132	0	0		
4-Methyl-2-pentanone	20.48	5.0	20	0	102	68.7	118	0	0		
Acetone	12	5.0	10	0	120	69.2	133	0	0		
Benzene	8.41	1.0	10	0	84.1	71.2	122	0	0		
Carbon disulfide	3.58	1.0	5	0	71.6	67.8	134	0	0		
Carbon tetrachloride	7.92	1.0	10	0	79.2	74.5	122	0	0		
Chlorobenzene	8.79	1.0	10	0	87.9	72.7	124	0	0		
Chloroethane	8.75	1.0	10	0	87.5	72.3	136	0	0		
Chloroform	8.35	1.0	10	0	83.5	71.6	133	0	0		
Dibromochloromethane	9.53	1.0	10	0	95.3	70.6	124	0	0		
Ethylbenzene	9.1	1.0	10	0	91	70.9	126	0	0		
Methylene chloride	9.33	1.0	10	0	93.3	66.3	130	0	0		
Tetrachloroethene	8.65	1.0	10	0	86.5	72.4	119	0	0		
Toluene	8.58	1.0	10	0	85.8	71.8	116	0	0		
trans-1,2-Dichloroethene	8.55	1.0	10	0	85.5	70.3	120	0	0		
Trichloroethene	8.01	1.0	10	0	80.1	73	127	0	0		
Vinyl chloride	7.92	1.0	10	0	79.2	65.2	134	0	0		
Xylenes, Total	50.62	1.0	50	0	101	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.98	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.54	5.0	50	0	99.1	76.5	125	0	0		
Surr: Toluene-d8	49.67	5.0	50	0	99.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176045

lcsd

SeqNo: **2713587** TestNo: **SW8260C** RunNo: **176045**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.62	1.0	10	0	96.2	72.3	121	8.25	15.3	25	
1,1,2,2-Tetrachloroethane	11.3	1.0	10	0	113	72.3	118	10.39	8.39	25	
1,1,2-Trichloroethane	10.16	1.0	10	0	102	73.1	123	9.26	9.27	25	
1,1-Dichloroethane	9.72	1.0	10	0	97.2	73.2	127	8.57	12.6	25	
1,1-Dichloroethene	9.53	1.0	10	0	95.3	70.3	128	7.91	18.6	25	
1,2,3-Trichloropropane	4.75	1.0	5	0	95	68.4	115	4.3	9.94	25	
1,2-Dichlorobenzene	9.87	1.0	10	0	98.7	71	124	8.6	13.8	25	
1,2-Dichloroethane	9.5	1.0	10	0	95	72.5	127	8.2	14.7	25	
1,3-Dichlorobenzene	10.01	1.0	10	0	100	72.2	121	8.43	17.1	25	
1,3-Dichloropropane	5.33	1.0	5	0	107	76	122	4.78	10.9	0	
1,4-Dichlorobenzene	9.73	1.0	10	0	97.3	71.7	127	8.34	15.4	25	
2-Butanone	6.97	5.0	10	0	69.7	65.1	132	6.72	3.65	25	
4-Methyl-2-pentanone	22.47	5.0	20	0	112	68.7	118	20.48	9.27	25	
Acetone	13.08	5.0	10	0	131	69.2	133	12	8.61	25	
Benzene	9.61	1.0	10	0	96.1	71.2	122	8.41	13.3	25	
Carbon disulfide	4.18	1.0	5	0	83.6	67.8	134	3.58	15.5	25	
Carbon tetrachloride	9.5	1.0	10	0	95	74.5	122	7.92	18.1	25	
Chlorobenzene	9.89	1.0	10	0	98.9	72.7	124	8.79	11.8	25	
Chloroethane	8.76	1.0	10	0	87.6	72.3	136	8.75	0.114	25	
Chloroform	9.32	1.0	10	0	93.2	71.6	133	8.35	11.0	25	
Dibromochloromethane	10.52	1.0	10	0	105	70.6	124	9.53	9.88	25	
Ethylbenzene	10.44	1.0	10	0	104	70.9	126	9.1	13.7	25	
Methylene chloride	10.34	1.0	10	0	103	66.3	130	9.33	10.3	25	
Tetrachloroethene	10.39	1.0	10	0	104	72.4	119	8.65	18.3	25	
Toluene	9.81	1.0	10	0	98.1	71.8	116	8.58	13.4	25	
trans-1,2-Dichloroethene	10.06	1.0	10	0	101	70.3	120	8.55	16.2	25	
Trichloroethene	9	1.0	10	0	90	73	127	8.01	11.6	25	
Vinyl chloride	8.38	1.0	10	0	83.8	65.2	134	7.92	5.64	25	
Xylenes, Total	55.83	1.0	50	0	112	72.1	124	50.62	9.79	25	
Surr: 1,2-Dichloroethane-d4	49.14	5.0	50	0	98.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	49.35	5.0	50	0	98.7	76.5	125	0	0	25	
Surr: Toluene-d8	49.5	5.0	50	0	99	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176045

ms	SeqNo: **2713594**	TestNo: **SW8260C**	RunNo: **176045**
	Samp ID: **191002077-003b (100219-03-SW-D-**	Units: **µg/L**	Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.57	1.0	10	0	95.7	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	11	1.0	10	0	110	70.1	123	0	0		
1,1,2-Trichloroethane	9.81	1.0	10	0	98.1	72.1	119	0	0		
1,1-Dichloroethane	9.67	1.0	10	0	96.7	70.4	126	0	0		
1,1-Dichloroethene	9.68	1.0	10	0	96.8	70.2	125	0	0		
1,2,3-Trichloropropane	4.52	1.0	5	0	90.4	53.7	101	0	0		
1,2-Dichlorobenzene	8.76	1.0	10	0	87.6	70.2	123	0	0		
1,2-Dichloroethane	9.17	1.0	10	0.17	90	73.5	126	0	0		
1,3-Dichlorobenzene	8.72	1.0	10	0	87.2	70.4	124	0	0		
1,3-Dichloropropane	4.91	1.0	5	0	98.2	64	125	0	0		
1,4-Dichlorobenzene	8.68	1.0	10	0	86.8	70.8	127	0	0		
2-Butanone	8.91	5.0	10	0	89.1	60.5	123	0	0		
4-Methyl-2-pentanone	9.54	5.0	20	0	47.7	52.8	133	0	0		S
Acetone	14.59	5.0	10	0	146	56.3	135	0	0		S
Benzene	9.46	1.0	10	0	94.6	70.2	127	0	0		
Carbon disulfide	4.19	1.0	5	0	83.8	62.2	130	0	0		
Carbon tetrachloride	9.8	1.0	10	0	98	56.4	137	0	0		
Chlorobenzene	9.71	1.0	10	0	97.1	72.7	128	0	0		
Chloroethane	10.14	1.0	10	0	101	71.3	135	0	0		
Chloroform	8.91	1.0	10	0	89.1	70.2	125	0	0		
Dibromochloromethane	9.91	1.0	10	0	99.1	69.5	123	0	0		
Ethylbenzene	10.09	1.0	10	0	101	71.9	129	0	0		
Methylene chloride	9.33	1.0	10	0	93.3	65.3	123	0	0		
Tetrachloroethene	9.98	1.0	10	0	99.8	74.5	121	0	0		
Toluene	9.67	1.0	10	0	96.7	73	122	0	0		
trans-1,2-Dichloroethene	9.64	1.0	10	0	96.4	69.1	133	0	0		
Trichloroethene	8.86	1.0	10	0	88.6	71.1	126	0	0		
Vinyl chloride	9.32	1.0	10	0	93.2	65	137	0	0		
Xylenes, Total	28.58	1.0	30	0	95.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.07	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.23	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	49.81	5.0	50	0	99.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191002077
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176045

msd

SeqNo: **2713595** TestNo: **SW8260C** RunNo: **176045**
Samp ID: **191002077-003b (100219-03-SW-D-** Units: **µg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.21	1.0	10	0	92.1	71.6	126	9.57	3.83	20.4	
1,1,2,2-Tetrachloroethane	11.09	1.0	10	0	111	70.1	123	11	0.815	18.6	
1,1,2-Trichloroethane	9.57	1.0	10	0	95.7	72.1	119	9.81	2.48	20	
1,1-Dichloroethane	9.14	1.0	10	0	91.4	70.4	126	9.67	5.64	19.2	
1,1-Dichloroethene	9.32	1.0	10	0	93.2	70.2	125	9.68	3.79	16.1	
1,2,3-Trichloropropane	4.59	1.0	5	0	91.8	53.7	101	4.52	1.54	20	
1,2-Dichlorobenzene	9.27	1.0	10	0	92.7	70.2	123	8.76	5.66	17.9	
1,2-Dichloroethane	9.03	1.0	10	0.17	88.6	73.5	126	9.17	1.54	15.6	
1,3-Dichlorobenzene	9.15	1.0	10	0	91.5	70.4	124	8.72	4.81	14.3	
1,3-Dichloropropane	4.96	1.0	5	0	99.2	64	125	4.91	1.01	0	
1,4-Dichlorobenzene	9.03	1.0	10	0	90.3	70.8	127	8.68	3.95	14.4	
2-Butanone	9.38	5.0	10	0	93.8	60.5	123	8.91	5.14	15	
4-Methyl-2-pentanone	9.6	5.0	20	0	48	52.8	133	9.54	0.627	11.9	S
Acetone	12.6	5.0	10	0	126	56.3	135	14.59	14.6	10.6	Z
Benzene	8.95	1.0	10	0	89.5	70.2	127	9.46	5.54	18.4	
Carbon disulfide	4.09	1.0	5	0	81.8	62.2	130	4.19	2.42	13.1	
Carbon tetrachloride	9.38	1.0	10	0	93.8	56.4	137	9.8	4.38	20.3	
Chlorobenzene	9.55	1.0	10	0	95.5	72.7	128	9.71	1.66	19.6	
Chloroethane	9.48	1.0	10	0	94.8	71.3	135	10.14	6.73	27.8	
Chloroform	8.52	1.0	10	0	85.2	70.2	125	8.91	4.48	20.3	
Dibromochloromethane	9.52	1.0	10	0	95.2	69.5	123	9.91	4.01	18.8	
Ethylbenzene	9.7	1.0	10	0	97	71.9	129	10.09	3.94	16.3	
Methylene chloride	8.72	1.0	10	0	87.2	65.3	123	9.33	6.76	21.4	
Tetrachloroethene	9.44	1.0	10	0	94.4	74.5	121	9.98	5.56	20.9	
Toluene	9.05	1.0	10	0	90.5	73	122	9.67	6.62	19.4	
trans-1,2-Dichloroethene	9.11	1.0	10	0	91.1	69.1	133	9.64	5.65	16.1	
Trichloroethene	8.39	1.0	10	0	83.9	71.1	126	8.86	5.45	16.6	
Vinyl chloride	8.82	1.0	10	0	88.2	65	137	9.32	5.51	20.5	
Xylenes, Total	27.62	1.0	30	0	92.1	72	130	28.58	3.42	16.1	
Surr: 1,2-Dichloroethane-d4	50.21	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.04	5.0	50	0	100	76.5	125	0	0	0	
Surr: Toluene-d8	48.88	5.0	50	0	97.8	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

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Albany, New York 12207
518-434-4546/434-0891 FAX

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191002077

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100219-01-SW-U-A-1	10/2/19	0935	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	100219-02-SW-A-A-1	10/2/19	1005	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	100219-03-SW-D-B-1	10/2/19	1055	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	100219-04-SW-B-A-1	10/2/19	1025	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	100219-05-SW-B-B-1	10/2/19	1115	A	W		✓	1	TSS
006	100219-TB01 Lot# VOA-F46.3			A	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Gehan	J. B	10/2/19 4:08pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
J. B	J. M	10/2/19 5:11pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

191002077

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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October 07, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191003081
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/3/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *07-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191003081	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100319-01-SW-U-A-1
Work Order:	**191003081**	**Collection Date:**	10/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191003081-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 1:19:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/7/2019 1:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 1:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 1:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 1:19:00 PM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	10/7/2019 1:19:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	10/7/2019 1:19:00 PM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	10/7/2019 1:19:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.5**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT: AECOM Environment
Work Order: **191003081**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100319-02-SW-A-A-1
Collection Date: 10/3/2019
Lab Sample ID: 191003081-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 11:53:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 11:53:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 11:53:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 11:53:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 11:53:00 AM
Surr: 1,2-Dichloroethane-d4	**98.9**	80.9-122		%REC	1	10/7/2019 11:53:00 AM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	10/7/2019 11:53:00 AM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	10/7/2019 11:53:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.0**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100319-03-SW-D-B-1
Work Order:	**191003081**	**Collection Date:**	10/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191003081-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 12:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/7/2019 12:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 12:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 12:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Chlorobenzene	**0.7**	1.0	J	µg/L	1	10/7/2019 12:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 12:15:00 PM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	10/7/2019 12:15:00 PM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	10/7/2019 12:15:00 PM
Surr: Toluene-d8	**99.5**	80.4-121		%REC	1	10/7/2019 12:15:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.2**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100319-04-SW-B-A-1
Work Order:	**191003081**	**Collection Date:**	10/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191003081-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 12:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/7/2019 12:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 12:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 12:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 12:58:00 PM
Surr: 1,2-Dichloroethane-d4	**99.2**	80.9-122		%REC	1	10/7/2019 12:58:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/7/2019 12:58:00 PM
Surr: Toluene-d8	**99.4**	80.4-121		%REC	1	10/7/2019 12:58:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.1**	1.1		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100319-05-SW-B-B-1
Work Order:	**191003081**	**Collection Date:**	10/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191003081-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/3/2019)						
TSS (Residue, Non-Filterable)	**7.2**	1.0		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT: AECOM Environment
Work Order: **191003081**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100319-01-SW-U-A-3
Collection Date: 10/3/2019
Lab Sample ID: 191003081-006
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Acetone	**3.8**	5.0	J	µg/L	1	10/7/2019 1:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Chloroform	**26**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 1:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 1:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 1:41:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/7/2019 1:41:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/7/2019 1:41:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	10/7/2019 1:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/3/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**1.1**	1.0		mg/L	1	10/3/2019

Adirondack Environmental Services, Inc

Date: *07-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100319-TB01
Work Order:	**191003081**	**Collection Date:**	10/3/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191003081-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Acetone	**4.5**	5.0	J	µg/L	1	10/7/2019 2:02:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 2:02:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 2:02:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 2:02:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/7/2019 2:02:00 PM
Surr: 4-Bromofluorobenzene	**91.2**	76.5-125		%REC	1	10/7/2019 2:02:00 PM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	10/7/2019 2:02:00 PM

CLIENT: AECOM Environment
Work Order: 191003081
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75946

LCS

SeqNo: **2714135** **PrepDate:10/3/2019** TestNo: **SM2540D** RunNo: **176074**
Samp ID: **LCS-75946** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	496	0	94.4	86.5	114	0	0		

DUP

SeqNo: **2714138** **PrepDate:10/3/2019** TestNo: **SM2540D** RunNo: **176074**
Samp ID: **191002048-001A** **PrepRef:** Units: **mg/L** Analysis Date: **10/3/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	1381	6.70	0	0	0	0	0	1392	0.818	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191003081
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

mblk	SeqNo: **2714833**	TestNo: **SW8260C**	RunNo: **176109**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.16	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.24	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	4.08	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.17	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.01	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.42	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	48.76	5.0	50	0	97.5	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191003081
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

lcs	SeqNo: **2714829**	TestNo: **SW8260C**	RunNo: **176109**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.72	1.0	10	0	87.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.15	1.0	10	0	91.5	72.3	118	0	0		
1,1,2-Trichloroethane	8.46	1.0	10	0	84.6	73.1	123	0	0		
1,1-Dichloroethane	8.74	1.0	10	0	87.4	73.2	127	0	0		
1,1-Dichloroethene	8.83	1.0	10	0	88.3	70.3	128	0	0		
1,2,3-Trichloropropane	3.89	1.0	5	0	77.8	68.4	115	0	0		
1,2-Dichlorobenzene	8.01	1.0	10	0	80.1	71	124	0	0		
1,2-Dichloroethane	8.1	1.0	10	0	81	72.5	127	0	0		
1,3-Dichlorobenzene	8.23	1.0	10	0	82.3	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	71.7	127	0	0		
2-Butanone	8.08	5.0	10	0	80.8	65.1	132	0	0		
4-Methyl-2-pentanone	6.79	5.0	10	0	67.9	68.7	118	0	0		S
Acetone	10.91	5.0	10	0	109	69.2	133	0	0		
Benzene	8.19	1.0	10	0	81.9	71.2	122	0	0		
Carbon disulfide	3.94	1.0	5	0	78.8	67.8	134	0	0		
Carbon tetrachloride	9.14	1.0	10	0	91.4	74.5	122	0	0		
Chlorobenzene	8.83	1.0	10	0	88.3	72.7	124	0	0		
Chloroethane	8.38	1.0	10	0	83.8	72.3	136	0	0		
Chloroform	8.37	1.0	10	0	83.7	71.6	133	0	0		
Dibromochloromethane	9.15	1.0	10	0	91.5	70.6	124	0	0		
Ethylbenzene	9.38	1.0	10	0	93.8	70.9	126	0	0		
Methylene chloride	8.48	1.0	10	0	84.8	66.3	130	0	0		
Tetrachloroethene	9.2	1.0	10	0	92	72.4	119	0	0		
Toluene	8.51	1.0	10	0	85.1	71.8	116	0	0		
trans-1,2-Dichloroethene	8.96	1.0	10	0	89.6	70.3	120	0	0		
Trichloroethene	8.13	1.0	10	0	81.3	73	127	0	0		
Vinyl chloride	7.51	1.0	10	0	75.1	65.2	134	0	0		
Xylenes, Total	26.66	1.0	30	0	88.9	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.15	5.0	50	0	98.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.3	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	49.37	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191003081

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehen
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100319-01-SW-U-A-1	10/3/19	1035	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
002	100319-02-SW-A-A-1	10/3/19	1050	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
003	100319-03-SW-D-B-1	10/3/19	1110	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
004	100319-04-SW-B-A-1	10/3/19	1020	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
005	100319-05-SW-B-B-1	10/3/19	1130	A	W		✓	1	TSS
				P					
006	100319-01-SW-U-A-3	10/3/19	1300	A	W		✓	2	VOCs
		↓	↓	A	↓		↓	1	TSS
				P					
007	100319-TB01 Lot# WA-F463			A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

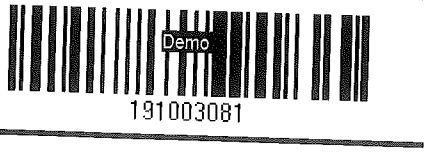
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 10/3/19 4:01pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 10/3/19 4:12pm

TEMPERATURE	AES Bottles		PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y	N	(Y) N	(Y) N
Notes: 6°C	☒	☐	Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi



Adirondack Environmental Services, Inc

191003081

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191003081

TAT: **2**

DateDue: 10/7/2019

10/3/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191003081-001	100319-01-SW-U-A-1	Water	10/3/2019	10/7/2019	B	A					
191003081-002	100319-02-SW-A-A-1	Water	10/3/2019	10/7/2019	B	A					
191003081-003	100319-03-SW-D-B-1	Water	10/3/2019	10/7/2019	B	A					
191003081-004	100319-04-SW-B-A-1	Water	10/3/2019	10/7/2019	B	A					
191003081-005	100319-05-SW-B-B-1	Water	10/3/2019	10/7/2019		A					
191003081-006	100319-01-SW-U-A-3	Water	10/3/2019	10/7/2019	B	A					
191003081-007	100319-TB01	Trip Blank	10/3/2019	10/7/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 08, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191004090
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/4/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *08-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191004090	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-01-SW-U-B-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
PCB, Total	**ND**	0.065		µg/L	1	10/4/2019 5:57:59 PM
Surr: Decachlorobiphenyl	**102**	57.1-135		%REC	1	10/4/2019 5:57:59 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Acetone	**2.9**	5.0	J	µg/L	1	10/7/2019 2:24:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 2:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 2:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 2:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-01-SW-U-B-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 2:24:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	10/7/2019 2:24:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/7/2019 2:24:00 PM
Surr: Toluene-d8	**98.0**	80.4-121		%REC	1	10/7/2019 2:24:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.1**	1.0		mg/L	1	10/7/2019

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-02-SW-A-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1242	**0.050**	0.065	J	µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/4/2019 6:11:19 PM
PCB, Total	**0.050**	0.065	J	µg/L	1	10/4/2019 6:11:19 PM
Surr: Decachlorobiphenyl	**81.2**	57.1-135		%REC	1	10/4/2019 6:11:19 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 2:45:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/7/2019 2:45:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 2:45:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 2:45:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-02-SW-A-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 2:45:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/7/2019 2:45:00 PM
Surr: 4-Bromofluorobenzene	**96.7**	76.5-125		%REC	1	10/7/2019 2:45:00 PM
Surr: Toluene-d8	**94.8**	80.4-121		%REC	1	10/7/2019 2:45:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/7/2019)						
TSS (Residue, Non-Filterable)	**21.8**	1.1		mg/L	1	10/7/2019

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-03-SW-D-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1242	**0.040**	0.065	J	µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/4/2019 6:24:36 PM
PCB, Total	**0.040**	0.065	J	µg/L	1	10/4/2019 6:24:36 PM
Surr: Decachlorobiphenyl	**83.4**	57.1-135		%REC	1	10/4/2019 6:24:36 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Acetone	**2.8**	5.0	J	µg/L	1	10/7/2019 3:07:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 3:07:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 3:07:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 3:07:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-03-SW-D-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 3:07:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/7/2019 3:07:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/7/2019 3:07:00 PM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	10/7/2019 3:07:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.1**	1.1		mg/L	1	10/7/2019

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-04-SW-B-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
PCB, Total	**ND**	0.065		µg/L	1	10/4/2019 6:37:56 PM
Surr: Decachlorobiphenyl	**89.6**	57.1-135		%REC	1	10/4/2019 6:37:56 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Acetone	**ND**	5.0		µg/L	1	10/7/2019 3:28:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 3:28:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 3:28:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 3:28:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-04-SW-B-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 3:28:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/7/2019 3:28:00 PM
Surr: 4-Bromofluorobenzene	**98.9**	76.5-125		%REC	1	10/7/2019 3:28:00 PM
Surr: Toluene-d8	**97.3**	80.4-121		%REC	1	10/7/2019 3:28:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/7/2019)						
TSS (Residue, Non-Filterable)	**3.5**	1.0		mg/L	1	10/7/2019

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-05-SW-B-A-1
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/7/2019)						
TSS (Residue, Non-Filterable)	**8.6**	1.0		mg/L	1	10/7/2019

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT: AECOM Environment
Work Order: **191004090**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100419-TB01
Collection Date: 10/4/2019
Lab Sample ID: 191004090-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Acetone	**3.8**	5.0	J	µg/L	1	10/7/2019 3:50:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 3:50:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 3:50:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 3:50:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 3:50:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/7/2019 3:50:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/7/2019 3:50:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	10/7/2019 3:50:00 PM

Adirondack Environmental Services, Inc

Date: *08-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100419-TB02
Work Order:	**191004090**	**Collection Date:**	10/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191004090-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Acetone	**4.3**	5.0	J	µg/L	1	10/7/2019 4:11:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/7/2019 4:11:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/7/2019 4:11:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Benzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/7/2019 4:11:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Toluene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/7/2019 4:11:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	10/7/2019 4:11:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	10/7/2019 4:11:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/7/2019 4:11:00 PM

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75953

MBLK

SeqNo: **2714419** PrepDate:**10/4/2019** TestNo: **E608** RunNo: **176070**
Samp ID: **MB-75953** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.078	0	0.1	0	78	51.5	144	0	0		

LCS

SeqNo: **2714420** PrepDate:**10/4/2019** TestNo: **E608** RunNo: **176070**
Samp ID: **LCS-75953** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.076	0	0.1	0	76	51.5	144	0	0		

MBLK

SeqNo: **2714049** PrepDate:**10/4/2019** TestNo: **SW8082A** RunNo: **176065**
Samp ID: **MB-75953** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.096	0	0.1	0	96	57.1	135	0	0		

LCS

SeqNo: **2714050** PrepDate:**10/4/2019** TestNo: **SW8082A** RunNo: **176065**
Samp ID: **LCS-75953** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.6026	0.0650	0.5	0	121	60	140	0	0		
PCB, Total	0.6026	0.0650	0.5	0	121	60	140	0	0		
Surr: Decachlorobiphenyl	0.1026	0	0.1	0	103	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75953

MS

SeqNo: **2714397** **PrepDate:10/4/2019** TestNo: **SW8082A** RunNo: **176065**
Samp ID: **191004090-004 (100419-04-SW-B-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5008	0.0650	0.5	0	100	46.7	130	0	0		
PCB, Total	0.5008	0.0650	0.5	0	100	51	150	0	0		
Surr: Decachlorobiphenyl	0.0968	0.0100	0.1	0	96.8	57.1	135	0	0		

MSD

SeqNo: **2714398** **PrepDate:10/4/2019** TestNo: **SW8082A** RunNo: **176065**
Samp ID: **191004090-004 (100419-04-SW-B-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.615	0.0650	0.5	0	123	46.7	130	0.5008	20.5	30	
PCB, Total	0.615	0.0650	0.5	0	123	51	150	0.5008	20.5	30	
Surr: Decachlorobiphenyl	0.0854	0.0100	0.1	0	85.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 75986

LCS

SeqNo: **2715773** **PrepDate:10/7/2019** TestNo: **SM2540D** RunNo: **176151**
Samp ID: **LCS-75986** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	524	40.0	496	0	106	86.5	114	0	0		

DUP

SeqNo: **2715777** **PrepDate:10/7/2019** TestNo: **SM2540D** RunNo: **176151**
Samp ID: **191003040-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	150	10.0	0	0	0	0	0	149	0.669	10	

DUP

SeqNo: **2715794** **PrepDate:10/7/2019** TestNo: **SM2540D** RunNo: **176151**
Samp ID: **191004090-004A** **PrepRef:** Units: **mg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	3.8	1.00	0	0	0	0	0	3.5	8.22	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

mblk	SeqNo: **2714833**	TestNo: **SW8260C**	RunNo: **176109**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.16	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.24	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	4.08	5.0									J
Benzene	ND	1.0									
Carbon disulfide	0.17	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.01	5.0	50	0	98	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.42	5.0	50	0	105	76.5	125	0	0		
Surr: Toluene-d8	48.76	5.0	50	0	97.5	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

lcs

SeqNo: **2714829** TestNo: **SW8260C** RunNo: **176109**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.72	1.0	10	0	87.2	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.15	1.0	10	0	91.5	72.3	118	0	0		
1,1,2-Trichloroethane	8.46	1.0	10	0	84.6	73.1	123	0	0		
1,1-Dichloroethane	8.74	1.0	10	0	87.4	73.2	127	0	0		
1,1-Dichloroethene	8.83	1.0	10	0	88.3	70.3	128	0	0		
1,2,3-Trichloropropane	3.89	1.0	5	0	77.8	68.4	115	0	0		
1,2-Dichlorobenzene	8.01	1.0	10	0	80.1	71	124	0	0		
1,2-Dichloroethane	8.1	1.0	10	0	81	72.5	127	0	0		
1,3-Dichlorobenzene	8.23	1.0	10	0	82.3	72.2	121	0	0		
1,3-Dichloropropane	4.35	1.0	5	0	87	76	122	0	0		
1,4-Dichlorobenzene	8.12	1.0	10	0	81.2	71.7	127	0	0		
2-Butanone	8.08	5.0	10	0	80.8	65.1	132	0	0		
4-Methyl-2-pentanone	6.79	5.0	10	0	67.9	68.7	118	0	0		S
Acetone	10.91	5.0	10	0	109	69.2	133	0	0		
Benzene	8.19	1.0	10	0	81.9	71.2	122	0	0		
Carbon disulfide	3.94	1.0	5	0	78.8	67.8	134	0	0		
Carbon tetrachloride	9.14	1.0	10	0	91.4	74.5	122	0	0		
Chlorobenzene	8.83	1.0	10	0	88.3	72.7	124	0	0		
Chloroethane	8.38	1.0	10	0	83.8	72.3	136	0	0		
Chloroform	8.37	1.0	10	0	83.7	71.6	133	0	0		
Dibromochloromethane	9.15	1.0	10	0	91.5	70.6	124	0	0		
Ethylbenzene	9.38	1.0	10	0	93.8	70.9	126	0	0		
Methylene chloride	8.48	1.0	10	0	84.8	66.3	130	0	0		
Tetrachloroethene	9.2	1.0	10	0	92	72.4	119	0	0		
Toluene	8.51	1.0	10	0	85.1	71.8	116	0	0		
trans-1,2-Dichloroethene	8.96	1.0	10	0	89.6	70.3	120	0	0		
Trichloroethene	8.13	1.0	10	0	81.3	73	127	0	0		
Vinyl chloride	7.51	1.0	10	0	75.1	65.2	134	0	0		
Xylenes, Total	26.66	1.0	30	0	88.9	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.15	5.0	50	0	98.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.3	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	49.37	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

ms	SeqNo: **2715504**	TestNo: **SW8260C**	RunNo: **176109**
	Samp ID: **191004090-004b (100419-04-SW-B-**	Units: **µg/L**	Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.91	1.0	10	0	89.1	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.51	1.0	10	0	95.1	70.1	123	0	0		
1,1,2-Trichloroethane	8.79	1.0	10	0	87.9	72.1	119	0	0		
1,1-Dichloroethane	8.86	1.0	10	0	88.6	70.4	126	0	0		
1,1-Dichloroethene	9.04	1.0	10	0	90.4	70.2	125	0	0		
1,2,3-Trichloropropane	3.81	1.0	5	0	76.2	53.7	101	0	0		
1,2-Dichlorobenzene	7.86	1.0	10	0	78.6	70.2	123	0	0		
1,2-Dichloroethane	8.19	1.0	10	0.14	80.5	73.5	126	0	0		
1,3-Dichlorobenzene	7.74	1.0	10	0	77.4	70.4	124	0	0		
1,3-Dichloropropane	4.45	1.0	5	0	89	64	125	0	0		
1,4-Dichlorobenzene	7.4	1.0	10	0	74	70.8	127	0	0		
2-Butanone	8.64	5.0	10	0	86.4	60.5	123	0	0		
4-Methyl-2-pentanone	8.17	5.0	10	0	81.7	52.8	133	0	0		
Acetone	10.12	5.0	10	0	101	56.3	135	0	0		
Benzene	8.48	1.0	10	0	84.8	70.2	127	0	0		
Carbon disulfide	3.72	1.0	5	0	74.4	62.2	130	0	0		
Carbon tetrachloride	9.25	1.0	10	0	92.5	56.4	137	0	0		
Chlorobenzene	8.51	1.0	10	0	85.1	72.7	128	0	0		
Chloroethane	8.21	1.0	10	0	82.1	71.3	135	0	0		
Chloroform	8.48	1.0	10	0	84.8	70.2	125	0	0		
Dibromochloromethane	8.69	1.0	10	0	86.9	69.5	123	0	0		
Ethylbenzene	9.06	1.0	10	0	90.6	71.9	129	0	0		
Methylene chloride	8.36	1.0	10	0	83.6	65.3	123	0	0		
Tetrachloroethene	9.41	1.0	10	0	94.1	74.5	121	0	0		
Toluene	8.49	1.0	10	0	84.9	73	122	0	0		
trans-1,2-Dichloroethene	9.08	1.0	10	0	90.8	69.1	133	0	0		
Trichloroethene	8.2	1.0	10	0	82	71.1	126	0	0		
Vinyl chloride	6.81	1.0	10	0	68.1	65	137	0	0		
Xylenes, Total	25.67	1.0	30	0	85.6	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.76	5.0	50	0	104	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.57	5.0	50	0	97.1	76.5	125	0	0		
Surr: Toluene-d8	48.85	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191004090
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176109

msd

SeqNo: **2715505** TestNo: **SW8260C** RunNo: **176109**
Samp ID: **191004090-004b (100419-04-SW-B-** Units: **µg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.98	1.0	10	0	99.8	71.6	126	8.91	11.3	20.4	
1,1,2,2-Tetrachloroethane	10.16	1.0	10	0	102	70.1	123	9.51	6.61	18.6	
1,1,2-Trichloroethane	9.59	1.0	10	0	95.9	72.1	119	8.79	8.71	20	
1,1-Dichloroethane	9.84	1.0	10	0	98.4	70.4	126	8.86	10.5	19.2	
1,1-Dichloroethene	9.96	1.0	10	0	99.6	70.2	125	9.04	9.68	16.1	
1,2,3-Trichloropropane	4.14	1.0	5	0	82.8	53.7	101	3.81	8.30	20	
1,2-Dichlorobenzene	9.58	1.0	10	0	95.8	70.2	123	7.86	19.7	17.9	Z
1,2-Dichloroethane	9.32	1.0	10	0.14	91.8	73.5	126	8.19	12.9	15.6	
1,3-Dichlorobenzene	9	1.0	10	0	90	70.4	124	7.74	15.1	14.3	Z
1,3-Dichloropropane	5.04	1.0	5	0	101	64	125	4.45	12.4	0	
1,4-Dichlorobenzene	9.03	1.0	10	0	90.3	70.8	127	7.4	19.8	14.4	Z
2-Butanone	9.59	5.0	10	0	95.9	60.5	123	8.64	10.4	15	
4-Methyl-2-pentanone	8.65	5.0	10	0	86.5	52.8	133	8.17	5.71	11.9	
Acetone	14.46	5.0	10	0	145	56.3	135	10.12	35.3	10.6	SZ
Benzene	9.18	1.0	10	0	91.8	70.2	127	8.48	7.93	18.4	
Carbon disulfide	4.21	1.0	5	0	84.2	62.2	130	3.72	12.4	13.1	
Carbon tetrachloride	10.13	1.0	10	0	101	56.4	137	9.25	9.08	20.3	
Chlorobenzene	8.88	1.0	10	0	88.8	72.7	128	8.51	4.26	19.6	
Chloroethane	7.68	1.0	10	0	76.8	71.3	135	8.21	6.67	27.8	
Chloroform	9.29	1.0	10	0	92.9	70.2	125	8.48	9.12	20.3	
Dibromochloromethane	9.63	1.0	10	0	96.3	69.5	123	8.69	10.3	18.8	
Ethylbenzene	9.59	1.0	10	0	95.9	71.9	129	9.06	5.68	16.3	
Methylene chloride	9.29	1.0	10	0	92.9	65.3	123	8.36	10.5	21.4	
Tetrachloroethene	10.37	1.0	10	0	104	74.5	121	9.41	9.71	20.9	
Toluene	9.43	1.0	10	0	94.3	73	122	8.49	10.5	19.4	
trans-1,2-Dichloroethene	9.83	1.0	10	0	98.3	69.1	133	9.08	7.93	16.1	
Trichloroethene	8.84	1.0	10	0	88.4	71.1	126	8.2	7.51	16.6	
Vinyl chloride	7.31	1.0	10	0	73.1	65	137	6.81	7.08	20.5	
Xylenes, Total	27.15	1.0	30	0	90.5	72	130	25.67	5.60	16.1	
Surr: 1,2-Dichloroethane-d4	50.52	5.0	50	0	101	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.44	5.0	50	0	94.9	76.5	125	0	0	0	
Surr: Toluene-d8	48.71	5.0	50	0	97.4	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 191004090

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.kleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100419-01-SW-U-B-1	10/4/19	1135	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	100419-02-SW-A-A-1	10/4/19	1145	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	100419-03-SW-D-A-1	10/4/19	1200	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	100419-04-SW-B-A-1	10/4/19	1100	A	W		✓	6	PCBs
	↓	↓	↓	A	↓		↓	6	VOCs
	↓	↓	↓	A	↓		↓	3	TSS
005	100419-05-SW-B-A-1	10/4/19	1215	A	W		✓	1	TSS
006	100419-TB01 Lot# VOA-F463			A	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other: _____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/4/19 4:03pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/4/19 4:41pm

Temperature

Ambient or (Chilled)

Notes: 6°C

AES Bottles

Y ☒ N ☐

Properly Preserved

(Y) N

Notes: _____

Received Within Holding Times

(Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Demo
191004090

Adirondack Environmental Servi

Adirondack Environmental Services Inc.

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

AES Work Order # 19100490

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Gehan	
Client Phone No: 978-905-2124	**Client Email:** john.bleiler@aecom.com	**PO Number:** 229608	**Samplers: (Signature)**

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	100419-TB02 Lot# F463			A	TB				trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
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				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 10/4/19 4:03pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 10/4/19 4:41pm

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

191004090

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191004090

TAT: **2**

DateDue: 10/8/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

10/4/2019

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191004090-001	100419-01-SW-U-B-1	Water	10/4/2019	10/8/2019	C	B	A				
191004090-002	100419-02-SW-A-A-1	Water	10/4/2019	10/8/2019	C	B	A				
191004090-003	100419-03-SW-D-A-1	Water	10/4/2019	10/8/2019	C	B	A				
191004090-004	100419-04-SW-B-A-1	Water	10/4/2019	10/8/2019	C	B	A				
191004090-005	100419-05-SW-B-A-1	Water	10/4/2019	10/8/2019			A				
191004090-006	100419-TB01	Trip Blank	10/4/2019	10/8/2019		A					
191004090-007	100419-TB02	Trip Blank	10/4/2019	10/8/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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October 09, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191007051
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/7/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *09-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191007051	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-01-SW-U-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
PCB, Total	**ND**	0.065		µg/L	1	10/7/2019 6:27:00 PM
Surr: Decachlorobiphenyl	**94.8**	57.1-135		%REC	1	10/7/2019 6:27:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 12:25:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/9/2019 12:25:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 12:25:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 12:25:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	10/9/2019 12:25:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-01-SW-U-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 12:25:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/9/2019 12:25:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	10/9/2019 12:25:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	10/9/2019 12:25:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.4**	1.1		mg/L	1	10/8/2019

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-02-SW-A-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
PCB, Total	**ND**	0.065		µg/L	1	10/7/2019 6:40:17 PM
Surr: Decachlorobiphenyl	**88.6**	57.1-135		%REC	1	10/7/2019 6:40:17 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	10/9/2019 12:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 12:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 12:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-02-SW-A-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 12:47:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/9/2019 12:47:00 PM
Surr: 4-Bromofluorobenzene	**95.9**	76.5-125		%REC	1	10/9/2019 12:47:00 PM
Surr: Toluene-d8	**96.8**	80.4-121		%REC	1	10/9/2019 12:47:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/8/2019)						
TSS (Residue, Non-Filterable)	**5.6**	1.0		mg/L	1	10/8/2019

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-03-SW-D-B-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
PCB, Total	**ND**	0.065		µg/L	1	10/7/2019 7:19:32 PM
Surr: Decachlorobiphenyl	**72.0**	57.1-135		%REC	1	10/7/2019 7:19:32 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 1:08:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/9/2019 1:08:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 1:08:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 1:08:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-03-SW-D-B-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 1:08:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/9/2019 1:08:00 PM
Surr: 4-Bromofluorobenzene	**99.9**	76.5-125		%REC	1	10/9/2019 1:08:00 PM
Surr: Toluene-d8	**97.6**	80.4-121		%REC	1	10/9/2019 1:08:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/8/2019)						
TSS (Residue, Non-Filterable)	**3.6**	1.1		mg/L	1	10/8/2019

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-04-SW-B-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/7/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
PCB, Total	**ND**	0.065		µg/L	1	10/7/2019 7:32:50 PM
Surr: Decachlorobiphenyl	**82.8**	57.1-135		%REC	1	10/7/2019 7:32:50 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Acetone	**3.5**	5.0	J	µg/L	1	10/9/2019 1:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/9/2019 1:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 1:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 1:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-04-SW-B-C-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 1:30:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/9/2019 1:30:00 PM
Surr: 4-Bromofluorobenzene	**98.6**	76.5-125		%REC	1	10/9/2019 1:30:00 PM
Surr: Toluene-d8	**94.7**	80.4-121		%REC	1	10/9/2019 1:30:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.0**	1.0		mg/L	1	10/8/2019

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-05-SW-B-A-1
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/8/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.0		mg/L	1	10/8/2019

Adirondack Environmental Services, Inc

Date: *09-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100719-TB01
Work Order:	**191007051**	**Collection Date:**	10/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191007051-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Acetone	**4.2**	5.0	J	µg/L	1	10/9/2019 1:51:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/9/2019 1:51:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 1:51:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 1:51:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 1:51:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/9/2019 1:51:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	10/9/2019 1:51:00 PM
Surr: Toluene-d8	**95.4**	80.4-121		%REC	1	10/9/2019 1:51:00 PM

CLIENT: AECOM Environment
Work Order: 191007051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76005

MBLK

SeqNo: **2715312** PrepDate:**10/7/2019** TestNo: **SW8082A** RunNo: **176133**
Samp ID: **MB-76005** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.1106	0.0100	0.1	0	111	57.1	135	0	0		

LCS

SeqNo: **2715313** PrepDate:**10/7/2019** TestNo: **SW8082A** RunNo: **176133**
Samp ID: **LCS-76005** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4876	0.0650	0.5	0	97.5	60	140	0	0		
PCB, Total	0.4876	0.0650	0.5	0	97.5	60	140	0	0		
Surr: Decachlorobiphenyl	0.107	0.0100	0.1	0	107	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191007051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76018

LCS

SeqNo: **2716820** **PrepDate:10/8/2019** TestNo: **SM2540D** RunNo: **176198**
Samp ID: **LCS-76018** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	496	0	98.4	86.5	114	0	0		

DUP

SeqNo: **2716833** **PrepDate:10/8/2019** TestNo: **SM2540D** RunNo: **176198**
Samp ID: **191003073-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	598	20.0	0	0	0	0	0	552	8.00	10	

DUP

SeqNo: **2716835** **PrepDate:10/8/2019** TestNo: **SM2540D** RunNo: **176198**
Samp ID: **191003074-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	185	10.0	0	0	0	0	0	187	1.08	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191007051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

mblk

SeqNo: **2716968** TestNo: **SW8260C** RunNo: **176205**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.15	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.2	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	4.03	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	0.25	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.51	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.98	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49.12	5.0	50	0	98.2	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191007051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

lcs

SeqNo: **2716966** TestNo: **SW8260C** RunNo: **176205**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.31	1.0	10	0	93.1	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.91	1.0	10	0	99.1	72.3	118	0	0		
1,1,2-Trichloroethane	9.36	1.0	10	0	93.6	73.1	123	0	0		
1,1-Dichloroethane	9.6	1.0	10	0	96	73.2	127	0	0		
1,1-Dichloroethene	9.34	1.0	10	0	93.4	70.3	128	0	0		
1,2,3-Trichloropropane	4.05	1.0	5	0	81	68.4	115	0	0		
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	8.11	1.0	10	0	81.1	72.2	121	0	0		
1,3-Dichloropropane	4.79	1.0	5	0	95.8	76	122	0	0		
1,4-Dichlorobenzene	7.52	1.0	10	0	75.2	71.7	127	0	0		
2-Butanone	10.07	5.0	10	0	101	65.1	132	0	0		
4-Methyl-2-pentanone	8.4	5.0	10	0	84	68.7	118	0	0		
Acetone	13.5	5.0	10	0	135	69.2	133	0	0		S
Benzene	8.97	1.0	10	0	89.7	71.2	122	0	0		
Carbon disulfide	3.74	1.0	5	0	74.8	67.8	134	0	0		
Carbon tetrachloride	9.37	1.0	10	0	93.7	74.5	122	0	0		
Chlorobenzene	8.6	1.0	10	0	86	72.7	124	0	0		
Chloroethane	10.58	1.0	10	0	106	72.3	136	0	0		
Chloroform	8.97	1.0	10	0	89.7	71.6	133	0	0		
Dibromochloromethane	9.14	1.0	10	0	91.4	70.6	124	0	0		
Ethylbenzene	9.43	1.0	10	0	94.3	70.9	126	0	0		
Methylene chloride	9.67	1.0	10	0	96.7	66.3	130	0	0		
Tetrachloroethene	9.74	1.0	10	0	97.4	72.4	119	0	0		
Toluene	9.72	1.0	10	0	97.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.68	1.0	10	0	86.8	73	127	0	0		
Vinyl chloride	11.93	1.0	10	0	119	65.2	134	0	0		
Xylenes, Total	26.29	1.0	30	0	87.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.5	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.12	5.0	50	0	94.2	76.5	125	0	0		
Surr: Toluene-d8	48.3	5.0	50	0	96.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191007051

Experience is the solution

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100719-01-SW-U-C-1	10/7/19	1315	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	100719-02-SW-A-C-1	10/7/19	1330	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	100719-03-SW-D-B-1	10/7/19	1340	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	100719-04-SW-B-C-1	10/7/19	1300	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	100719-05-SW-B-A-1	10/7/19	1355	A	W		✓	1	TSS
006	100719-TB01 Lot# WA-T452			A	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

jm 10/7/19

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/7/19 16:10
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/7/19 4:57 pm

Temperature

Ambient or (Chilled)

Notes: 6°C

AES Bottles

Y ☒ N ☐

Properly Preserved

(Y) N

Notes:

Received Within Holding Times

(Y) N

Notes:

WHITE - Lab Copy

YELLOW - Sampler Copy

Adirondack Environmental Serv

Demo
191007051

Adirondack Environmental Services, Inc

191007051

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

191007051

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/9/2019

10/7/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191007051-001	100719-01-SW-U-C-1	Water	10/7/2019	10/9/2019	C	B	A				
191007051-002	100719-02-SW-A-C-1	Water	10/7/2019	10/9/2019	C	B	A				
191007051-003	100719-03-SW-D-B-1	Water	10/7/2019	10/9/2019	C	B	A				
191007051-004	100719-04-SW-B-C-1	Water	10/7/2019	10/9/2019	C	B	A				
191007051-005	100719-05-SW-B-A-1	Water	10/7/2019	10/9/2019			A				
191007051-006	100719-TB01	Trip Blank	10/7/2019	10/9/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

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(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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Bulkhead Water Quality Monitoring Summary & Recommendation Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**9/13/18 – 10/5/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (17 working days) to evaluate conditions within the river during the sheet pile bulkhead installation activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) TSS samples collected from each monitoring buoy at approximately shallow, mid-depth, and near bottom in the water column. These samples are also analyzed for turbidity in the laboratory to allow comparison with the real-time measurements and TSS data;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes chemistry data collected during the first 17 days of bulkhead installation field work. Based on the data summarized herein, and in accordance with the approved work plan, this memorandum provides recommendations for reduced sampling frequency for the remainder of the bulkhead and pier installation program at the BASF site.

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 sheetpile installation during the period 9/13/18 through 10/5/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum, and will be subsequently summarized in weekly water column monitoring reports

turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings). TSS and turbidity samples were collected from two additional depths.

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A.

PCBs were undetected (filtered and non-filtered) during the monitoring program. Over the reporting period, there were five low level exceedances of the water quality criteria (Table 2) for inorganic constituents which are not believed to be site-related, were not identified as Site-related COPCs in the remedial investigation, and are not the subject of this response action. Mercury was detected at low levels at two depths on 9/14/18 at the downstream buoy and again on 9/18/18 at the adjacent and downstream buoy. Since then, it has not been detected above the guidance value during the reporting period. Zinc was detected slightly over the guidance value on 9/21/18. These low level detections may be representative of ambient Site conditions and do not appear related on Site remedial activities.

Summary

Based on the analysis described herein, and in accordance with the final Surface Water Remedial Action Monitoring Plan, based on the first few weeks of bulkhead monitoring, it is recommended that the chemistry monitoring program for the remainder of bulkhead installation (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency be reduced to collection of two samples per week. The minimal exceedances and low level detections of analytes indicate that the reduced program would be appropriate and still be protective of the environment. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the sheetpile installation. Daily monitoring will be re-initiated once the dredging of TSCA sediments commences.

Table 1: Water Quality Detections Summary

SAMPLE ID	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?
091318-01-SW-U-A-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-01-SW-U-A-2	ARSENIC	D	mg/l	0.15	0.001	J	
091318-01-SW-U-B-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-01-SW-U-C-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-02-SW-A-A-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-02-SW-A-B-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-03-SW-D-A-1	ARSENIC	D	mg/l	0.15	0.001	J	
091318-03-SW-D-B-1	ARSENIC	D	mg/l	0.15	0.001	J	
091418-01-SW-U-C-1	ARSENIC	D	mg/l	0.15	0.001	J	
091418-02-SW-A-A-2	ARSENIC	D	mg/l	0.15	0.001	J	
091418-02-SW-A-C-1	ARSENIC	D	mg/l	0.15	0.001	J	
091418-03-SW-D-A-1	ARSENIC	D	mg/l	0.15	0.001	J	
091418-03-SW-D-B-1	MERCURY	T	mg/l	0.00005	0.00009	J	X
091418-03-SW-D-C-1	ARSENIC	D	mg/l	0.15	0.001	J	
091418-03-SW-D-C-1	MERCURY	T	mg/l	0.00005	0.00010	J	X
091718-01-SW-U-A-1	ARSENIC	D	mg/l	0.15	0.001	J	
091718-01-SW-U-C-1	ARSENIC	D	mg/l	0.15	0.001	J	
091718-02-SW-A-C-1	MERCURY	T	mg/l	0.00005	0.00009	J	X
091718-03-SW-D-A-1	MERCURY	T	mg/l	0.00005	0.00006	J	X
091818-01-SW-U-A-1	ARSENIC	D	µg/l	150.00	1.200	J	
091818-01-SW-U-A-1	CHROMIUM, TOTAL	D	µg/l	180.59	0.820	J	

SAMPLE ID	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?
091818-01-SW-U-B-1	ARSENIC	D	µg/l	150.00	0.930	J	
091818-01-SW-U-C-1	ARSENIC	D	µg/l	150.00	0.930	J	
091818-02-SW-A-A-1	ARSENIC	D	µg/l	150.00	0.700	J	
091818-02-SW-A-B-1	ARSENIC	D	µg/l	150.00	0.820	J	
091818-02-SW-A-C-1	ARSENIC	D	µg/l	150.00	0.950	J	
091818-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	1.000	J	
091818-03-SW-D-A-2	ARSENIC	D	µg/l	150.00	0.930	J	
091818-03-SW-D-B-1	ARSENIC	D	µg/l	150.00	0.760	J	
091818-03-SW-D-C-1	ARSENIC	D	µg/l	150.00	1.400	J	
091818-03-SW-D-C-1	CHROMIUM, TOTAL	D	µg/l	182.74	0.780	J	
091818-03-SW-D-C-1	ZINC	D	µg/l	22.00	7.500	J	
092018-03-SW-D-C-1	ARSENIC	D	µg/l	150.00	0.900	J	
092018-03-SW-D-C-1	CHLOROBENZENE	N	µg/l	5.00	0.200	J	
092118-01-SW-U-A-1	ARSENIC	D	µg/l	150.00	0.870	J	
092118-01-SW-U-A-1	ZINC	D	µg/l	15.43	18.000		X
092118-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	1.000	J	
092418-02-SW-A-A-2	ARSENIC	D	µg/l	150.00	0.680	J	
092418-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	0.820	J	
092518-02-SW-A-B-1	ARSENIC	D	µg/l	150.00	0.740	J	
092618-02-SW-A-A-1	CHROMIUM, TOTAL	D	µg/l	174.56	0.700	J	
092618-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	0.910	J	
092618-03-SW-D-A-1	CHROMIUM, TOTAL	D	µg/l	177.83	0.750	J	

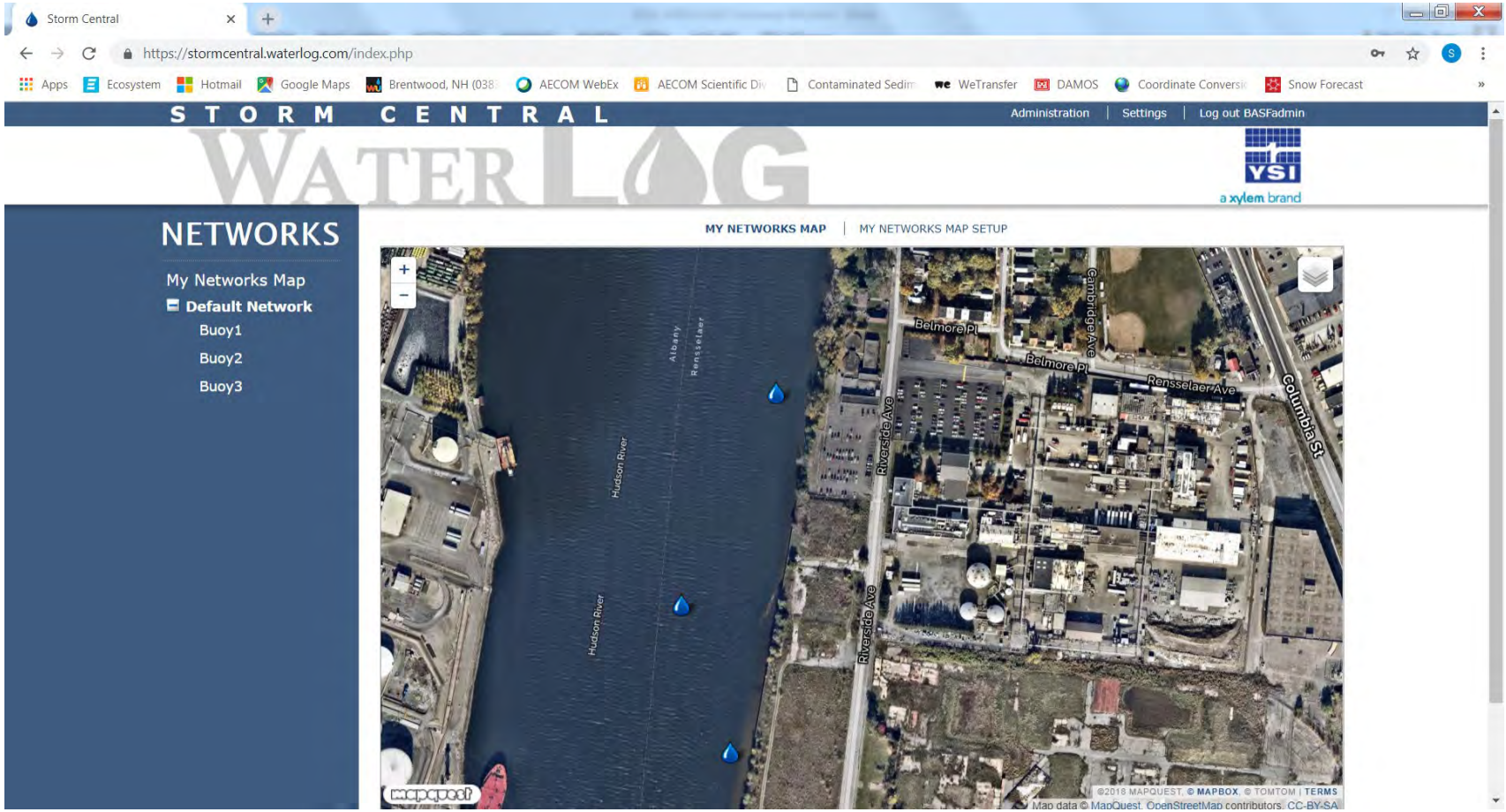
SAMPLE ID	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?
092718-01-SW-U-C-1	ARSENIC	D	µg/l	150.00	0.690	J	
092718-03-SW-D-B-1	ARSENIC	D	µg/l	150.00	0.710	J	
092818-01-SW-U-A-1	CHROMIUM, TOTAL	D	µg/l	177.83	0.810	J	
092818-01-SW-U-A-1	LEAD	D	µg/l	122.78	1.200	J	
092818-01-SW-U-A-1	ZINC	D	µg/l	20.45	6.700	J	
100118-01-SW-U-A-1	ARSENIC	D	µg/l	150.00	1.600	J	
100118-02-SW-A-B-1	CHROMIUM, TOTAL	D	µg/l	168.42	1.900	J	
100118-03-SW-D-C-1	CHROMIUM, TOTAL	D	µg/l	167.21	11.800		
100218-01-SW-U-A-1	CHROMIUM, TOTAL	D	µg/l	167.73	1.300	J	
100218-01-SW-U-A-1	ZINC	D	µg/l	17.48	13.200	J	
100218-02-SW-A-A-1	ZINC	D	µg/l	16.57	10.800	J	
100218-03-SW-D-A-1	ZINC	D	µg/l	17.12	16.600		
100318-01-SW-U-A-1	ARSENIC	D	µg/l	150.00	1.300	J	
100318-01-SW-U-A-1	ZINC	D	µg/l	16.04	12.200	J	
100318-02-SW-A-A-1	ZINC	D	µg/l	15.99	10.100	J	
100318-03-SW-D-B-1	ZINC	D	µg/l	16.10	11.000	J	
100418-01-SW-U-A-1	ARSENIC	D	µg/l	150.00	0.680	J	
100418-01-SW-U-A-1	ZINC	D	µg/l	17.09	13.600	J	
100418-02-SW-A-A-1	ZINC	D	µg/l	17.30	11.700	J	
100418-03-SW-D-A-1	ZINC	D	µg/l	17.11	12.900	J	
100518-01-SW-U-B-1	ARSENIC	D	µg/l	150.00	1.100	J	
100518-01-SW-U-B-1	CHROMIUM, TOTAL	D	µg/l	161.34	1.300	J	

SAMPLE ID	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?
100518-01-SW-U-B-1	DICHLOROBENZENE (SUM)	N	µg/l	5.00	1.000		
100518-01-SW-U-B-1	ZINC	D	µg/l	15.75	14.000	J	
100518-02-SW-A-A-1	DICHLOROBENZENE (SUM)	N	µg/l	5.00	2.000		
100518-02-SW-A-A-1	ZINC	D	µg/l	16.33	14.800	J	
100518-03-SW-D-B-1	ARSENIC	D	µg/l	150.00	0.950	J	
100518-03-SW-D-B-1	DICHLOROBENZENE (SUM)	N	µg/l	5.00	2.000		
100518-03-SW-D-B-1	ZINC	D	µg/l	15.84	7.800	J	

Table 2: Water Quality Exceedances Summary

Sample ID	Analyte	CAS Number	Fraction	WQ Guidance Value	WQ Guidance Value Unit	WQ Result (mg/L)	Result Unit	Lab Qualifier
091418-03-SW-D-B-1	MERCURY	7439-97-6	Total	0.05	µg/l	0.09	µg/l	J
091418-03-SW-D-C-1	MERCURY	7439-97-6	Total	0.05	µg/l	0.10	µg/l	J
091718-02-SW-A-C-1	MERCURY	7439-97-6	Total	0.05	µg/l	0.09	µg/l	J
091718-03-SW-D-A-1	MERCURY	7439-97-6	Total	0.05	µg/l	0.06	µg/l	J
092118-01-SW-U-A-1	ZINC	7440-66-6	Dissolved	15.43	µg/l	18	µg/l	

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 19, 2018 15:30

Project: Rensselaer

Account #: 04285
Group Number: 1987218
SDG: RNS05
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
091318-01-SW-U-A-1 Grab Surface Water	09/13/2018 13:25	9802914
091318-01-SW-U-A-1 Filtered Grab Surface Water	09/13/2018 13:25	9802915
091318-01-SW-U-A-2 Grab Surface Water	09/13/2018 13:35	9802916
091318-01-SW-U-A-2 Filtered Grab Surface Water	09/13/2018 13:35	9802917
091318-01-SW-U-B-1 Grab Surface Water	09/13/2018 13:55	9802918
091318-01-SW-U-B-1 Filtered Grab Surface Water	09/13/2018 13:55	9802919
091318-01-SW-U-C-1 Grab Surface Water	09/13/2018 14:15	9802920
091318-01-SW-U-C-1 Filtered Grab Surface Water	09/13/2018 14:15	9802921
091318-02-SW-A-A-1 Grab Surface Water	09/13/2018 14:35	9802922
091318-02-SW-A-A-1 Filtered Grab Surface Water	09/13/2018 14:35	9802923
091318-02-SW-A-B-1 Grab Surface Water	09/13/2018 15:00	9802924
091318-02-SW-A-B-1 Filtered Grab Surface Water	09/13/2018 15:00	9802925
091318-02-SW-A-C-1 Grab Surface Water	09/13/2018 15:17	9802926
091318-02-SW-A-C-1 Filtered Grab Surface Water	09/13/2018 15:17	9802927
091318-03-SW-D-A-1 Grab Surface Water	09/13/2018 15:40	9802928
091318-03-SW-D-A-1 Filtered Grab Surface Water	09/13/2018 15:40	9802929
091318-03-SW-D-B-1 Grab Surface Water	09/13/2018 15:50	9802930
091318-03-SW-D-B-1 Filtered Grab Surface Water	09/13/2018 15:50	9802931
091318-03-SW-D-C-1 Grab Surface Water	09/13/2018 16:05	9802932
091318-03-SW-D-C-1 Filtered Grab Surface Water	09/13/2018 16:05	9802933
091318-TB01 Water	09/13/2018 12:00	9802934

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **091318-01-SW-U-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:25
SDG#: RNS05-01

BASF Corporation
ELLE Sample #: WW 9802914
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00094 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0264	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:25
SDG#: RNS05-01

BASF Corporation
ELLE Sample #: WW 9802914
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.00071 J	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	97.6	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.9	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	11.9	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 11:29	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 11:29	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 06:35	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:24	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:24	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:24	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:24	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:24	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:24	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:24	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 15:43	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:25
SDG#: RNS05-02

BASF Corporation
ELLE Sample #: WW 9802915
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.129	0.644	1
14188	PCB-1221	11104-28-2	N.D. D1	0.129	0.644	1
14188	PCB-1232	11141-16-5	N.D. D1	0.129	0.644	1
14188	PCB-1242	53469-21-9	N.D. D1	0.129	0.644	1
14188	PCB-1248	12672-29-6	N.D. D1	0.129	0.644	1
14188	PCB-1254	11097-69-1	N.D. D1	0.129	0.644	1
14188	PCB-1260	11096-82-5	N.D. D1	0.129	0.644	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0954	0.644	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0954	0.644	1
14188	Total PCBs	1336-36-3	N.D.	0.0954	0.644	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0011 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0243	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 06:46	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:36	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:36	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:36	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:36	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:36	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:36	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:36	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-A-2 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:35
SDG#: RNS05-03

BASF Corporation
ELLE Sample #: WW 9802916
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00093 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0261	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-A-2 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:35
SDG#: RNS05-03

BASF Corporation
ELLE Sample #: WW 9802916
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	96.9	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.6	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	12.2	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 11:51	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 11:51	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 06:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:38	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:38	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:38	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:38	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:38	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:38	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:38	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 16:00	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-A-2 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:35
SDG#: RNS05-04

BASF Corporation
ELLE Sample #: WW 9802917
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00078 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0256	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 07:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:41	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:41	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:41	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:55
SDG#: RNS05-05

BASF Corporation
ELLE Sample #: WW 9802918
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00095 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0279	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:55
SDG#: RNS05-05

BASF Corporation
ELLE Sample #: WW 9802918
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	93.5	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.0	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	11.3	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 12:12	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 12:12	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 07:20	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:48	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:48	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:48	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:48	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:48	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:48	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:48	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 16:12	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 13:55
SDG#: RNS05-06

BASF Corporation
ELLE Sample #: WW 9802919
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00073 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0245	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 07:31	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:50	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:50	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:50	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:50	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:50	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:50	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:50	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:15
SDG#: RNS05-07

BASF Corporation
ELLE Sample #: WW 9802920
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00081 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0271	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:15
SDG#: RNS05-07

BASF Corporation
ELLE Sample #: WW 9802920
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	96.9	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	7.46	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 12:34	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 12:34	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 07:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:53	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:53	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:53	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:53	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:53	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:53	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:53	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:03	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-01-SW-U-C-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:15
SDG#: RNS05-08

BASF Corporation
ELLE Sample #: WW 9802921
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0011 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0259	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570046A	09/18/2018 07:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570046A	09/17/2018 08:00	Logan M Brosemer	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:55	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:55	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:55	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:55	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:55	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:55	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:55	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:35
SDG#: RNS05-09

BASF Corporation
ELLE Sample #: WW 9802922
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00077 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0274	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:35
SDG#: RNS05-09

BASF Corporation
ELLE Sample #: WW 9802922
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	99.2	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.9	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	10.9	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 12:54	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 12:54	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 09:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:58	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 07:58	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:58	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:58	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:58	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 07:58	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 07:58	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:11	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 14:35
SDG#: RNS05-10

BASF Corporation
ELLE Sample #: WW 9802923
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00082 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0245	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 09:13	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 08:00	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705001D	09/17/2018 08:00	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 08:00	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 08:00	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 08:00	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705001B	09/17/2018 08:00	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705001A	09/17/2018 08:00	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571401	09/17/2018 10:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705001	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571401	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:00
SDG#: RNS05-11

BASF Corporation
ELLE Sample #: WW 9802924
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.7 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00081 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0280	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:00
SDG#: RNS05-11

BASF Corporation
ELLE Sample #: WW 9802924
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	98.2	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.0	0.140	1.00	1
	The holding time was not met.Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	9.40	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 13:16	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 13:16	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 09:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:18	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:18	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:18	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:18	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:18	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:18	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:18	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 10:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:19	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:00
SDG#: RNS05-12

BASF Corporation
ELLE Sample #: WW 9802925
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00088 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0264	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 09:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:20	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:20	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:20	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:20	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:20	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:20	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:20	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 10:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:17
SDG#: RNS05-13

BASF Corporation
ELLE Sample #: WW 9802926
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0023	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0272	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:17
SDG#: RNS05-13

BASF Corporation
ELLE Sample #: WW 9802926
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	97.9	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.82	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 13:38	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 13:38	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 09:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:23	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:23	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:23	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 10:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:27	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:17
SDG#: RNS05-14

BASF Corporation
ELLE Sample #: WW 9802927
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0263	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 10:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:30	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:30	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:30	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:30	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:30	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:30	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:30	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:40
SDG#: RNS05-15

BASF Corporation
ELLE Sample #: WW 9802928
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.8 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00088 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0274	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-A-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:40
SDG#: RNS05-15

BASF Corporation
ELLE Sample #: WW 9802928
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	96.3	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.5	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	8.51	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 13:59	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 13:59	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 10:33	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:32	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:32	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:32	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:32	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:32	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:32	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:32	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:35	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:40
SDG#: RNS05-16

BASF Corporation
ELLE Sample #: WW 9802929
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0010 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0252	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 10:44	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:35	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:35	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:35	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:35	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:35	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:35	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:35	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:50
SDG#: RNS05-17

BASF Corporation
ELLE Sample #: WW 9802930
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00078 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0287	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-B-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:50
SDG#: RNS05-17

BASF Corporation
ELLE Sample #: WW 9802930
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	101	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.3	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	12.1	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 14:20	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 14:20	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 10:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:37	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:37	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:37	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:37	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:37	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:37	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:37	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:43	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:01	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 15:50
SDG#: RNS05-18

BASF Corporation
ELLE Sample #: WW 9802931
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0010 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0271	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182570047A	09/18/2018 11:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182570047A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:40	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:40	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:40	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:40	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:40	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:40	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:40	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 16:05
SDG#: RNS05-19

BASF Corporation
ELLE Sample #: WW 9802932
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.7 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00078 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0286	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-C-1 Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 16:05
SDG#: RNS05-19

BASF Corporation
ELLE Sample #: WW 9802932
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	101	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.9	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.82	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 14:42	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 14:42	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 11:41	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:06	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:06	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:06	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:06	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:06	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:06	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:06	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001102A	09/17/2018 17:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 552200

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 16:05
SDG#: RNS05-20

BASF Corporation
ELLE Sample #: WW 9802933
ELLE Group #: 1987218
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0266	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 11:52	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:42	Patrick J Engle	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705002D	09/17/2018 09:42	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:42	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:42	Patrick J Engle	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705002B	09/17/2018 09:42	Patrick J Engle	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705002A	09/17/2018 09:42	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182580571402	09/17/2018 11:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705002	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182580571402	09/17/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091318-TB01 Water**
COC: 556601

Project Name: **Rensselaer**

Submittal Date/Time: 09/14/2018 10:10
Collection Date/Time: 09/13/2018 12:00
SDG#: RNS05-21TB

BASF Corporation
ELLE Sample #: WW 9802934
ELLE Group #: 1987218
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182611AA	09/18/2018 11:07	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182611AA	09/18/2018 11:07	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182611AA	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932,9802934		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Carbon Tetrachloride	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
Chloroethane	N.D.	0.2	1
Chloroform	N.D.	0.2	1
Dibromochloromethane	N.D.	0.2	1
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,3-Dichloropropane	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
4-Methyl-2-pentanone	N.D.	0.5	10
Methylene Chloride	N.D.	0.3	1
1,1,2,2-Tetrachloroethane	N.D.	0.2	1
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
1,1,2-Trichloroethane	N.D.	0.2	1
Trichloroethene	N.D.	0.2	1
1,2,3-Trichloropropane	N.D.	0.2	5
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 182570046A	Sample number(s): 9802914-9802921		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 182570047A	Sample number(s): 9802922-9802931		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182600001A	Sample number(s): 9802932-9802933		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
	mg/l	mg/l	mg/l
Batch number: 182580571401	Sample number(s): 9802914-9802923		
Mercury	N.D.	0.000050	0.00020
Batch number: 182580571402	Sample number(s): 9802924-9802933		
Mercury	N.D.	0.000050	0.00020
Batch number: 182590705001A	Sample number(s): 9802914-9802923		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Lead	N.D.	0.0011	0.0030
Silver	N.D.	0.00017	0.00050
Batch number: 182590705001B	Sample number(s): 9802914-9802923		
Selenium	N.D.	0.00065	0.0020
Batch number: 182590705001D	Sample number(s): 9802914-9802923		
Barium	N.D.	0.00075	0.0040
Batch number: 182590705002A	Sample number(s): 9802924-9802933		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Lead	N.D.	0.0011	0.0030
Silver	N.D.	0.00017	0.00050
Batch number: 182590705002B	Sample number(s): 9802924-9802933		
Selenium	N.D.	0.00065	0.0020
Batch number: 182590705002D	Sample number(s): 9802924-9802933		
Barium	N.D.	0.00075	0.0040
Batch number: 18260385801A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932		
Total Suspended Solids	N.D.	1.00	3.00
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3
Batch number: 18260001102A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932		
Total Hardness	N.D.	3.0	10.0
	N T U	N T U	N T U
Batch number: 18262121452A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924		
Turbidity	0.20 J	0.140	1.00
Batch number: 18262121453A	Sample number(s): 9802926,9802928,9802930,9802932		
Turbidity	0.20 J	0.140	1.00

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5182611AA	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932,9802934								
Acetone	150	158.56	150	156.82	106	105	54-157	1	30
Benzene	20	19.49	20	19.27	97	96	80-120	1	30
2-Butanone	150	130.66	150	136.04	87	91	59-135	4	30
Carbon Disulfide	20	19.92	20	19.94	100	100	65-128	0	30
Carbon Tetrachloride	20	22.14	20	22.23	111	111	64-134	0	30
Chlorobenzene	20	19.08	20	18.68	95	93	80-120	2	30
Chloroethane	20	17.42	20	17.41	87	87	55-123	0	30
Chloroform	20	19.17	20	19.15	96	96	80-120	0	30
Dibromochloromethane	20	18.39	20	18.02	92	90	71-120	2	30
1,1-Dichloroethane	20	18.73	20	18.72	94	94	80-120	0	30
1,2-Dichloroethane	20	17.37	20	17.37	87	87	73-124	0	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1-Dichloroethene	20	22.88	20	23.16	114	116	80-131	1	30
trans-1,2-Dichloroethene	20	21.56	20	21.29	108	106	80-120	1	30
1,3-Dichloropropane	20	17.85	20	17.66	89	88	80-120	1	30
Ethylbenzene	20	19.47	20	19.43	97	97	80-120	0	30
4-Methyl-2-pentanone	100	86.57	100	87.97	87	88	62-133	2	30
Methylene Chloride	20	20.62	20	20.1	103	101	80-120	3	30
1,1,2,2-Tetrachloroethane	20	16.13	20	16.12	81	81	72-120	0	30
Tetrachloroethene	20	21.02	20	21.21	105	106	80-120	1	30
Toluene	20	19.07	20	19.27	95	96	80-120	1	30
1,1,1-Trichloroethane	20	19.82	20	19.84	99	99	67-126	0	30
1,1,2-Trichloroethane	20	18.61	20	18.54	93	93	80-120	0	30
Trichloroethene	20	19.78	20	19.13	99	96	80-120	3	30
1,2,3-Trichloropropane	20	17.22	20	17.29	86	86	75-124	0	30
Vinyl Chloride	20	17.19	20	17.67	86	88	56-120	3	30
Xylene (Total)	60	59.86	60	59.4	100	99	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182570046A	Sample number(s): 9802914-9802921								
PCB-1016	5.01	4.48	5.01	4.20	89	84	50-140	6	36
PCB-1260	5.00	4.88	5.00	4.63	98	93	50-140	5	38
Batch number: 182570047A	Sample number(s): 9802922-9802931								
PCB-1016	5.01	4.56	5.01	4.16	91	83	50-140	9	36
PCB-1260	5.00	4.85	5.00	4.26	97	85	50-140	13	38
Batch number: 182600001A	Sample number(s): 9802932-9802933								
PCB-1016	5.01	4.48			89		50-140		
PCB-1260	5.00	5.36			107		50-140		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182580571401	Sample number(s): 9802914-9802923								
Mercury	0.00100	0.000926			93		85-115		
Batch number: 182580571402	Sample number(s): 9802924-9802933								
Mercury	0.00100	0.000928			93		85-115		
Batch number: 182590705001A	Sample number(s): 9802914-9802923								
Arsenic	0.0100	0.0104			104		85-115		
Cadmium	0.00500	0.00485			97		85-115		
Chromium	0.0500	0.0500			100		85-115		
Lead	0.0150	0.0153			102		85-115		
Silver	0.0500	0.0475			95		85-115		
Batch number: 182590705001B	Sample number(s): 9802914-9802923								
Selenium	0.0100	0.0109			109		85-115		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182590705001D	Sample number(s): 9802914-9802923								
Barium	0.0500	0.0501			100		85-115		
Batch number: 182590705002A	Sample number(s): 9802924-9802933								
Arsenic	0.0100	0.00997			100		85-115		
Cadmium	0.00500	0.00503			101		85-115		
Chromium	0.0500	0.0521			104		85-115		
Lead	0.0150	0.0153			102		85-115		
Silver	0.0500	0.0518			104		85-115		
Batch number: 182590705002B	Sample number(s): 9802924-9802933								
Selenium	0.0100	0.0102			102		85-115		
Batch number: 182590705002D	Sample number(s): 9802924-9802933								
Barium	0.0500	0.0504			101		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18260385801A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932								
Total Suspended Solids	150	143.7			96		89-105		
	mg/l as CaCO3	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**					
Batch number: 18260001102A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932								
Total Hardness	40	38.55			96		85-110		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18262121452A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924								
Turbidity	10	10			100		90-104		
Batch number: 18262121453A	Sample number(s): 9802926,9802928,9802930,9802932								
Turbidity	10	10			100		90-104		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182580571401	Sample number(s): 9802914-9802923 UNSPK: 9802914									
Mercury	N.D.	0.00100	0.000894			89		80-120		

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182580571402	Sample number(s): 9802924-9802933 UNSPK: 9802924									
Mercury	N.D.	0.00100	0.000933			93		80-120		
Batch number: 182590705001A	Sample number(s): 9802914-9802923 UNSPK: 9802914									
Arsenic	0.000939	0.0100	0.0114			105		70-130		
Cadmium	N.D.	0.00500	0.00503			101		70-130		
Chromium	0.000709	0.0500	0.0519			102		70-130		
Lead	N.D.	0.0150	0.0165			110		70-130		
Silver	N.D.	0.0500	0.0492			98		70-130		
Batch number: 182590705001B	Sample number(s): 9802914-9802923 UNSPK: 9802914									
Selenium	N.D.	0.0100	0.00976			98		70-130		
Batch number: 182590705001D	Sample number(s): 9802914-9802923 UNSPK: 9802914									
Barium	0.0264	0.0500	0.0817			111		70-130		
Batch number: 182590705002A	Sample number(s): 9802924-9802933 UNSPK: 9802932									
Arsenic	0.000783	0.0100	0.0124			116		70-130		
Cadmium	N.D.	0.00500	0.00582			116		70-130		
Chromium	N.D.	0.0500	0.0532			106		70-130		
Lead	N.D.	0.0150	0.0164			109		70-130		
Silver	N.D.	0.0500	0.0541			108		70-130		
Batch number: 182590705002B	Sample number(s): 9802924-9802933 UNSPK: 9802932									
Selenium	N.D.	0.0100	0.0111			111		70-130		
Batch number: 182590705002D	Sample number(s): 9802924-9802933 UNSPK: 9802932									
Barium	0.0286	0.0500	0.0847			112		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 182580571401	Sample number(s): 9802914-9802923 BKG: 9802914			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182580571402	Sample number(s): 9802924-9802933 BKG: 9802924			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182590705001A	Sample number(s): 9802914-9802923 BKG: 9802914			

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Arsenic	0.000939	0.00117	22* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.000709	N.D.	200* (1)	20
Lead	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 182590705001B	Sample number(s): 9802914-9802923 BKG: 9802914			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 182590705001D	Sample number(s): 9802914-9802923 BKG: 9802914			
Barium	0.0264	0.0280	6	20
Batch number: 182590705002A	Sample number(s): 9802924-9802933 BKG: 9802932			
Arsenic	0.000783	0.000796	2 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 182590705002B	Sample number(s): 9802924-9802933 BKG: 9802932			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 182590705002D	Sample number(s): 9802924-9802933 BKG: 9802932			
Barium	0.0286	0.0275	4	20
	mg/l as CaCO3	mg/l as CaCO3		
Batch number: 18260001102A	Sample number(s): 9802914,9802916,9802918,9802920,9802922,9802924,9802926,9802928,9802930,9802932 BKG: 9802914			
Total Hardness	97.62	98.92	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9802914	100	98	93	87
9802916	101	99	94	87
9802918	101	100	93	86
9802920	101	98	93	87
9802922	103	99	93	86

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9802924	104	100	93	87
9802926	103	101	93	86
9802928	105	101	93	86
9802930	105	99	93	86
9802932	106	103	94	87
9802934	100	101	93	87
Blank	97	97	94	88
LCS	98	102	96	94
LCSD	98	97	95	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182570046A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9802914	77	83	75	81
9802915	81	83	78	84
9802916	75	73	73	71
9802917	79	86	79	82
9802918	78	74	77	70
9802919	80	77	77	75
9802920	81	77	80	75
9802921	80	83	78	82
Blank	64	45	64	42
LCS	76	93	75	88
LCSD	76	80	72	83
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182570047A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9802922	76	82	76	81
9802923	69	82	68	75
9802924	72	76	70	74
9802925	77	85	75	83
9802926	83	81	80	81
9802927	81	84	81	80
9802928	79	77	77	75
9802929	77	76	75	74
9802930	75	76	73	76
9802931	71	77	70	77

*- Outside of specification
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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/19/2018 15:30

Group Number: 1987218

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182570047A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	75	58	73	54
LCS	79	88	78	83
LCSD	74	38	74	38
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9802932	78	65	78	65
9802933	68	76	66	76
Blank	72	62	69	59
LCS	84	89	79	87
Limits:	33-137	10-148	33-137	10-148

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Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1987218 Sample # 9802914-34

COC # 552200

Client Information

Client: AECOM / BASF Corp

Acct. #:

Project Name/#: BASF Corporation

PWSID #:

Project Manager: Ryan McCarthy

P.O. #:

Sampler: Patrick Gehan

Quote #: Order 228061

State where samples were collected: New York

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☒ Surface ☐ NPDES ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR# 228061

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Aroclors (Filtered)	PCB Aroclors (unfiltered)	metals (Filtered)	metals (unfiltered)	mercury	Hardness	TSS	VOCs - 8260c	Remarks
091318-01-SW-U-A-1	9/13/18	1325	X		12	2	2	1	1	1	1	1	3	
091318-01-SW-U-A-2	9/13/18	1335	X		12	2	2	1	1	1	1	1	3	
091318-01-SW-U-B-1	9/13/18	1355	X		12	2	2	1	1	1	1	1	3	
091318-01-SW-U-C-1	9/13/18	1415	X		12	2	2	1	1	1	1	1	3	
091318-02-SW-A-A-1	9/13/18	1435	X		12	2	2	1	1	1	1	1	3	A-A-1 (ending)
091318-02-SW-A-B-1	9/13/18	1500	X		12	2	2	1	1	1	1	1	3	
091318-02-SW-A-C-1	9/13/18	1517	X		12	2	2	1	1	1	1	1	3	
091318-03-SW-D-A-1	9/13/18	1540	X		12	2	2	1	1	1	1	1	3	
091318-03-SW-D-B-1	9/13/18	1550	X		12	2	2	1	1	1	1	1	3	
091318-03-SW-D-C-1	9/13/18	1605	X		12	2	2	1	1	1	1	1	3	

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 Hr ~~TAT~~ PG TAT

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: _____

E-mail address: _____

Data Package Options (circle if required) per contract

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/13/18	1:35	PG 9/13/18		
[signature]	9/13/18	6:40			
			[signature]	9-14-18	1010

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 4.4-4.6C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1987218 Sample # 9802914-34

COC # 556601

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Corporation	PWSID #:
Project Manager: Ryan McCarthy	P.O. #:
Sampler: Patrick Gehan	Quote #: order 228061

State where samples were collected:

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Potable	Ground	NPDES	Surface	Other	Total # of Containers	VOCs - 8260C	Remarks
091318 - TB01	091318	1200	TB					X						2	2	

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 hr TAT

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: _____

E-mail address: _____

Data Package Options (circle if required) per contract

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/13/18	6:40			
			[signature]	9-14-18	1010

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt 19.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227067

Group Number(s): 1987218

Client: AECOM

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/14/2018 10:10
Number of Packages:	4	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): Trip Blank ((2 of 2)

Unpacked by Melvin Sanchez (8943) at 12:08 on 09/14/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	1.9	IR	Wet	Y	Bagged	N
2	32170023	2.5	IR	Wet	Y	Bagged	N
3	32170023	2.9	IR	Wet	Y	Bagged	N
4	32170023	4.6	IR	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 20, 2018 17:54

Project: Rensselaer

Account #: 04285
Group Number: 1987611
SDG: RNS06
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
091418-01-SW-U-A-1 Grab Surface Water	09/14/2018 10:30	9804935
091418-01-SW-U-A-1 Filtered Grab Surface Water	09/14/2018 10:30	9804936
091418-01-SW-U-A-3 Grab Surface Water	09/14/2018 13:55	9804937
091418-01-SW-U-A-3 Filtered Grab Surface Water	09/14/2018 13:55	9804938
091418-01-SW-U-B-1 Grab Surface Water	09/14/2018 10:50	9804939
091418-01-SW-U-B-1 Filtered Grab Surface Water	09/14/2018 10:50	9804940
091418-01-SW-U-C-1 Grab Surface Water	09/14/2018 11:00	9804941
091418-01-SW-U-C-1 MS Grab Surface Water	09/14/2018 11:00	9804942
091418-01-SW-U-C-1 MSD Grab Surface Water	09/14/2018 11:00	9804943
091418-01-SW-U-C-1 DUP Grab Surface Water	09/14/2018 11:00	9804944
091418-01-SW-U-C-1 Filtered Grab Surface Water	09/14/2018 11:00	9804945
091418-01-SW-U-C-1 MS Filtered Grab Surface Water	09/14/2018 11:00	9804946
091418-01-SW-U-C-1 MSD Filtered Grab Surface Water	09/14/2018 11:00	9804947
091418-01-SW-U-C-1 DUP Filtered Grab Surface Water	09/14/2018 11:00	9804948
091418-02-SW-A-A-1 Grab Surface Water	09/14/2018 12:00	9804949
091418-02-SW-A-A-1 Filtered Grab Surface Water	09/14/2018 12:00	9804950
091418-02-SW-A-A-2 Grab Surface Water	09/14/2018 11:55	9804951
091418-02-SW-A-A-2 Filtered Grab Surface Water	09/14/2018 11:55	9804952
091418-02-SW-A-A-3 Grab Surface Water	09/14/2018 14:30	9804953
091418-02-SW-A-A-3 Filtered Grab Surface Water	09/14/2018 14:30	9804954
091418-02-SW-A-B-1 Grab Surface Water	09/14/2018 12:10	9804955
091418-02-SW-A-B-1 Filtered Grab Surface Water	09/14/2018 12:10	9804956
091418-02-SW-A-C-1 Grab Surface Water	09/14/2018 12:20	9804957
091418-02-SW-A-C-1 Filtered Grab Surface Water	09/14/2018 12:20	9804958
091418-TB-01 Grab Water	09/14/2018 14:00	9804959
091418-03-SW-D-A-1 Grab Surface Water	09/14/2018 12:45	9804960
091418-03-SW-D-A-1 Filtered Grab Surface Water	09/14/2018 12:45	9804961
091418-03-SW-D-B-1 Grab Surface Water	09/14/2018 13:00	9804962
091418-03-SW-D-B-1 Filtered Grab Surface Water	09/14/2018 13:00	9804963
091418-03-SW-D-C-1 Grab Surface Water	09/14/2018 13:15	9804964
091418-03-SW-D-C-1 Filtered Grab Surface Water	09/14/2018 13:15	9804965

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **091418-01-SW-U-A-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:30
SDG#: RNS06-01

BASF Corporation
ELLE Sample #: WW 9804935
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.133	0.665	1
14188	PCB-1221	11104-28-2	N.D. D1	0.133	0.665	1
14188	PCB-1232	11141-16-5	N.D. D1	0.133	0.665	1
14188	PCB-1242	53469-21-9	N.D. D1	0.133	0.665	1
14188	PCB-1248	12672-29-6	N.D. D1	0.133	0.665	1
14188	PCB-1254	11097-69-1	N.D. D1	0.133	0.665	1
14188	PCB-1260	11096-82-5	N.D. D1	0.133	0.665	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0984	0.665	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0984	0.665	1
14188	Total PCBs	1336-36-3	N.D.	0.0984	0.665	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00083 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0268	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-A-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:30
SDG#: RNS06-01

BASF Corporation
ELLE Sample #: WW 9804935
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	98.1	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.3	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.72	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 17:37	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 17:37	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 12:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:56	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:56	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:56	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:56	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:56	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:56	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:56	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 20:46	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:30
SDG#: RNS06-02

BASF Corporation
ELLE Sample #: WW 9804936
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0252	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 12:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:22	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:22	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:22	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:22	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:22	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:22	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:22	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-A-3 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:55
SDG#: RNS06-03

BASF Corporation
ELLE Sample #: WW 9804937
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.162	0.812	1
14188	PCB-1221	11104-28-2	N.D. D1	0.162	0.812	1
14188	PCB-1232	11141-16-5	N.D. D1	0.162	0.812	1
14188	PCB-1242	53469-21-9	N.D. D1	0.162	0.812	1
14188	PCB-1248	12672-29-6	N.D. D1	0.162	0.812	1
14188	PCB-1254	11097-69-1	N.D. D1	0.162	0.812	1
14188	PCB-1260	11096-82-5	N.D. D1	0.162	0.812	1
14188	PCB-1262	37324-23-5	N.D. D1	0.120	0.812	1
14188	PCB-1268	11100-14-4	N.D. D1	0.120	0.812	1
14188	Total PCBs	1336-36-3	N.D.	0.120	0.812	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.00092 J	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-A-3 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:55
SDG#: RNS06-03

BASF Corporation
ELLE Sample #: WW 9804937
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	N.D.	3.0	10.0	1
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	0.20 J	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 18:00	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 18:00	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 12:26	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:58	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:58	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:58	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:58	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:58	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:58	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:58	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	2	18261001101A	09/18/2018 07:52	Susan A Engle	1
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-A-3 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:55
SDG#: RNS06-04

BASF Corporation
ELLE Sample #: WW 9804938
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	N.D.	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 12:38	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:24	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:24	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:24	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:24	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:24	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:24	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:24	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-B-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:50
SDG#: RNS06-05

BASF Corporation
ELLE Sample #: WW 9804939
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.8 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00069 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0278	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-B-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:50
SDG#: RNS06-05

BASF Corporation
ELLE Sample #: WW 9804939
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	93.4	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	6.72	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 18:24	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 18:24	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 12:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:06	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:06	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:06	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:06	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:06	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:06	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:06	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 21:07	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 10:50
SDG#: RNS06-06

BASF Corporation
ELLE Sample #: WW 9804940
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0241	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 13:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:32	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:32	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:32	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:32	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:32	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:32	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:32	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07BKG

BASF Corporation
ELLE Sample #: WW 9804941
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.543	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.543	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0804	0.543	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0804	0.543	1
14188	Total PCBs	1336-36-3	N.D.	0.0804	0.543	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00090 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0257	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07BKG

BASF Corporation
ELLE Sample #: WW 9804941
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	95.7	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.8	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.63	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 14:51	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 14:51	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 13:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:42	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:42	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:42	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:42	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:42	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:42	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:42	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:15	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 21:57	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MS Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07MS

BASF Corporation
ELLE Sample #: WW 9804942
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	150	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	140	0.3	10	1
11997	Carbon Disulfide	75-15-0	24	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	25	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	Chloroethane	75-00-3	22	0.2	1	1
11997	Chloroform	67-66-3	22	0.2	1	1
11997	Dibromochloromethane	124-48-1	22	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	22	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	27	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	24	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	21	0.2	1	1
11997	Ethylbenzene	100-41-4	23	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	98	0.5	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	21	0.2	1	1
11997	Tetrachloroethene	127-18-4	24	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	22	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	22	0.2	1	1
11997	Trichloroethene	79-01-6	23	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	21	0.2	5	1
11997	Vinyl Chloride	75-01-4	22	0.2	1	1
11997	Xylene (Total)	1330-20-7	70	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.43 D2	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	4.85 D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	9.28	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0112	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0779	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MS Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07MS

BASF Corporation
ELLE Sample #: WW 9804942
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	0.0050	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.0521	0.00070	0.0040	1
06035	Lead	7439-92-1	0.0158	0.0011	0.0030	1
06041	Selenium	7782-49-2	0.0099	0.00065	0.0020	1
06042	Silver	7440-22-4	0.0495	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00093	0.000050	0.00020	1
Wet Chemistry		**EPA 130.2 modified**	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	181	6.0	20.0	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 15:15	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 15:15	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 13:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:49	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:49	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:49	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:49	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:49	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:49	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:49	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 22:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MSD Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07MSD

BASF Corporation
ELLE Sample #: WW 9804943
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	140	0.7	20	1
11997	Benzene	71-43-2	22	0.2	1	1
11997	2-Butanone	78-93-3	140	0.3	10	1
11997	Carbon Disulfide	75-15-0	23	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	24	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	Chloroethane	75-00-3	21	0.2	1	1
11997	Chloroform	67-66-3	22	0.2	1	1
11997	Dibromochloromethane	124-48-1	22	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	22	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	21	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	26	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	24	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	21	0.2	1	1
11997	Ethylbenzene	100-41-4	23	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	96	0.5	10	1
11997	Methylene Chloride	75-09-2	23	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	21	0.2	1	1
11997	Tetrachloroethene	127-18-4	24	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	19	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	22	0.2	1	1
11997	Trichloroethene	79-01-6	23	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	21	0.2	5	1
11997	Vinyl Chloride	75-01-4	21	0.2	1	1
11997	Xylene (Total)	1330-20-7	69	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.43 D1	0.133	0.665	1
14188	PCB-1221	11104-28-2	N.D. D1	0.133	0.665	1
14188	PCB-1232	11141-16-5	N.D. D1	0.133	0.665	1
14188	PCB-1242	53469-21-9	N.D. D1	0.133	0.665	1
14188	PCB-1248	12672-29-6	N.D. D1	0.133	0.665	1
14188	PCB-1254	11097-69-1	N.D. D1	0.133	0.665	1
14188	PCB-1260	11096-82-5	6.14 D1	0.133	0.665	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0984	0.665	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0984	0.665	1
14188	Total PCBs	1336-36-3	11.6	0.0984	0.665	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0117	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0771	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MSD Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07MSD

BASF Corporation
ELLE Sample #: WW 9804943
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	0.0050	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.0511	0.00070	0.0040	1
06035	Lead	7439-92-1	0.0158	0.0011	0.0030	1
06041	Selenium	7782-49-2	0.0101	0.00065	0.0020	1
06042	Silver	7440-22-4	0.0523	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00093	0.000050	0.00020	1
Wet Chemistry		**EPA 130.2 modified**	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	174	6.0	20.0	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 15:39	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 15:39	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 13:34	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:51	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:51	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:51	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:51	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:51	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:51	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:51	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 22:15	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 DUP Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-07DUP

BASF Corporation
ELLE Sample #: WW 9804944
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00071 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0251	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	92.4	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.7	0.140	1.00	1
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.63	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:46	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 22:46	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:46	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:46	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:46	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 22:46	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 22:46	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 22:23	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 13:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-08BKG

BASF Corporation
ELLE Sample #: WW 9804945
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00082 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0248	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 14:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:08	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:08	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:08	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:08	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:08	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:08	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:08	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 11:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MS Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-08MS

BASF Corporation
ELLE Sample #: WW 9804946
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.24 D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	6.15 D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	11.4	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0116	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0784	0.00075	0.0040	1
06028	Cadmium	7440-43-9	0.0051	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.0476	0.00070	0.0040	1
06035	Lead	7439-92-1	0.0160	0.0011	0.0030	1
06041	Selenium	7782-49-2	0.0102	0.00065	0.0020	1
06042	Silver	7440-22-4	0.0520	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00095	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 14:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:15	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:15	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:15	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:15	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:15	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:15	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:15	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 11:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 MSD Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-08MSD

BASF Corporation
ELLE Sample #: WW 9804947
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.98 D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	5.60 D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	10.6	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0108	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0773	0.00075	0.0040	1
06028	Cadmium	7440-43-9	0.0050	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.0481	0.00070	0.0040	1
06035	Lead	7439-92-1	0.0154	0.0011	0.0030	1
06041	Selenium	7782-49-2	0.0094	0.00065	0.0020	1
06042	Silver	7440-22-4	0.0512	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00094	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 15:05	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:17	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:17	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:17	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:17	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:17	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:17	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:17	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-01-SW-U-C-1 DUP Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:00
SDG#: RNS06-08DUP

BASF Corporation
ELLE Sample #: WW 9804948
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00087 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0239	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:12	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:12	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:12	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:12	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:12	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:12	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:12	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 11:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:00
SDG#: RNS06-09

BASF Corporation
ELLE Sample #: WW 9804949
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00094 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0273	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:00
SDG#: RNS06-09

BASF Corporation
ELLE Sample #: WW 9804949
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	94.0	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.6	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	7.76	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 18:48	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 18:48	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600001A	09/18/2018 13:46	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600001A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:08	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:08	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:08	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:08	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:08	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:08	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:08	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 22:31	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453A	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:00
SDG#: RNS06-10

BASF Corporation
ELLE Sample #: WW 9804950
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0189	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 15:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:34	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:34	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:34	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:34	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:34	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:34	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:34	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-2 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:55
SDG#: RNS06-11

BASF Corporation
ELLE Sample #: WW 9804951
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00080 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0262	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-2 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:55
SDG#: RNS06-11

BASF Corporation
ELLE Sample #: WW 9804951
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	96.1	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.3	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	7.91	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 19:12	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 19:12	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 15:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:11	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:11	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:11	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:11	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:11	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:11	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:11	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 22:39	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18260385801A	09/17/2018 15:02	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-2 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 11:55
SDG#: RNS06-12

BASF Corporation
ELLE Sample #: WW 9804952
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	N.D.	0.0791	0.534	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00071 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0245	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 15:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:36	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:36	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:36	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:36	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:36	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:36	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:36	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-3 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 14:30
SDG#: RNS06-13

BASF Corporation
ELLE Sample #: WW 9804953
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.9 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.638	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.638	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.638	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.638	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.638	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.638	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.638	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0944	0.638	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0944	0.638	1
14188	Total PCBs	1336-36-3	N.D.	0.0944	0.638	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.00095 J	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-3 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 14:30
SDG#: RNS06-13

BASF Corporation
ELLE Sample #: WW 9804953
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	N.D.	3.0	10.0	1
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	0.25 J	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	N.D.	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 19:35	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 19:35	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 15:51	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:13	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:13	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:13	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:13	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:13	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:13	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:13	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:37	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	2	18261001101A	09/18/2018 08:06	Susan A Engle	1
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385801A	09/19/2018 13:26	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-A-3 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 14:30
SDG#: RNS06-14

BASF Corporation
ELLE Sample #: WW 9804954
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.134	0.672	1
14188	PCB-1221	11104-28-2	N.D. D1	0.134	0.672	1
14188	PCB-1232	11141-16-5	N.D. D1	0.134	0.672	1
14188	PCB-1242	53469-21-9	N.D. D1	0.134	0.672	1
14188	PCB-1248	12672-29-6	N.D. D1	0.134	0.672	1
14188	PCB-1254	11097-69-1	N.D. D1	0.134	0.672	1
14188	PCB-1260	11096-82-5	N.D. D1	0.134	0.672	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0995	0.672	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0995	0.672	1
14188	Total PCBs	1336-36-3	N.D.	0.0995	0.672	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.00091 J	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 16:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:39	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:39	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:39	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:39	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:39	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:39	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:39	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-B-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:10
SDG#: RNS06-15

BASF Corporation
ELLE Sample #: WW 9804955
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0277	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-B-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:10
SDG#: RNS06-15

BASF Corporation
ELLE Sample #: WW 9804955
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	94.9	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.5	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.93	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 19:59	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 19:59	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 16:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:15	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:15	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:15	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:15	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:15	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:15	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:15	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:39	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 23:00	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385801A	09/19/2018 13:26	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:10
SDG#: RNS06-16

BASF Corporation
ELLE Sample #: WW 9804956
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0256	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 16:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:41	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:41	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:41	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:41	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:41	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:41	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:41	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-C-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:20
SDG#: RNS06-17

BASF Corporation
ELLE Sample #: WW 9804957
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.7 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.143	0.714	1
14188	PCB-1221	11104-28-2	N.D. D1	0.143	0.714	1
14188	PCB-1232	11141-16-5	N.D. D1	0.143	0.714	1
14188	PCB-1242	53469-21-9	N.D. D1	0.143	0.714	1
14188	PCB-1248	12672-29-6	N.D. D1	0.143	0.714	1
14188	PCB-1254	11097-69-1	N.D. D1	0.143	0.714	1
14188	PCB-1260	11096-82-5	N.D. D1	0.143	0.714	1
14188	PCB-1262	37324-23-5	N.D. D1	0.106	0.714	1
14188	PCB-1268	11100-14-4	N.D. D1	0.106	0.714	1
14188	Total PCBs	1336-36-3	N.D.	0.106	0.714	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0257	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-C-1 Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:20
SDG#: RNS06-17

BASF Corporation
ELLE Sample #: WW 9804957
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	94.8	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.4	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.33	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182622AA	09/19/2018 23:51	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182622AA	09/19/2018 23:51	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 16:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:18	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:18	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:18	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:18	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:18	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:18	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:18	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:41	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 23:29	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385801A	09/19/2018 13:26	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:20
SDG#: RNS06-18

BASF Corporation
ELLE Sample #: WW 9804958
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.131	0.654	1
14188	PCB-1221	11104-28-2	N.D. D1	0.131	0.654	1
14188	PCB-1232	11141-16-5	N.D. D1	0.131	0.654	1
14188	PCB-1242	53469-21-9	N.D. D1	0.131	0.654	1
14188	PCB-1248	12672-29-6	N.D. D1	0.131	0.654	1
14188	PCB-1254	11097-69-1	N.D. D1	0.131	0.654	1
14188	PCB-1260	11096-82-5	N.D. D1	0.131	0.654	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0969	0.654	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0969	0.654	1
14188	Total PCBs	1336-36-3	N.D.	0.0969	0.654	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00078 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0257	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600002A	09/18/2018 16:48	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600002A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:44	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:44	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:44	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:44	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:44	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:44	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:44	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-TB-01 Grab Water**
COC: 556602

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 14:00
SDG#: RNS06-19TB

BASF Corporation
ELLE Sample #: WW 9804959
ELLE Group #: 1987611
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182621AA	09/19/2018 14:04	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182621AA	09/19/2018 14:04	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-A-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:45
SDG#: RNS06-20

BASF Corporation
ELLE Sample #: WW 9804960
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	1 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00089 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0261	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-A-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:45
SDG#: RNS06-20

BASF Corporation
ELLE Sample #: WW 9804960
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	96.4	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.07	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182622AA	09/20/2018 00:15	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182622AA	09/20/2018 00:15	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 17:45	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:20	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705004D	09/17/2018 23:20	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:20	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:20	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:20	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705004B	09/17/2018 23:20	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705004A	09/17/2018 23:20	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571401	09/18/2018 11:43	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705004	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571401	09/18/2018 07:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 23:37	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385801A	09/19/2018 13:26	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 12:45
SDG#: RNS06-21

BASF Corporation
ELLE Sample #: WW 9804961
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	N.D.	0.0930	0.628	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00089 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0255	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 17:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:46	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705005D	09/17/2018 21:46	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:46	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:46	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:46	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705005B	09/17/2018 21:46	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705005A	09/17/2018 21:46	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182600571402	09/18/2018 12:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705005	09/16/2018 09:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182600571402	09/18/2018 07:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-B-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:00
SDG#: RNS06-22

BASF Corporation
ELLE Sample #: WW 9804962
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	0.8 J	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00068 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0253	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-B-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:00
SDG#: RNS06-22

BASF Corporation
ELLE Sample #: WW 9804962
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000091 J	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	93.5	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.0	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.73	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182622AA	09/20/2018 00:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182622AA	09/20/2018 00:39	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 18:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:54	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705006D	09/17/2018 19:54	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:54	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:54	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:54	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705006B	09/17/2018 19:54	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:54	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182610571401	09/19/2018 06:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705006	09/16/2018 09:36	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182610571401	09/18/2018 17:45	Barbara A Kane	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 23:45	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385801A	09/19/2018 13:26	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:00
SDG#: RNS06-23

BASF Corporation
ELLE Sample #: WW 9804963
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.130	0.648	1
14188	PCB-1221	11104-28-2	N.D. D1	0.130	0.648	1
14188	PCB-1232	11141-16-5	N.D. D1	0.130	0.648	1
14188	PCB-1242	53469-21-9	N.D. D1	0.130	0.648	1
14188	PCB-1248	12672-29-6	N.D. D1	0.130	0.648	1
14188	PCB-1254	11097-69-1	N.D. D1	0.130	0.648	1
14188	PCB-1260	11096-82-5	N.D. D1	0.130	0.648	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0959	0.648	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0959	0.648	1
14188	Total PCBs	1336-36-3	N.D.	0.0959	0.648	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0257	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00010 J	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 18:41	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:57	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705006D	09/17/2018 19:57	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:57	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:57	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:57	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705006B	09/17/2018 19:57	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:57	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182610571401	09/19/2018 06:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705006	09/16/2018 09:36	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182610571401	09/18/2018 17:45	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-C-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:15
SDG#: RNS06-24

BASF Corporation
ELLE Sample #: WW 9804964
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Acetone	67-64-1	N.D.	0.7	20	1
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	2-Butanone	78-93-3	N.D.	0.3	10	1
11997	Carbon Disulfide	75-15-0	N.D.	0.2	5	1
11997	Carbon Tetrachloride	56-23-5	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	Chloroethane	75-00-3	N.D.	0.2	1	1
11997	Chloroform	67-66-3	N.D.	0.2	1	1
11997	Dibromochloromethane	124-48-1	N.D.	0.2	1	1
11997	1,1-Dichloroethane	75-34-3	N.D.	0.2	1	1
11997	1,2-Dichloroethane	107-06-2	N.D.	0.3	1	1
11997	1,1-Dichloroethene	75-35-4	N.D.	0.2	1	1
11997	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	1	1
11997	1,3-Dichloropropane	142-28-9	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	4-Methyl-2-pentanone	108-10-1	N.D.	0.5	10	1
11997	Methylene Chloride	75-09-2	N.D.	0.3	1	1
11997	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	1	1
11997	Tetrachloroethene	127-18-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	1,1,1-Trichloroethane	71-55-6	N.D.	0.3	1	1
11997	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	1	1
11997	Trichloroethene	79-01-6	N.D.	0.2	1	1
11997	1,2,3-Trichloropropane	96-18-4	N.D.	0.2	5	1
11997	Vinyl Chloride	75-01-4	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.638	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.638	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.638	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.638	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.638	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.638	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.638	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0944	0.638	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0944	0.638	1
14188	Total PCBs	1336-36-3	N.D.	0.0944	0.638	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.0011 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0243	0.00075	0.0040	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-C-1 Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:15
SDG#: RNS06-24

BASF Corporation
ELLE Sample #: WW 9804964
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00010 J	0.000050	0.00020	1
Wet Chemistry	**EPA 130.2 modified**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	94.1	6.0	20.0	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	2.9	0.140	1.00	1
	The holding time was not met. Client requested turbidity after the fact.					
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.43	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182622AA	09/20/2018 01:02	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182622AA	09/20/2018 01:02	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 18:52	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:42	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705006D	09/17/2018 19:42	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:42	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:42	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:42	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705006B	09/17/2018 19:42	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:42	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182610571401	09/19/2018 06:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705006	09/16/2018 09:36	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182610571401	09/18/2018 17:45	Barbara A Kane	1
12147	Total Hardness	EPA 130.2 modified	1	18260001103A	09/17/2018 23:53	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18262121453B	09/19/2018 16:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18262385802A	09/19/2018 14:19	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091418-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 556603

Project Name: **Rensselaer**

Submittal Date/Time: 09/15/2018 09:30
Collection Date/Time: 09/14/2018 13:15
SDG#: RNS06-25

BASF Corporation
ELLE Sample #: WW 9804965
ELLE Group #: 1987611
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00076 J	0.00068	0.0020	1
06026	Barium	7440-39-3	0.0249	0.00075	0.0040	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00050	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000096 J	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182600003A	09/18/2018 19:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182600003A	09/17/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:59	Tara L Snyder	1
06026	Barium	EPA 200.8 rev 5.4	1	182590705006D	09/17/2018 19:59	Tara L Snyder	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:59	Tara L Snyder	1
06031	Chromium	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:59	Tara L Snyder	1
06035	Lead	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:59	Tara L Snyder	1
06041	Selenium	EPA 200.8 rev 5.4	1	182590705006B	09/17/2018 19:59	Tara L Snyder	1
06042	Silver	EPA 200.8 rev 5.4	1	182590705006A	09/17/2018 19:59	Tara L Snyder	1
00259	Mercury	EPA 245.1 rev 3	1	182610571401	09/19/2018 06:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182590705006	09/16/2018 09:36	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182610571401	09/18/2018 17:45	Barbara A Kane	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182621AA	Sample number(s): 9804935,9804937,9804939,9804941-9804943,9804949,9804951,9804953,9804955,9804959		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Carbon Tetrachloride	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
Chloroethane	N.D.	0.2	1
Chloroform	N.D.	0.2	1
Dibromochloromethane	N.D.	0.2	1
1,1-Dichloroethane	N.D.	0.2	1
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,3-Dichloropropane	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
4-Methyl-2-pentanone	N.D.	0.5	10
Methylene Chloride	N.D.	0.3	1
1,1,2,2-Tetrachloroethane	N.D.	0.2	1
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
1,1,2-Trichloroethane	N.D.	0.2	1
Trichloroethene	N.D.	0.2	1
1,2,3-Trichloropropane	N.D.	0.2	5
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W182622AA	Sample number(s): 9804957,9804960,9804962,9804964		
Acetone	N.D.	0.7	20
Benzene	N.D.	0.2	1
2-Butanone	N.D.	0.3	10
Carbon Disulfide	N.D.	0.2	5
Carbon Tetrachloride	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
Chloroethane	N.D.	0.2	1
Chloroform	N.D.	0.2	1
Dibromochloromethane	N.D.	0.2	1
1,1-Dichloroethane	N.D.	0.2	1

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
1,2-Dichloroethane	N.D.	0.3	1
1,1-Dichloroethene	N.D.	0.2	1
trans-1,2-Dichloroethene	N.D.	0.2	1
1,3-Dichloropropane	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
4-Methyl-2-pentanone	N.D.	0.5	10
Methylene Chloride	N.D.	0.3	1
1,1,2,2-Tetrachloroethane	N.D.	0.2	1
Tetrachloroethene	N.D.	0.2	1
Toluene	N.D.	0.2	1
1,1,1-Trichloroethane	N.D.	0.3	1
1,1,2-Trichloroethane	N.D.	0.2	1
Trichloroethene	N.D.	0.2	1
1,2,3-Trichloropropane	N.D.	0.2	5
Vinyl Chloride	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: 182600001A	Sample number(s): 9804935-9804943,9804949		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182600002A	Sample number(s): 9804945-9804947,9804950-9804958		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182600003A	Sample number(s): 9804960-9804965		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
	mg/l	mg/l	mg/l
Batch number: 182590705004A	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Lead	N.D.	0.0011	0.0030
Silver	N.D.	0.00017	0.00050
Batch number: 182590705004B	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960		
Selenium	N.D.	0.00065	0.0020
Batch number: 182590705004D	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960		
Barium	N.D.	0.00075	0.0040
Batch number: 182590705005A	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Lead	N.D.	0.0011	0.0030
Silver	N.D.	0.00017	0.00050
Batch number: 182590705005B	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961		
Selenium	N.D.	0.00065	0.0020
Batch number: 182590705005D	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961		
Barium	N.D.	0.00075	0.0040
Batch number: 182590705006A	Sample number(s): 9804962-9804965		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Lead	N.D.	0.0011	0.0030
Silver	N.D.	0.00017	0.00050
Batch number: 182590705006B	Sample number(s): 9804962-9804965		
Selenium	N.D.	0.00065	0.0020

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 182590705006D	Sample number(s): 9804962-9804965		
Barium	N.D.	0.00075	0.0040
Batch number: 182600571401	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960		
Mercury	N.D.	0.000050	0.00020
Batch number: 182600571402	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961		
Mercury	N.D.	0.000050	0.00020
Batch number: 182610571401	Sample number(s): 9804962-9804965		
Mercury	0.000094 J	0.000050	0.00020
Batch number: 18260385801A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949,9804951		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18262385801A	Sample number(s): 9804953,9804955,9804957,9804960,9804962		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18262385802A	Sample number(s): 9804964		
Total Suspended Solids	N.D.	1.00	3.00
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3
Batch number: 18260001103A	Sample number(s): 9804935,9804939,9804941-9804944,9804949,9804951,9804955,9804957,9804960,9804962,9804964		
Total Hardness	N.D.	3.0	10.0
Batch number: 18261001101A	Sample number(s): 9804937,9804953		
Total Hardness	N.D.	3.0	10.0
	N T U	N T U	N T U
Batch number: 18262121453A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949		
Turbidity	0.20 J	0.140	1.00
Batch number: 18262121453B	Sample number(s): 9804951,9804953,9804955,9804957,9804960,9804962,9804964		
Turbidity	0.20 J	0.140	1.00

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W182621AA	Sample number(s): 9804935,9804937,9804939,9804941-9804943,9804949,9804951,9804953,9804955,9804959								

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Acetone	150	150.73			100		54-157		
Benzene	20	20.62			103		80-120		
2-Butanone	150	146.35			98		59-135		
Carbon Disulfide	20	21.32			107		65-128		
Carbon Tetrachloride	20	21.19			106		64-134		
Chlorobenzene	20	21.25			106		80-120		
Chloroethane	20	18			90		55-123		
Chloroform	20	20.53			103		80-120		
Dibromochloromethane	20	20.49			102		71-120		
1,1-Dichloroethane	20	20.25			101		80-120		
1,2-Dichloroethane	20	20.04			100		73-124		
1,1-Dichloroethene	20	23.43			117		80-131		
trans-1,2-Dichloroethene	20	22.04			110		80-120		
1,3-Dichloropropane	20	20.41			102		80-120		
Ethylbenzene	20	20.99			105		80-120		
4-Methyl-2-pentanone	100	100.11			100		62-133		
Methylene Chloride	20	22			110		80-120		
1,1,2,2-Tetrachloroethane	20	20.86			104		72-120		
Tetrachloroethene	20	21.49			107		80-120		
Toluene	20	21.07			105		80-120		
1,1,1-Trichloroethane	20	18.69			93		67-126		
1,1,2-Trichloroethane	20	21.5			108		80-120		
Trichloroethene	20	20.52			103		80-120		
1,2,3-Trichloropropane	20	21.13			106		75-124		
Vinyl Chloride	20	16.04			80		56-120		
Xylene (Total)	60	63.2			105		80-120		
Batch number: W182622AA	Sample number(s): 9804957,9804960,9804962,9804964								
Acetone	150	150.17			100		54-157		
Benzene	20	21.06			105		80-120		
2-Butanone	150	153.24			102		59-135		
Carbon Disulfide	20	21.15			106		65-128		
Carbon Tetrachloride	20	22.14			111		64-134		
Chlorobenzene	20	21.9			109		80-120		
Chloroethane	20	19.11			96		55-123		
Chloroform	20	20.99			105		80-120		
Dibromochloromethane	20	21.28			106		71-120		
1,1-Dichloroethane	20	20.94			105		80-120		
1,2-Dichloroethane	20	21.07			105		73-124		
1,1-Dichloroethene	20	24.25			121		80-131		
trans-1,2-Dichloroethene	20	22.23			111		80-120		
1,3-Dichloropropane	20	21.22			106		80-120		
Ethylbenzene	20	21.67			108		80-120		
4-Methyl-2-pentanone	100	102.65			103		62-133		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Methylene Chloride	20	22.54			113		80-120		
1,1,2,2-Tetrachloroethane	20	21.78			109		72-120		
Tetrachloroethene	20	22.18			111		80-120		
Toluene	20	21.74			109		80-120		
1,1,1-Trichloroethane	20	19.48			97		67-126		
1,1,2-Trichloroethane	20	22.5			113		80-120		
Trichloroethene	20	21.02			105		80-120		
1,2,3-Trichloropropane	20	21.86			109		75-124		
Vinyl Chloride	20	18.11			91		56-120		
Xylene (Total)	60	65.28			109		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182600001A	Sample number(s): 9804935-9804943,9804949								
PCB-1016	5.01	4.48			89		50-140		
PCB-1260	5.00	5.36			107		50-140		
Batch number: 182600002A	Sample number(s): 9804945-9804947,9804950-9804958								
PCB-1016	5.01	4.13			83		50-140		
PCB-1260	5.00	4.68			94		50-140		
Batch number: 182600003A	Sample number(s): 9804960-9804965								
PCB-1016	5.01	4.42	5.01	4.61	88	92	50-140	4	36
PCB-1260	5.00	5.24	5.00	5.26	105	105	50-140	0	38
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182590705004A	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960								
Arsenic	0.0100	0.0105			105		85-115		
Cadmium	0.00500	0.00510			102		85-115		
Chromium	0.0500	0.0517			103		85-115		
Lead	0.0150	0.0152			101		85-115		
Silver	0.0500	0.0512			102		85-115		
Batch number: 182590705004B	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960								
Selenium	0.0100	0.0104			104		85-115		
Batch number: 182590705004D	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960								
Barium	0.0500	0.0524			105		85-115		
Batch number: 182590705005A	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961								
Arsenic	0.0100	0.0107			107		85-115		
Cadmium	0.00500	0.00509			102		85-115		
Chromium	0.0500	0.0471			94		85-115		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Lead	0.0150	0.0151			101		85-115		
Silver	0.0500	0.0521			104		85-115		
Batch number: 182590705005B	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961								
Selenium	0.0100	0.0101			101		85-115		
Batch number: 182590705005D	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961								
Barium	0.0500	0.0530			106		85-115		
Batch number: 182590705006A	Sample number(s): 9804962-9804965								
Arsenic	0.0100	0.0103			103		85-115		
Cadmium	0.00500	0.00483			97		85-115		
Chromium	0.0500	0.0467			93		85-115		
Lead	0.0150	0.0153			102		85-115		
Silver	0.0500	0.0498			100		85-115		
Batch number: 182590705006B	Sample number(s): 9804962-9804965								
Selenium	0.0100	0.00990			99		85-115		
Batch number: 182590705006D	Sample number(s): 9804962-9804965								
Barium	0.0500	0.0507			101		85-115		
Batch number: 182600571401	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960								
Mercury	0.00100	0.000931			93		85-115		
Batch number: 182600571402	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961								
Mercury	0.00100	0.000930			93		85-115		
Batch number: 182610571401	Sample number(s): 9804962-9804965								
Mercury	0.00100	0.000994			99		85-115		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18260385801A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949,9804951								
Total Suspended Solids	150	143.7			96		89-105		
Batch number: 18262385801A	Sample number(s): 9804953,9804955,9804957,9804960,9804962								
Total Suspended Solids	150	146.5			98		89-105		
Batch number: 18262385802A	Sample number(s): 9804964								
Total Suspended Solids	150	150.2			100		89-105		
	mg/l as CaCO3	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**					

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l as CaCO3	LCS Conc mg/l as CaCO3	LCSD Spike Added mg/l as CaCO3	LCSD Conc mg/l as CaCO3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18260001103A	Sample number(s): 9804935,9804939,9804941-9804944,9804949,9804951,9804955,9804957,9804960,9804962,9804964								
Total Hardness	40	37.86			95		85-110		
Batch number: 18261001101A	Sample number(s): 9804937,9804953								
Total Hardness	40	38.55			96		85-110		
	N T U	N T U	N T U	N T U					
Batch number: 18262121453A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949								
Turbidity	10	10			100		90-104		
Batch number: 18262121453B	Sample number(s): 9804951,9804953,9804955,9804957,9804960,9804962,9804964								
Turbidity	10	10			100		90-104		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W182621AA	Sample number(s): 9804935,9804937,9804939,9804941-9804943,9804949,9804951,9804953,9804955,9804959 UNSPK: 9804941									
Acetone	N.D.	150	147	150	142.37	98	95	54-157	3	30
Benzene	N.D.	20	22.31	20	22.19	112	111	80-120	1	30
2-Butanone	N.D.	150	141.76	150	135.23	95	90	59-135	5	30
Carbon Disulfide	N.D.	20	23.76	20	23.35	119	117	65-128	2	30
Carbon Tetrachloride	N.D.	20	24.6	20	24.45	123	122	64-134	1	30
Chlorobenzene	N.D.	20	23.03	20	22.8	115	114	80-120	1	30
Chloroethane	N.D.	20	22.08	20	21.05	110	105	55-123	5	30
Chloroform	N.D.	20	22.05	20	21.89	110	109	80-120	1	30
Dibromochloromethane	N.D.	20	21.67	20	21.88	108	109	71-120	1	30
1,1-Dichloroethane	N.D.	20	21.95	20	21.58	110	108	80-120	2	30
1,2-Dichloroethane	N.D.	20	21.18	20	20.77	106	104	73-124	2	30
1,1-Dichloroethene	N.D.	20	26.67	20	26.16	133*	131	80-131	2	30
trans-1,2-Dichloroethene	N.D.	20	23.82	20	23.96	119	120	80-120	1	30
1,3-Dichloropropane	N.D.	20	21.37	20	21.17	107	106	80-120	1	30
Ethylbenzene	N.D.	20	23.11	20	22.91	116	115	80-120	1	30
4-Methyl-2-pentanone	N.D.	100	98	100	95.96	98	96	62-133	2	30
Methylene Chloride	N.D.	20	23.2	20	22.67	116	113	80-120	2	30
1,1,2,2-Tetrachloroethane	N.D.	20	21.22	20	21.02	106	105	72-120	1	30

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Tetrachloroethene	N.D.	20	24.17	20	23.81	121*	119	80-120	2	30
Toluene	N.D.	20	23.33	20	22.95	117	115	80-120	2	30
1,1,1-Trichloroethane	N.D.	20	22.11	20	19.28	111	96	67-126	14	30
1,1,2-Trichloroethane	N.D.	20	22.37	20	22.34	112	112	80-120	0	30
Trichloroethene	N.D.	20	22.85	20	22.63	114	113	80-120	1	30
1,2,3-Trichloropropane	N.D.	20	21.41	20	21.46	107	107	75-124	0	30
Vinyl Chloride	N.D.	20	21.51	20	20.84	108	104	56-120	3	30
Xylene (Total)	N.D.	60	69.66	60	69.4	116	116	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182600001A	Sample number(s): 9804935-9804943,9804949 UNSPK: 9804941									
PCB-1016	N.D.	5.88	4.43	6.66	5.43	75	82	50-140	20	36
PCB-1260	N.D.	5.87	4.85	6.65	6.14	83	92	50-140	24	38
Batch number: 182600002A	Sample number(s): 9804945-9804947,9804950-9804958 UNSPK: 9804945									
PCB-1016	N.D.	5.96	5.24	5.79	4.98	88	86	50-140	5	36
PCB-1260	N.D.	5.95	6.15	5.79	5.60	103	97	50-140	9	38
	mg/l	**mg/l**	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182590705004A	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 UNSPK: 9804941									
Arsenic	0.000898	0.0100	0.0112	0.0100	0.0117	103	108	70-130	4	20
Cadmium	N.D.	0.00500	0.00500	0.00500	0.00501	100	100	70-130	0	20
Chromium	N.D.	0.0500	0.0521	0.0500	0.0511	104	102	70-130	2	20
Lead	N.D.	0.0150	0.0158	0.0150	0.0158	105	106	70-130	0	20
Silver	N.D.	0.0500	0.0495	0.0500	0.0523	99	105	70-130	6	20
Batch number: 182590705004B	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 UNSPK: 9804941									
Selenium	N.D.	0.0100	0.00990	0.0100	0.0101	99	101	70-130	2	20
Batch number: 182590705004D	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 UNSPK: 9804941									
Barium	0.0257	0.0500	0.0779	0.0500	0.0771	104	103	70-130	1	20
Batch number: 182590705005A	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 UNSPK: 9804945									
Arsenic	0.000816	0.0100	0.0116	0.0100	0.0108	108	100	70-130	7	20
Cadmium	N.D.	0.00500	0.00509	0.00500	0.00505	102	101	70-130	1	20
Chromium	N.D.	0.0500	0.0476	0.0500	0.0481	95	96	70-130	1	20

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Lead	N.D.	0.0150	0.0160	0.0150	0.0154	106	103	70-130	4	20
Silver	N.D.	0.0500	0.0520	0.0500	0.0512	104	102	70-130	1	20
Batch number: 182590705005B	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 UNSPK: 9804945									
Selenium	N.D.	0.0100	0.0102	0.0100	0.00937	102	94	70-130	9	20
Batch number: 182590705005D	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 UNSPK: 9804945									
Barium	0.0248	0.0500	0.0784	0.0500	0.0773	107	105	70-130	1	20
Batch number: 182590705006A	Sample number(s): 9804962-9804965 UNSPK: 9804964									
Arsenic	0.00107	0.0100	0.0114			103		70-130		
Cadmium	N.D.	0.00500	0.00491			98		70-130		
Chromium	N.D.	0.0500	0.0444			89		70-130		
Lead	N.D.	0.0150	0.0159			106		70-130		
Silver	N.D.	0.0500	0.0489			98		70-130		
Batch number: 182590705006B	Sample number(s): 9804962-9804965 UNSPK: 9804964									
Selenium	N.D.	0.0100	0.00984			98		70-130		
Batch number: 182590705006D	Sample number(s): 9804962-9804965 UNSPK: 9804964									
Barium	0.0243	0.0500	0.0780			107		70-130		
Batch number: 182600571401	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 UNSPK: 9804941									
Mercury	N.D.	0.00100	0.000927	0.00100	0.000929	93	93	80-120	0	20
Batch number: 182600571402	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 UNSPK: 9804945									
Mercury	N.D.	0.00100	0.000954	0.00100	0.000938	95	94	80-120	2	20
Batch number: 182610571401	Sample number(s): 9804962-9804965 UNSPK: 9804962									
Mercury	0.0000908	0.00100	0.000982			89		80-120		
	mg/l as CaCO3	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**					
Batch number: 18260001103A	Sample number(s): 9804935,9804939,9804941-9804944,9804949,9804951,9804955,9804957,9804960,9804962,9804964 UNSPK: 9804941									
Total Hardness	95.7	80	181.48	80	173.88	107	98	85-110	4	7

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l as CaCO3	MS Spike Added mg/l as CaCO3	MS Conc mg/l as CaCO3	MSD Spike Added mg/l as CaCO3	MSD Conc mg/l as CaCO3	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 182590705004A	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 BKG: 9804941			
Arsenic	0.000898	0.000713	23* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 182590705004B	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 BKG: 9804941			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 182590705004D	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 BKG: 9804941			
Barium	0.0257	0.0251	2	20
Batch number: 182590705005A	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 BKG: 9804945			
Arsenic	0.000816	0.000869	6 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 182590705005B	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 BKG: 9804945			
Selenium	N.D.	N.D.	0 (1)	20

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 182590705005D	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 BKG: 9804945			
Barium	0.0248	0.0239	4	20
Batch number: 182590705006A	Sample number(s): 9804962-9804965 BKG: 9804964			
Arsenic	0.00107	0.000847	23* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Silver	N.D.	N.D.	0 (1)	20
Batch number: 182590705006B	Sample number(s): 9804962-9804965 BKG: 9804964			
Selenium	N.D.	N.D.	0 (1)	20
Batch number: 182590705006D	Sample number(s): 9804962-9804965 BKG: 9804964			
Barium	0.0243	0.0246	1	20
Batch number: 182600571401	Sample number(s): 9804935,9804937,9804939,9804941-9804944,9804949,9804951,9804953,9804955,9804957,9804960 BKG: 9804941			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182600571402	Sample number(s): 9804936,9804938,9804940,9804945-9804948,9804950,9804952,9804954,9804956,9804958,9804961 BKG: 9804945			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182610571401	Sample number(s): 9804962-9804965 BKG: 9804962			
Mercury	0.0000908	0.0000894	2 (1)	20
	mg/l	mg/l		
Batch number: 18260385801A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949,9804951 BKG: 9804941			
Total Suspended Solids	4.63	4.63	0 (1)	5
	mg/l as CaCO3	mg/l as CaCO3		
Batch number: 18260001103A	Sample number(s): 9804935,9804939,9804941-9804944,9804949,9804951,9804955,9804957,9804960,9804962,9804964 BKG: 9804941			
Total Hardness	95.7	92.42	3 (1)	7
	N T U	N T U		
Batch number: 18262121453A	Sample number(s): 9804935,9804937,9804939,9804941,9804944,9804949 BKG: 9804941			
Turbidity	4.80	4.70	2 (1)	8

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Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182621AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9804935	98	99	101	96
9804937	99	102	100	96
9804939	98	99	101	96
9804941	98	100	101	96
9804942	99	98	101	97
9804943	99	100	102	99
9804949	97	102	101	95
9804951	98	101	100	96
9804953	98	100	101	96
9804955	97	100	100	96
9804959	99	101	101	96
Blank	97	102	100	96
LCS	99	99	102	99
MS	99	98	101	97
MSD	99	100	102	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182622AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9804957	98	102	101	97
9804960	98	101	101	96
9804962	97	102	100	96
9804964	98	101	100	95
Blank	98	101	100	96
LCS	99	100	101	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9804935	65	79	65	79
9804936	74	86	72	85
9804937	77	46	75	46
9804938	76	90	75	90
9804939	73	79	71	80
9804940	73	88	72	85

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9804941	68	78	65	75
9804942	70	81	67	79
9804943	68	80	65	79
9804949	60	76	61	79
Blank	72	62	69	59
LCS	84	89	79	87
MS	70	81	67	79
MSD	68	80	65	79
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9804945	68	82	64	76
9804946	75	88	75	91
9804947	73	82	72	83
9804950	74	90	71	88
9804951	63	80	62	80
9804952	69	82	68	83
9804953	81	98	77	99
9804954	74	83	74	82
9804955	69	79	66	73
9804956	66	82	66	80
9804957	89	80	89	83
9804958	75	85	73	88
Blank	74	59	73	57
LCS	75	60	73	57
MS	75	88	75	91
MSD	73	82	72	83
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9804960	84	80	83	76
9804961	76	85	74	81
9804962	73	79	71	78
9804963	73	90	72	86
9804964	73	87	69	83
9804965	73	84	70	82

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/20/2018 17:54

Group Number: 1987611

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182600003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	81	74	82	70
LCS	81	66	79	61
LCSD	84	85	80	85
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 1987611 Sample # 9804935-65

COC # 556602

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Corp, Rensselaer	PWSID #:
Project Manager: Ryan McCarthy	P.O. #:
Sampler: Patrick Gehan	Quote #: order# 228061
State where samples were collected: New York	For Compliance: Yes ☐ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ Surface ☒ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F metals (Filtered)	N metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260C	Remarks
091418-01-SW-U-A-1	9/14/18	1030	X		12	2	2	1	1	1	1	1	3	
091418-01-SW-U-A-3	9/14/18	1355	X		12	2	2	1	1	1	1	1	3	
091418-01-SW-U-B-1	9/14/18	1050	X		12	2	2	1	1	1	1	1	3	
091418-01-SW-U-C-1	9/14/18	1100	X		36	6	6	3	3	3	3	3	9	MS/MSD
091418-02-SW-[illegible]A-A-1	9/14/18	1200	X		12	2	2	1	1	1	1	1	3	
091418-02-SW-A-A-2	9/14/18	1155	X		12	2	2	1	1	1	1	1	3	
091418-02-SW-A-A-3	9/14/18	1430	X		12	2	2	1	1	1	1	1	3	
091418-02-SW-A-B-1	9/14/18	1210	X		12	2	2	1	1	1	1	1	3	
091418-02-SW-A-C-1	9/14/18	1220	X		12	2	2	1	1	1	1	1	3	
091418-TB-01	9/14/18	1400	X										2	Trip

Turnaround Time (TAT) Requested (please circle)
Standard Rush 48hr TAT
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: per contract

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required) per contract
Type I (EPA Level 3 Equivalent/non-CLP)
Type III (Reduced non-CLP)
NYSDEC Category A or B
Type VI (Raw Data Only)
NJ DKQP
MA MCP
TX TRRP-13
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/14/18	4:15 pm			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	9/15/18	0830

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.1-3.6 °C
@MP 9/15/18

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 187611 Sample # 9814935-65

COC # 556603

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Corp, Rensselaer	PWSID #:
Project Manager: Ryan McCarthy	P.O. #:
Sampler: Patrick Gehan	Quote #: order #
State where samples were collected: New York	For Compliance: Yes ☐ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☒ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	E metals (Filtered)	N metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260C	Remarks
091418-03-SW-D-A-1	09/14/18	1245	X		12	2	2	1	1	1	1	1	3	
091418-03-SW-D-B-1	9/14/18	1300	X		12	2	2	1	1	1	1	1	3	
091418-03-SW-D-C-1	9/14/18	1315	X		12	2	2	1	1	1	1	1	3	

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 hr TAT

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required) per contract

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/14/18	4:15 pm			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	9/15/18	0930

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS / FedEx X Other ____

Temperature upon receipt 1.1-3.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227196

Group Number(s): 1987611

Client: Aecom

BASF Corp, Rennselaer

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/15/2018 9:30
Number of Packages:	5	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 1 HCl Tripblank

Unpacked by Nicole Reiff (25684) at 11:25 on 09/15/2018

Samples Chilled Details: BASF Corp, Rennselaer

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.1	DT	Wet	Y	Bagged	N
2	DT146	1.8	DT	Wet	Y	Bagged	N
3	DT146	1.6	DT	Wet	Y	Bagged	N
4	DT146	3.4	DT	Wet	Y	Bagged	N
5	DT146	4.1	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 03, 2018 14:09

Project: Rensselaer

Account #: 04285
Group Number: 1988317
SDG: RNS07
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
091718-02-SW-A-A-1 Grab Surface Water	09/17/2018 12:45	9807568
091718-02-SW-A-B-1 Grab Surface Water	09/17/2018 12:45	9807569
091718-02-SW-A-C-1 Grab Surface Water	09/17/2018 12:45	9807570
091718-03-SW-D-A-1 Grab Surface Water	09/17/2018 14:05	9807571
091718-03-SW-D-B-1 Grab Surface Water	09/17/2018 14:05	9807572
091718-03-SW-D-C-1 Grab Surface Water	09/17/2018 14:05	9807573
091718-03-SW-D-A-2 Grab Surface Water	09/17/2018 14:10	9807574
091718-01-SW-U-A-1 Grab Surface Water	09/17/2018 11:45	9812315
091718-01-SW-U-B-1 Grab Surface Water	09/17/2018 11:45	9812316
091718-01-SW-U-C-1 Grab Surface Water	09/17/2018 11:45	9812317
091718-02-SW-A-A-1 Filtered Grab Surface Water	09/17/2018 12:45	9812340
091718-02-SW-A-B-1 Filtered Grab Surface Water	09/17/2018 12:45	9812341
091718-02-SW-A-C-1 Filtered Grab Surface Water	09/17/2018 12:45	9812342
091718-03-SW-D-A-1 Filtered Grab Surface Water	09/17/2018 14:05	9812343
091718-03-SW-D-B-1 Filtered Grab Surface Water	09/17/2018 14:05	9812344
091718-03-SW-D-C-1 Filtered Grab Surface Water	09/17/2018 14:05	9812345
091718-03-SW-D-A-2 Filtered Grab Surface Water	09/17/2018 14:10	9812346
091718-01-SW-U-A-1 Filtered Grab Surface Water	09/17/2018 11:45	9815164
091718-01-SW-U-B-1 Filtered Grab Surface Water	09/17/2018 11:45	9815165
091718-01-SW-U-C-1 Filtered Grab Surface Water	09/17/2018 11:45	9815166

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **091718-02-SW-A-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-01

BASF Corporation
ELLE Sample #: WW 9807568
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00071 J	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.8	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	89.5	6.0	20.0	2
	SM 2540 D-2011		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.63	1.00	3.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-01

BASF Corporation
ELLE Sample #: WW 9807568
ELLE Group #: 1988317
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 17:42	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 17:42	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:08	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 10:12	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-02

BASF Corporation
ELLE Sample #: WW 9807569
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.7	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	87.4	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-02

BASF Corporation
ELLE Sample #: WW 9807569
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.78	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 18:04	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 18:04	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:13	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:21	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 10:20	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-03

BASF Corporation
ELLE Sample #: WW 9807570
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00071 J	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000086 J	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.3	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	85.5	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-03

BASF Corporation
ELLE Sample #: WW 9807570
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.84 J	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 18:25	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 18:25	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:24	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:24	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 10:28	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-04

BASF Corporation
ELLE Sample #: WW 9807571
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.131	0.654	1
14188	PCB-1221	11104-28-2	N.D. D1	0.131	0.654	1
14188	PCB-1232	11141-16-5	N.D. D1	0.131	0.654	1
14188	PCB-1242	53469-21-9	N.D. D1	0.131	0.654	1
14188	PCB-1248	12672-29-6	N.D. D1	0.131	0.654	1
14188	PCB-1254	11097-69-1	N.D. D1	0.131	0.654	1
14188	PCB-1260	11096-82-5	N.D. D1	0.131	0.654	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0969	0.654	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0969	0.654	1
14188	Total PCBs	1336-36-3	N.D.	0.0969	0.654	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.000056 J	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.4	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	87.4	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-04

BASF Corporation
ELLE Sample #: WW 9807571
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.33	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 19:08	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 19:08	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:26	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 10:57	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-05

BASF Corporation
ELLE Sample #: WW 9807572
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.139	0.694	1
14188	PCB-1221	11104-28-2	N.D. D1	0.139	0.694	1
14188	PCB-1232	11141-16-5	N.D. D1	0.139	0.694	1
14188	PCB-1242	53469-21-9	N.D. D1	0.139	0.694	1
14188	PCB-1248	12672-29-6	N.D. D1	0.139	0.694	1
14188	PCB-1254	11097-69-1	N.D. D1	0.139	0.694	1
14188	PCB-1260	11096-82-5	N.D. D1	0.139	0.694	1
14188	PCB-1262	37324-23-5	N.D. D1	0.103	0.694	1
14188	PCB-1268	11100-14-4	N.D. D1	0.103	0.694	1
14188	Total PCBs	1336-36-3	N.D.	0.103	0.694	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.0	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	90.0	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-05

BASF Corporation
ELLE Sample #: WW 9807572
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	5.52	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 19:30	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 19:30	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:34	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 11:05	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-06

BASF Corporation
ELLE Sample #: WW 9807573
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.2	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	87.5	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-06

BASF Corporation
ELLE Sample #: WW 9807573
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.78	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 19:51	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 19:51	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 00:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:37	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 11:13	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-2 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:10
SDG#: RNS07-07

BASF Corporation
ELLE Sample #: WW 9807574
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	88.7	6.0	20.0	2

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-2 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:10
SDG#: RNS07-07

BASF Corporation
ELLE Sample #: WW 9807574
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	4.48	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 20:13	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 20:13	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 01:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:39	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18262121452A	09/19/2018 12:20	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001101A	09/23/2018 11:21	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-08

BASF Corporation
ELLE Sample #: WW 9812315
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00084 J	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	0.00072 J	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	0.20 J	0.140	1.00	1

The holding time was not met. The sample was submitted to the laboratory outside of the holding time.

	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-A-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-08

BASF Corporation
ELLE Sample #: WW 9812315
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2340 C-2011**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	86.8	6.0	20.0	2
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	3.73	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 21:38	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 21:38	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 00:46	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:06	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:39	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:39	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:06	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:39	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:06	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001102A	09/23/2018 16:29	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-09

BASF Corporation
ELLE Sample #: WW 9812316
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	2.7	0.140	1.00	1

The holding time was not met. The sample was submitted to the laboratory outside of the holding time.

	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-B-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-09

BASF Corporation
ELLE Sample #: WW 9812316
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2340 C-2011**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	89.8	6.0	20.0	2
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.09 J	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 22:00	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 22:00	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 00:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:48	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:39	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001102A	09/23/2018 16:37	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-10

BASF Corporation
ELLE Sample #: WW 9812317
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
	EPA 245.1 rev 3		**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.0	0.140	1.00	1

The holding time was not met. The sample was submitted to the laboratory outside of the holding time.

	SM 2340 C-2011		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-C-1 Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-10

BASF Corporation
ELLE Sample #: WW 9812317
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2340 C-2011**		**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**	
12147	Total Hardness	471-34-1	88.9	6.0	20.0	2
Wet Chemistry	**SM 2540 D-2011**		**mg/l**	**mg/l**	**mg/l**	
13858	Total Suspended Solids	n.a.	2.54 J	1.00	3.00	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 22:21	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 22:21	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 01:08	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:50	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
12147	Total Hardness	SM 2340 C-2011	1	18266001102A	09/23/2018 16:45	Susan A Engle	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-11

BASF Corporation
ELLE Sample #: WW 9812340
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 01:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:42	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-12

BASF Corporation
ELLE Sample #: WW 9812341
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 01:32	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:07	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 12:45
SDG#: RNS07-13

BASF Corporation
ELLE Sample #: WW 9812342
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630031A	09/24/2018 01:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630031A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705001A	09/24/2018 12:47	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705001	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-14

BASF Corporation
ELLE Sample #: WW 9812343
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.638	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.638	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.638	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.638	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.638	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.638	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.638	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0944	0.638	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0944	0.638	1
14188	Total PCBs	1336-36-3	N.D.	0.0944	0.638	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D. K4	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D. K4	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D. K4	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630032A	09/24/2018 02:51	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630032A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:51	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-15

BASF Corporation
ELLE Sample #: WW 9812344
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D. K4	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D. K4	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630032A	09/24/2018 03:03	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630032A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:30	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:53	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:53	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:53	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:53	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:53	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:05
SDG#: RNS07-16

BASF Corporation
ELLE Sample #: WW 9812345
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D. K4	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D. K4	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D. K4	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630032A	09/24/2018 03:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630032A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:56	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-03-SW-D-A-2 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 14:10
SDG#: RNS07-17

BASF Corporation
ELLE Sample #: WW 9812346
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.132	0.661	1
14188	PCB-1221	11104-28-2	N.D. D1	0.132	0.661	1
14188	PCB-1232	11141-16-5	N.D. D1	0.132	0.661	1
14188	PCB-1242	53469-21-9	N.D. D1	0.132	0.661	1
14188	PCB-1248	12672-29-6	N.D. D1	0.132	0.661	1
14188	PCB-1254	11097-69-1	N.D. D1	0.132	0.661	1
14188	PCB-1260	11096-82-5	N.D. D1	0.132	0.661	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0979	0.661	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0979	0.661	1
14188	Total PCBs	1336-36-3	N.D.	0.0979	0.661	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D. K4	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D. K4	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630032A	09/24/2018 03:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630032A	09/21/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:31	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:58	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:58	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:58	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:58	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:58	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571404	09/24/2018 09:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571404	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-18

BASF Corporation
ELLE Sample #: WW 9815164
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00074 J	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 02:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:06	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:06	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:06	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:06	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:06	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182750705004A	10/03/2018 11:23	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 08:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182750705004	10/03/2018 03:29	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-19

BASF Corporation
ELLE Sample #: WW 9815165
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 02:11	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:13	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 08:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091718-01-SW-U-C-1 Filtered Grab Surface Water**
COC: 556604

Project Name: **Rensselaer**

Submittal Date/Time: 09/18/2018 10:00
Collection Date/Time: 09/17/2018 11:45
SDG#: RNS07-20

BASF Corporation
ELLE Sample #: WW 9815166
ELLE Group #: 1988317
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**mg/l**	**mg/l**	**mg/l**	
06025	Arsenic	7440-38-2	0.00095 J	0.00068	0.0020	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.0010	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0040	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0400	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0030	1
06049	Zinc	7440-66-6	N.D.	0.0062	0.0150	1
		EPA 245.1 rev 3	**mg/l**	**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	N.D.	0.000050	0.00020	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 02:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:15	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 08:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182651AA	Sample number(s): 9807568-9807574,9812315-9812317		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182630031A	Sample number(s): 9807568-9807574,9812340-9812342		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182630032A	Sample number(s): 9812343-9812346		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182640054A	Sample number(s): 9812315-9812317,9815164-9815166		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total PCBs	N.D.	0.0740	0.500
	mg/l	mg/l	mg/l
Batch number: 182640571401	Sample number(s): 9807568-9807574		
Mercury	N.D.	0.000050	0.00020
Batch number: 182640571404	Sample number(s): 9812340-9812346		
Mercury	N.D.	0.000050	0.00020
Batch number: 182640705001A	Sample number(s): 9807568-9807574,9812340-9812342		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	0.0015 J	0.00070	0.0040
Copper	N.D.	0.0099	0.0400
Lead	N.D.	0.0011	0.0030
Zinc	N.D.	0.0062	0.0150
Batch number: 182640705002A	Sample number(s): 9812343-9812346		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Copper	N.D.	0.0099	0.0400
Lead	N.D.	0.0011	0.0030
Zinc	N.D.	0.0062	0.0150
Batch number: 182660571401	Sample number(s): 9812315-9812317,9815164-9815166		
Mercury	N.D.	0.000050	0.00020
Batch number: 182660705001A	Sample number(s): 9812315-9812317		
Arsenic	0.0020 J	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Copper	N.D.	0.0099	0.0400
Lead	N.D.	0.0011	0.0030
Zinc	N.D.	0.0062	0.0150
Batch number: 182660705002A	Sample number(s): 9815164-9815166		
Arsenic	N.D.	0.00068	0.0020
Cadmium	N.D.	0.00015	0.0010
Chromium	N.D.	0.00070	0.0040
Copper	N.D.	0.0099	0.0400
Lead	N.D.	0.0011	0.0030
Zinc	0.0072 J	0.0062	0.0150
Batch number: 182700705002A	Sample number(s): 9812315		
Arsenic	N.D.	0.00068	0.0020
Copper	N.D.	0.0099	0.0400
Zinc	N.D.	0.0062	0.0150

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 182750705004A	Sample number(s): 9815164		
Zinc	0.0066 J	0.0062	0.0150
Batch number: 18264385801A	Sample number(s): 9807568-9807574		
Total Suspended Solids	N.D.	1.00	3.00
Batch number: 18267385802A	Sample number(s): 9812315-9812317		
Total Suspended Solids	N.D.	1.00	3.00
	mg/l as CaCO3	mg/l as CaCO3	mg/l as CaCO3
Batch number: 18266001101A	Sample number(s): 9807568-9807574		
Total Hardness	N.D.	3.0	10.0
Batch number: 18266001102A	Sample number(s): 9812315-9812317		
Total Hardness	N.D.	3.0	10.0
	N T U	N T U	N T U
Batch number: 18262121452A	Sample number(s): 9807568-9807574		
Turbidity	0.20 J	0.140	1.00
Batch number: 18264121452B	Sample number(s): 9812315-9812317		
Turbidity	0.20 J	0.140	1.00

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5182651AA	Sample number(s): 9807568-9807574,9812315-9812317								
Benzene	20	18.57			93		80-120		
Chlorobenzene	20	18.17			91		80-120		
1,2-Dichlorobenzene	20	17.63			88		80-120		
1,3-Dichlorobenzene	20	17.8			89		80-120		
1,4-Dichlorobenzene	20	17.87			89		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182630031A	Sample number(s): 9807568-9807574,9812340-9812342								
PCB-1016	5.01	4.18	5.01	3.31	83	66	50-140	23	36
PCB-1260	5.00	4.45	5.00	3.42	89	68	50-140	26	38
Batch number: 182630032A	Sample number(s): 9812343-9812346								
PCB-1016	5.01	3.67	5.01	3.85	73	77	50-140	5	36
PCB-1260	5.00	3.99	5.00	4.01	80	80	50-140	0	38

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182640054A	Sample number(s): 9812315-9812317,9815164-9815166								
PCB-1016	5.01	5.09	5.01	4.93	102	99	50-140	3	36
PCB-1260	5.00	4.99	5.00	5.33	100	107	50-140	7	38
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 182640571401	Sample number(s): 9807568-9807574								
Mercury	0.00100	0.000952			95		85-115		
Batch number: 182640571404	Sample number(s): 9812340-9812346								
Mercury	0.00100	0.000971			97		85-115		
Batch number: 182640705001A	Sample number(s): 9807568-9807574,9812340-9812342								
Arsenic	0.0100	0.00981			98		85-115		
Cadmium	0.00500	0.00545			109		85-115		
Chromium	0.0500	0.0500			100		85-115		
Copper	0.0500	0.0459			92		85-115		
Lead	0.0150	0.0152			101		85-115		
Zinc	0.500	0.510			102		85-115		
Batch number: 182640705002A	Sample number(s): 9812343-9812346								
Arsenic	0.0100	0.0108			108		85-115		
Cadmium	0.00500	0.00544			109		85-115		
Chromium	0.0500	0.0506			101		85-115		
Copper	0.0500	0.0502			100		85-115		
Lead	0.0150	0.0171			114		85-115		
Zinc	0.500	0.513			103		85-115		
Batch number: 182660571401	Sample number(s): 9812315-9812317,9815164-9815166								
Mercury	0.00100	0.000889			89		85-115		
Batch number: 182660705001A	Sample number(s): 9812315-9812317								
Arsenic	0.0100	0.00992			99		85-115		
Cadmium	0.00500	0.00462			92		85-115		
Chromium	0.0500	0.0464			93		85-115		
Copper	0.0500	0.0496			99		85-115		
Lead	0.0150	0.0140			93		85-115		
Zinc	0.500	0.476			95		85-115		
Batch number: 182660705002A	Sample number(s): 9815164-9815166								
Arsenic	0.0100	0.0101			101		85-115		
Cadmium	0.00500	0.00506			101		85-115		
Chromium	0.0500	0.0556			111		85-115		
Copper	0.0500	0.0609			122*		85-115		
Lead	0.0150	0.0151			101		85-115		
Zinc	0.500	0.651			130*		85-115		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182700705002A	Sample number(s): 9812315								
Arsenic	0.0100	0.0104			104		85-115		
Copper	0.0500	0.0489			98		85-115		
Zinc	0.500	0.521			104		85-115		
Batch number: 182750705004A	Sample number(s): 9815164								
Zinc	0.500	0.515			103		90-113		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18264385801A	Sample number(s): 9807568-9807574								
Total Suspended Solids	150	148			99		89-105		
Batch number: 18267385802A	Sample number(s): 9812315-9812317								
Total Suspended Solids	150	151.6	150	148.3	101	99	89-105	2	5
	mg/l as CaCO3	**mg/l as CaCO3**	**mg/l as CaCO3**	**mg/l as CaCO3**					
Batch number: 18266001101A	Sample number(s): 9807568-9807574								
Total Hardness	40	38.56			96		85-110		
Batch number: 18266001102A	Sample number(s): 9812315-9812317								
Total Hardness	40	38.28			96		85-110		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18262121452A	Sample number(s): 9807568-9807574								
Turbidity	10	10			100		90-104		
Batch number: 18264121452B	Sample number(s): 9812315-9812317								
Turbidity	10	9.50			95		90-104		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182640705001A	Sample number(s): 9807568-9807574,9812340-9812342 UNSPK: 9807568									
Arsenic	0.000706	0.0100	0.0110			103		70-130		
Cadmium	N.D.	0.00500	0.00552			110		70-130		
Chromium	N.D.	0.0500	0.0521			104		70-130		
Copper	N.D.	0.0500	0.0506			101		70-130		
Lead	N.D.	0.0150	0.0162			108		70-130		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Zinc	N.D.	0.500	0.523			105		70-130		
Batch number: 182660571401	Sample number(s): 9812315-9812317,9815164-9815166 UNSPK: 9812316									
Mercury	N.D.	0.00100	0.000854			85		80-120		
Batch number: 182660705001A	Sample number(s): 9812315-9812317 UNSPK: 9812315									
Arsenic	0.000862	0.0100	0.0113			105		70-130		
Cadmium	N.D.	0.00500	0.00504			101		70-130		
Chromium	0.000722	0.0500	0.0481			95		70-130		
Copper	N.D.	0.0500	0.0495			99		70-130		
Lead	N.D.	0.0150	0.0152			101		70-130		
Zinc	N.D.	0.500	0.479			96		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 182640705001A	Sample number(s): 9807568-9807574,9812340-9812342 BKG: 9807568			
Arsenic	0.000706	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 182660571401	Sample number(s): 9812315-9812317,9815164-9815166 BKG: 9812316			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182660705001A	Sample number(s): 9812315-9812317 BKG: 9812315			
Arsenic	0.000862	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.000722	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18262121452A	Sample number(s): 9807568-9807574 BKG: 9807574			
Turbidity	4.00	3.90	3 (1)	8

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc N T U	DUP Conc N T U	DUP RPD	DUP RPD Max

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9807568	105	102	93	87
9807569	106	100	92	89
9807570	107	102	93	87
9807571	108	101	93	87
9807572	110	100	93	89
9807573	109	100	93	87
9807574	110	99	92	88
9812315	110	104	92	87
9812316	112	98	93	87
9812317	112	102	92	87
Blank	106	98	92	88
LCS	101	100	95	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630031A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9807568	67	69	66	67
9807569	80	78	78	77
9807570	68	68	68	67
9807571	71	71	71	70
9807572	72	70	70	68
9807573	70	70	70	68
9807574	69	65	68	62
9812340	72	73	70	73
9812341	67	69	64	65
9812342	71	74	68	73
Blank	70	57	67	54
LCS	76	52	75	51
LCSD	59	63	56	60

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/03/2018 14:09

Group Number: 1988317

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630031A

Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9812343	69	73	65	72
9812344	69	71	66	71
9812345	67	68	64	69
9812346	62	72	60	71
Blank	67	80	65	77
LCS	62	66	61	64
LCSD	69	50	65	47
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182640054A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9812315	87	89	85	93
9812316	80	84	79	84
9812317	69	85	68	85
9815164	69	88	69	91
9815165	71	88	71	90
9815166	73	88	75	89
Blank	78	59	78	59
LCS	85	90	87	91
LCSD	80	92	81	93
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4288 Group # 1988317 Sample # 9807568-74, 9812315-17, 40-46

COC # 556604

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Corp. Rensselaer	PWSID #:
Project Manager: Ryan McCarthy	P.O. #:
Sampler: Patrick Gehan	Quote #:
State where samples were collected:	For Compliance: Yes ☐ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☒ Surface ☐ | Other: ___

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ___

SCR#: ___

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Aroclors (filtered)	PCB Aroclors (unfiltered)	metals (filtered)	metals (unfiltered)	mercury	hardness	TSS	VOCs - 8260 C
091718-01-SW-U-A-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-01-SW-U-B-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-01-SW-U-C-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-A-1	9/17/18	1245	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-B-1	9/17/18	1245	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-C-1	9/17/18	1245	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-A-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-B-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-C-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-A-2	9/17/18	1410	X		12	2	2	1	1	1	1	1	3

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 hrs

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: TAT

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/17/18	6:40	[signature]		
			[signature]	9/18/18	1000

EDD Required? Yes No

If yes, format: ___

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ___ FedEx ✓ Other ___

Temperature upon receipt 1.1-2.9 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1988317 Sample # 9807568-74, 9812315-17, 40-46

COC # 556605

Client Information

Client: AECOM	Acct. #:
Project Name/#: BASF Corp. Rensselaer	PWSID #:
Project Manager: Ryan McCarthy	P.O. #:
Sampler: Patrick Cohan	Quote #:
State where samples were collected:	For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Potable ☐ Ground ☐ Surface ☐ | NPDES ☐ | Other: ____ | Water

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Aroclors (filtered)	PCB Aroclors (unfiltered)	metals (filtered)	metals (unfiltered)	mercury	hardness	TSS	VOCs - 8260C
091718-03-SW-D-B-2	9/17/18	1410	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-C-2	9/17/18	1410	X		12	2	2	1	1	1	1	1	3

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 hrs.

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: TAT

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) | Type VI (Raw Data Only)

Type III (Reduced non-CLP) | NJ DKQP | TX TRRP-13

NYSDEC Category A or B | MA MCP | CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Cohan	9/17/18	6:40			
			MMR	9/18/18	1000

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 1.1-2.9 °C

198817

Kay Hower

From: Au, Emily L <Emily.Au@aecom.com>
Sent: Tuesday, September 18, 2018 4:30 PM
To: Kay Hower
Cc: Gehan, Patrick; McCarthy, Ryan
Subject: RE: BASF OU2 - 9/17/18 Delivery
Attachments: 09-17-2018 BASF COC with corrections.pdf

EXTERNAL EMAIL*

Kay,

I think I've figured out the COC discrepancies, I think the missing cooler may only have 9 bottles in it, Patrick, did one cooler only have a few bottles? Also, Patrick can you take a look and confirm the edits that I made. Let Kay know if anything is incorrect. I made edits based on the time discrepancies and knowledge of Bouys Upriver (U), Adjacent (A),and Downriver (D) placement(pg4).

Kay I will follow up with a phone call.

Thanks,

Emily

Emily L. Au, PG
Staff Geologist, Environment
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M +1-716-531-3312
emily.au@aecom.com

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From: Kay Hower [mailto:KayHower@eurofinsus.com]
Sent: Tuesday, September 18, 2018 4:16 PM
To: Au, Emily L
Subject: RE: BASF OU2 - 9/17/18 Delivery

I had clarification. We did not receive the two samples on the second page and are missing the cooler with 9 bottles each for the three samples on page 1.

From: Au, Emily L [mailto:Emily.Au@aecom.com]
Sent: Tuesday, September 18, 2018 3:58 PM

Environmental Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

COC # 556604

For Lab Use Only
FSC: _____
SCR#: _____

Client Information

Client: AECOM
Acct. #:
Project Name/#: BASF Corp Kenilworth
PWSID #:
Project Manager: Ryan McCarthy
P.O. #:
Sampler: Patrick Graham
Quote #:
State where samples were collected:
For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐
Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☒
Other: _____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PAH Analytes (filtered)	PCB Analytes (unfiltered)	metals (filtered)	metals (unfiltered)	mercury	hardness	TSS	VOC - 8260 C
091718-01-SW-U-A-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-01-SW-U-B-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-01-SW-U-C-1	9/17/18	1145	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-A-1	9/17/18	1240	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-B-1	9/17/18	1245	X		12	2	2	1	1	1	1	1	3
091718-02-SW-A-C-1	9/17/18	1245	X		12	2	2	1	1	1	1	1	3
091718-03-SW-A-A-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-B-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-C-1	9/17/18	1405	X		12	2	2	1	1	1	1	1	3
091718-03-SW-D-A-2	9/17/18	1410	X		12	2	2	1	1	1	1	1	3

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush) 48 hrs
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: TAT

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type II (Raw Data Only)
Type III (Reduced non-CLP)
NJ DKQP
TX TRRP-13
NYSDEC Category A or B
MA MCP
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/17/18	6:40			
			[signature]	9/18/18	1000

EDD Required? Yes No
If yes, format: _____
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx ✓ Other _____
Temperature upon receipt 1.1-2.9 °C

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7044 0717

Environmental Analysis Request/Chain of Custody

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Acct. # _____ Group # _____ Sample # _____

COC # 556605

Client Information

Client: AECOM

Acct. #:

Project Name/#: BASF Corp. Rensselaer

PWSID #:

Project Manager: Ryan McCarthy

PO #:

Sampler: Patrick Cohen

Quote #:

State where samples were collected:

For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐

Water ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ☐

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Analytes (Filtered)	PCB Analytes (Unfiltered)	Metals (Filtered)	Metals (Unfiltered)	Mercury	Hardness	TSS	VOCs - 8260C
091715-03-SW-D-B-2	9/15/18	1410	X		12	2	2	1	1	1	1	1	3
091715-03-SW-D-C-2	9/15/18	1410	X		12	2	2	1	1	1	1	1	3
Shouldn't exist													

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush) 48 hrs

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: TAT

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Relinquished by	Date	Time	Received by	Date	Time
1	Patrick Cohen	9/17/18	6:40			
2						
3						
4						
5				Received by	9/18/18	1000

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other X

Temperature upon receipt 11.2 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227305

Group Number(s):

Client: Aecom

BASF Corp.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/18/2018 10:00
Number of Packages:	3	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	Yes		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Nicole Reiff (25684) at 12:57 on 09/18/2018

Samples Chilled Details: BASF Corp.

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	2.9	IR	Wet	Y	Bagged	N
2	32170023	1.3	IR	Wet	Y	Bagged	N
3	32170023	1.1	IR	Wet	Y	Bagged	N

Missing Sample Details: BASF Corp.

Sample ID on COC	Comments
091718-02-SW-A-A-1	

Container Quantity Discrepancy Details: BASF Corp.

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
091718-01-SW-U-A-1	3	12	→ the 9 Bottles? cooler that was delayed
091718-01-SW-U-B-1	3	12	→ see time disc. next pg for mislabeled samples.
091718-01-SW-U-C-1	3	12	

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Sample Administration Receipt Documentation Log

Doc Log ID: 227305

Group Number(s):

Client: Aecom

Sample Date/Time Discrepancy Details: BASF Corp.

Sample ID on COC	Date/Time on Label	Comments
091718-02-SW-A-B-1	9/17/2018 13:00	
091718-02-SW-A-C-1	9/17/2018 13:20	
091718-03-SW-D-B-1	9/17/2018 14:25	
091718-03-SW-D-C-1	9/17/2018 14:45	
091718-02-SW-U-B-1	9/17/2018 12:00	
091718-02-SW-U-C-1	9/17/2018 12:15	

→ 01

Idea 01

01 has the U 3rd from Right

02 has the A 3rd from Right

03 has the D 3rd from Right.

Still Missing 091718-01-SW-U-A-1 (non VOCs)?
(9 Bottles)

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Kay Hower

Subject: FW: BASF OU2 - 9/17/18 Delivery

From: Au, Emily L [mailto:Emily.Au@aecom.com]
Sent: Friday, September 21, 2018 2:54 PM
To: Kay Hower; Gehan, Patrick; McCarthy, Ryan
Subject: Re: BASF OU2 - 9/17/18 Delivery

EXTERNAL EMAIL*

Hi Kay, go ahead and run them. We will qualify the data.

Thank you,
Emily

Sent from my Verizon 4G LTE Smartphone

From: Kay Hower
Sent: Friday, September 21, 2018 11:56 AM
To: 'Gehan, Patrick'; Au, Emily L; 'McCarthy, Ryan'
Subject: FW: BASF OU2 - 9/17/18 Delivery

The missing cooler has arrived and it is 20.0C. The cooler contains all bottles for the first three samples except for the VOC vials which arrived on time. Please let me know if we should enter these bottles/analyses with high temperature. Thanks, Kay

---

From: Gehan, Patrick [mailto:Patrick.Gehan@aecom.com]
Sent: Tuesday, September 18, 2018 7:41 AM
To: Kay Hower
Cc: McCarthy, Ryan
Subject: BASF OU2 - 9/17/18 Delivery

EXTERNAL EMAIL*

Kay,

Please see the tracking numbers and chains of custody for yesterday's delivery. Thank you.

813348371668
813348371657
813348371679
813348371680

Sincerely,

Patrick Gehan
Deputy Project Manager, Buffalo, New York
T +1-716-923-1237

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Sample Administration Receipt Documentation Log

Doc Log ID: 227305

Group Number(s): 1988317

Client: Aecom

BASF Corp.

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/18/2018 10:00
Number of Packages:	3	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	Yes		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Nicole Reiff (25 684) at 12:57 on 09/18/2018

Samples Chilled Details: BASF Corp.

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	2.9	IR	Wet	Y	Bagged	N
2	32170023	1.3	IR	Wet	Y	Bagged	N
3	32170023	1.1	IR	Wet	Y	Bagged	N

Missing Sample Details: BASF Corp.

Sample ID on COC	Comments
091718-03-SW-D-B-2	
091718-03-SW-D-C-2	

Container Quantity Discrepancy Details: BASF Corp.

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
091718-01-SW-U-A-1	3	12	
091718-01-SW-U-B-1	3	12	
091718-01-SW-U-C-1	3	12	

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Client: Aecom

Sample Date/Time Discrepancy Details: BASF Corp.

Sample ID on COC	Date/Time on Label	Comments
091718-02-SW-A-B-1	9/17/2018 13:00	
091718-02-SW-A-C-1	9/17/2018 13:20	
091718-03-SW-D-B-1	9/17/2018 14:25	
091718-03-SW-D-C-1	9/17/2018 14:45	
091718-02-SW-U-B-1	9/17/2018 12:00	
091718-02-SW-U-C-1	9/17/2018 12:15	

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
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Sample Administration Receipt Documentation Log

Doc Log ID: 227720

Group Number(s): 1988317

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/21/2018 10:30
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	N/A
Custody Seal Present:	Yes	Sample Date/Times match COC:	N/A
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	No	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	N/A		

Unpacked by Melvin Sanchez (8943) at 11:38 on 09/21/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?	Samples Collected Same Day as Receipt?
1	32170023	20.5	IR	Wet	N	Bagged	Y	N

Elevated Temperature Details

All Temperatures in °C

Cooler #	Thermometer ID	Top Left Temp	Top Right Temp	Bottom Left Temp	Bottom Right Temp	Center Temp	Factors Contributing to Elevated Temp	Comments
1	32170023	20.4	20.5	20.5	20.8	20.6		

Paperwork Not Enclosed Details

Sample ID on Label	No. of Containers	Date on Label	Comments
091718-01-SW-V-A-1	9	9/17/2018 11:45	
091718-01-SW-V-B-1	9	9/17/2018 12:00	
091718-01-SW-V-C-1	9	9/17/2018 12:15	

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 01, 2018 10:41

Project: Rensselaer

Account #: 04285
Group Number: 1988876
SDG: RNS08
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
091818-01-SW-U-A-1 Grab Surface Water	09/18/2018 11:45	9809835
091818-01-SW-U-A-1 Filtered Grab Surface Water	09/18/2018 11:45	9809836
091818-01-SW-U-B-1 Grab Surface Water	09/18/2018 12:00	9809837
091818-01-SW-U-B-1 Filtered Grab Surface Water	09/18/2018 12:00	9809838
091818-01-SW-U-C-1 Grab Surface Water	09/18/2018 12:20	9809839
091818-01-SW-U-C-1 Filtered Grab Surface Water	09/18/2018 12:20	9809840
091818-02-SW-A-A-1 Grab Surface Water	09/18/2018 14:30	9809841
091818-02-SW-A-A-1 Filtered Grab Surface Water	09/18/2018 14:30	9809842
091818-02-SW-A-B-1 Grab Surface Water	09/18/2018 14:45	9809843
091818-02-SW-A-B-1 Filtered Grab Surface Water	09/18/2018 14:45	9809844
091818-02-SW-A-C-1 Grab Surface Water	09/18/2018 14:55	9809845
091818-02-SW-A-C-1 Filtered Grab Surface Water	09/18/2018 14:55	9809846
091818-03-SW-D-A-1 Grab Surface Water	09/18/2018 12:50	9809847
091818-03-SW-D-A-1 Filtered Grab Surface Water	09/18/2018 12:50	9809848
091818-03-SW-D-B-1 Grab Surface Water	09/18/2018 13:15	9809849
091818-03-SW-D-B-1 Filtered Grab Surface Water	09/18/2018 13:15	9809850
091818-03-SW-D-C-1 Grab Surface Water	09/18/2018 13:30	9809851
091818-03-SW-D-C-1 MS Grab Surface Water	09/18/2018 13:30	9809852
091818-03-SW-D-C-1 MSD Grab Surface Water	09/18/2018 13:30	9809853
091818-03-SW-D-C-1 DUP Grab Surface Water	09/18/2018 13:30	9809854
091818-03-SW-D-C-1 Filtered Grab Surface Water	09/18/2018 13:30	9809855
091818-03-SW-D-C-1 MS Filtered Grab Surface Water	09/18/2018 13:30	9809856
091818-03-SW-D-C-1 MSD Filtered Grab Surface Water	09/18/2018 13:30	9809857
091818-03-SW-D-C-1 DUP Filtered Grab Surface Water	09/18/2018 13:30	9809858
091818-03-SW-D-A-2 Grab Surface Water	09/18/2018 13:05	9809859
091818-03-SW-D-A-2 Filtered Grab Surface Water	09/18/2018 13:05	9809860
091818-02-SW-A-C-3 Grab Surface Water	09/18/2018 16:30	9809861
091818-02-SW-A-C-3 Filtered Grab Surface Water	09/18/2018 16:30	9809862

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **091818-01-SW-U-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 11:45
SDG#: RNS08-01

BASF Corporation
ELLE Sample #: WW 9809835
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	2.4	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	4.2	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	5.4	1.1	3.0	1
06049	Zinc	7440-66-6	26.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	105,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	140	1.40	10.0	10
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	140,000	7,000	21,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 11:45
SDG#: RNS08-01

BASF Corporation
ELLE Sample #: WW 9809835
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/20/2018 23:17	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/20/2018 23:17	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 19:19	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:39	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 12:55	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451A	09/20/2018 08:20	Michele L Graham	10
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:06	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 11:45
SDG#: RNS08-02

BASF Corporation
ELLE Sample #: WW 9809836
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.2 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.82 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 19:30	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:15	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:15	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:15	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:03	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:15	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:15	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:00
SDG#: RNS08-03

BASF Corporation
ELLE Sample #: WW 9809837
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.105	0.527	1
14188	PCB-1221	11104-28-2	N.D. D1	0.105	0.527	1
14188	PCB-1232	11141-16-5	N.D. D1	0.105	0.527	1
14188	PCB-1242	53469-21-9	N.D. D1	0.105	0.527	1
14188	PCB-1248	12672-29-6	N.D. D1	0.105	0.527	1
14188	PCB-1254	11097-69-1	N.D. D1	0.105	0.527	1
14188	PCB-1260	11096-82-5	N.D. D1	0.105	0.527	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0781	0.527	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0781	0.527	1
14188	Total PCBs	1336-36-3	N.D.	0.0781	0.527	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.4 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.9 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	108,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	45	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	45,300	3,000	9,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:00
SDG#: RNS08-03

BASF Corporation
ELLE Sample #: WW 9809837
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/20/2018 23:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/20/2018 23:39	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 19:41	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 13:03	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451A	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:06	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:00
SDG#: RNS08-04

BASF Corporation
ELLE Sample #: WW 9809838
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.93 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 19:53	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:17	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:17	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:05	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:17	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:17	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:20
SDG#: RNS08-05

BASF Corporation
ELLE Sample #: WW 9809839
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.8 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.9 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	3.1	1.1	3.0	1
06049	Zinc	7440-66-6	15.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	107,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	75	0.560	4.00	4
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	78,000	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:20
SDG#: RNS08-05

BASF Corporation
ELLE Sample #: WW 9809839
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 00:00	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 00:00	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 20:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:49	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 13:11	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451A	09/20/2018 08:20	Michele L Graham	4
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:06	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-01-SW-U-C-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:20
SDG#: RNS08-06

BASF Corporation
ELLE Sample #: WW 9809840
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.93 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 20:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:25	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:25	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:25	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:13	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:25	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:25	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:30
SDG#: RNS08-07

BASF Corporation
ELLE Sample #: WW 9809841
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.129	0.644	1
14188	PCB-1221	11104-28-2	N.D. D1	0.129	0.644	1
14188	PCB-1232	11141-16-5	N.D. D1	0.129	0.644	1
14188	PCB-1242	53469-21-9	N.D. D1	0.129	0.644	1
14188	PCB-1248	12672-29-6	N.D. D1	0.129	0.644	1
14188	PCB-1254	11097-69-1	N.D. D1	0.129	0.644	1
14188	PCB-1260	11096-82-5	N.D. D1	0.129	0.644	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0954	0.644	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0954	0.644	1
14188	Total PCBs	1336-36-3	N.D.	0.0954	0.644	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.7 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	13.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	113,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	50	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	65,000	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:30
SDG#: RNS08-07

BASF Corporation
ELLE Sample #: WW 9809841
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 00:22	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 00:22	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 20:27	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:52	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 13:19	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:06	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:30
SDG#: RNS08-08

BASF Corporation
ELLE Sample #: WW 9809842
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.70 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 16:40	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:28	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:28	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:28	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:16	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:28	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:28	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:45
SDG#: RNS08-09

BASF Corporation
ELLE Sample #: WW 9809843
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.130	0.651	1
14188	PCB-1221	11104-28-2	N.D. D1	0.130	0.651	1
14188	PCB-1232	11141-16-5	N.D. D1	0.130	0.651	1
14188	PCB-1242	53469-21-9	N.D. D1	0.130	0.651	1
14188	PCB-1248	12672-29-6	N.D. D1	0.130	0.651	1
14188	PCB-1254	11097-69-1	N.D. D1	0.130	0.651	1
14188	PCB-1260	11096-82-5	N.D. D1	0.130	0.651	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0964	0.651	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0964	0.651	1
14188	Total PCBs	1336-36-3	N.D.	0.0964	0.651	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.4 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.0 J	1.1	3.0	1
06049	Zinc	7440-66-6	12.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	114,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	45	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	51,000	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:45
SDG#: RNS08-09

BASF Corporation
ELLE Sample #: WW 9809843
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 00:44	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 00:44	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 16:51	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:54	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 13:27	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:06	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:45
SDG#: RNS08-10

BASF Corporation
ELLE Sample #: WW 9809844
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.82 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 17:03	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:30	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:30	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:30	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:18	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:30	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:30	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 08:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:55
SDG#: RNS08-11

BASF Corporation
ELLE Sample #: WW 9809845
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.5 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	8.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	120,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	36	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	39,000	3,000	9,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:55
SDG#: RNS08-11

BASF Corporation
ELLE Sample #: WW 9809845
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 01:06	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 01:06	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 17:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:57	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 13:36	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:07	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 14:55
SDG#: RNS08-12

BASF Corporation
ELLE Sample #: WW 9809846
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.95 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 17:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:33	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:33	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:33	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:21	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:33	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:33	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 08:07	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:50
SDG#: RNS08-13

BASF Corporation
ELLE Sample #: WW 9809847
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.8 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	110,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	60	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	64,000	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:50
SDG#: RNS08-13

BASF Corporation
ELLE Sample #: WW 9809847
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 01:27	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 01:27	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 17:37	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:00	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 14:25	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:07	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 12:50
SDG#: RNS08-14

BASF Corporation
ELLE Sample #: WW 9809848
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.0 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 20:29	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:36	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:36	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:36	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:24	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:36	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:36	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 08:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:15
SDG#: RNS08-15

BASF Corporation
ELLE Sample #: WW 9809849
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.6 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	107,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	55	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	54,000	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-B-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:15
SDG#: RNS08-15

BASF Corporation
ELLE Sample #: WW 9809849
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 01:49	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 01:49	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 17:59	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:02	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 14:33	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:07	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:15
SDG#: RNS08-16

BASF Corporation
ELLE Sample #: WW 9809850
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.532	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.532	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.532	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.532	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.532	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.532	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.532	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0787	0.532	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0787	0.532	1
14188	Total PCBs	1336-36-3	N.D.	0.0787	0.532	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.76 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 20:40	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:38	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:38	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:38	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:26	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:38	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:38	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 08:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17BKG

BASF Corporation
ELLE Sample #: WW 9809851
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
	A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.					
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.4 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	13.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	109,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	45	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	49,600	4,000	12,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17BKG

BASF Corporation
ELLE Sample #: WW 9809851
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/20/2018 21:51	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/20/2018 21:51	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 18:45	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 14:41	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:07	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MS Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17MS

BASF Corporation
ELLE Sample #: WW 9809852
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	21	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	20	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.74 D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	4.25 D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	7.99	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	4.8	0.15	1.0	1
06031	Chromium	7440-47-3	52.8	0.70	4.0	1
06033	Copper	7440-50-8	53.5	9.9	40.0	1
06035	Lead	7439-92-1	17.0	1.1	3.0	1
06049	Zinc	7440-66-6	518	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	1.0	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	186,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/20/2018 22:13	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/20/2018 22:13	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MS Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17MS

BASF Corporation
ELLE Sample #: WW 9809852
ELLE Group #: 1988876
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 18:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:31	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 14:50	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MSD Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17MSD

BASF Corporation
ELLE Sample #: WW 9809853
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	21	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	20	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	21	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	20	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.49 D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	4.90 D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	9.40	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.0	0.15	1.0	1
06031	Chromium	7440-47-3	54.0	0.70	4.0	1
06033	Copper	7440-50-8	53.5	9.9	40.0	1
06035	Lead	7439-92-1	16.8	1.1	3.0	1
06049	Zinc	7440-66-6	521	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.98	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	192,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/20/2018 22:34	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/20/2018 22:34	Don V Viray	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MSD Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17MSD

BASF Corporation
ELLE Sample #: WW 9809853
ELLE Group #: 1988876
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630009A	09/23/2018 19:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630009A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:34	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 14:59	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 DUP Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-17DUP

BASF Corporation
ELLE Sample #: WW 9809854
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.8 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	17.9	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	107,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	38	0.280	2.00	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 10:28	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571401	09/24/2018 07:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571401	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 15:07	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-18BKG

BASF Corporation
ELLE Sample #: WW 9809855
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.4 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.78 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.5 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 20:38	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 15:59	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 15:59	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 15:59	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 11:46	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 15:59	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 15:59	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MS Filtered Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-18MS

BASF Corporation
ELLE Sample #: WW 9809856
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.69 D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	5.41 D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	10.1	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.7	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	52.4	0.70	4.0	1
06033	Copper	7440-50-8	49.2	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	520	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.98	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 20:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 11:55	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:07	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 MSD Filtered Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-18MSD

BASF Corporation
ELLE Sample #: WW 9809857
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.56 D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	5.50 D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	10.1	0.0902	0.610	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.1	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	52.7	0.70	4.0	1
06033	Copper	7440-50-8	50.2	9.9	40.0	1
06035	Lead	7439-92-1	16.0	1.1	3.0	1
06049	Zinc	7440-66-6	515	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.95	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 21:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:09	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:09	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:09	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 11:58	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:09	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:09	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-C-1 DUP Filtered Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:30
SDG#: RNS08-18DUP

BASF Corporation
ELLE Sample #: WW 9809858
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.2 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:04	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:04	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:04	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 11:51	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:04	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:04	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 07:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-2 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:05
SDG#: RNS08-19

BASF Corporation
ELLE Sample #: WW 9809859
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.1 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	106,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	50	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	61,500	5,000	15,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-2 Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:05
SDG#: RNS08-19

BASF Corporation
ELLE Sample #: WW 9809859
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 02:11	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 02:11	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 21:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705006A	09/24/2018 11:05	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705006	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 15:15	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18263385801A	09/20/2018 13:07	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-03-SW-D-A-2 Filtered Grab Surface Water**
COC: 556608

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 13:05
SDG#: RNS08-20

BASF Corporation
ELLE Sample #: WW 9809860
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.93 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630010A	09/21/2018 21:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630010A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705007A	09/25/2018 12:29	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705007A	09/24/2018 16:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571402	09/24/2018 08:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705007	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571402	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-3 Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 16:30
SDG#: RNS08-21

BASF Corporation
ELLE Sample #: WW 9809861
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.102	0.512	1
14188	PCB-1221	11104-28-2	N.D. D1	0.102	0.512	1
14188	PCB-1232	11141-16-5	N.D. D1	0.102	0.512	1
14188	PCB-1242	53469-21-9	N.D. D1	0.102	0.512	1
14188	PCB-1248	12672-29-6	N.D. D1	0.102	0.512	1
14188	PCB-1254	11097-69-1	N.D. D1	0.102	0.512	1
14188	PCB-1260	11096-82-5	N.D. D1	0.102	0.512	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0758	0.512	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0758	0.512	1
14188	Total PCBs	1336-36-3	N.D.	0.0758	0.512	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	10,000	1
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	0.20 J	0.140	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-3 Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 16:30
SDG#: RNS08-21

BASF Corporation
ELLE Sample #: WW 9809861
ELLE Group #: 1988876
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670
Trip blank vials were not received by the laboratory for this sample group.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182632AA	09/21/2018 02:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182632AA	09/21/2018 02:32	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630011A	09/23/2018 15:10	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630011A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:34	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705008	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	2	18267001101A	09/24/2018 07:37	Susan A Engle	1
12145	Turbidity	SM 2130 B-2011	1	18263121451B	09/20/2018 08:20	Michele L Graham	1

*=This limit was used in the evaluation of the final result

Sample Description: **091818-02-SW-A-C-3 Filtered Grab Surface Water**
COC: 556607

Project Name: **Rensselaer**

Submittal Date/Time: 09/19/2018 10:30
Collection Date/Time: 09/18/2018 16:30
SDG#: RNS08-22

BASF Corporation
ELLE Sample #: WW 9809862
ELLE Group #: 1988876
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.100	0.502	1
14188	PCB-1221	11104-28-2	N.D. D1	0.100	0.502	1
14188	PCB-1232	11141-16-5	N.D. D1	0.100	0.502	1
14188	PCB-1242	53469-21-9	N.D. D1	0.100	0.502	1
14188	PCB-1248	12672-29-6	N.D. D1	0.100	0.502	1
14188	PCB-1254	11097-69-1	N.D. D1	0.100	0.502	1
14188	PCB-1260	11096-82-5	N.D. D1	0.100	0.502	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0743	0.502	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0743	0.502	1
14188	Total PCBs	1336-36-3	N.D.	0.0743	0.502	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630011A	09/23/2018 15:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630011A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182630705008A	09/24/2018 19:37	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182640571403	09/24/2018 08:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182630705008	09/21/2018 16:47	Barbara A Kane	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571403	09/22/2018 15:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

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Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182632AA	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809853,9809859,9809861		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182630009A	Sample number(s): 9809842-9809847,9809849,9809851-9809853		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182630010A	Sample number(s): 9809835-9809841,9809855-9809857,9809859-9809860		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182630011A	Sample number(s): 9809861-9809862		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
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Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182680023A	Sample number(s): 9809848,9809850		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182630705006A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182630705007A	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182630705008A	Sample number(s): 9809861-9809862		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182640571401	Sample number(s): 9809835,9809837,9809851-9809854		
Mercury	N.D.	0.050	0.20
Batch number: 182640571402	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860		
Mercury	N.D.	0.050	0.20

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
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Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 182640571403	Sample number(s): 9809839,9809841,9809843,9809845,9809847,9809849,9809859,9809861-9809862		
Mercury	N.D.	0.050	0.20
	N T U	N T U	N T U
Batch number: 18263121451A	Sample number(s): 9809835,9809837,9809839		
Turbidity	0.15 J	0.140	1.00
Batch number: 18263121451B	Sample number(s): 9809841,9809843,9809845,9809847,9809849,9809851,9809854,9809859,9809861		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18263385801A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851,9809859		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18266001102A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859		
Total Hardness	N.D.	3,000	10,000
Batch number: 18267001101A	Sample number(s): 9809861		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182632AA	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809853,9809859,9809861								
Benzene	20	19.91			100		80-120		
Chlorobenzene	20	19.14			96		80-120		
1,2-Dichlorobenzene	20	19.23			96		80-120		
1,3-Dichlorobenzene	20	19.15			96		80-120		
1,4-Dichlorobenzene	20	19.26			96		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182630009A	Sample number(s): 9809842-9809847,9809849,9809851-9809853								
PCB-1016	5.01	3.03			60		50-140		
PCB-1260	5.00	3.33			67		50-140		
Batch number: 182630010A	Sample number(s): 9809835-9809841,9809855-9809857,9809859-9809860								
PCB-1016	5.01	3.50			70		50-140		
PCB-1260	5.00	4.01			80		50-140		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Client Name: BASF Corporation
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LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182630011A	Sample number(s): 9809861-9809862								
PCB-1016	5.01	1.19	5.01	2.88	24*	58	50-140	83*	36
PCB-1260	5.00	2.01	5.00	3.79	40*	76	50-140	61*	38
Batch number: 182680023A	Sample number(s): 9809848,9809850								
PCB-1016	5.01	4.13	5.01	4.11	83	82	50-140	1	36
PCB-1260	5.00	4.28	5.00	4.07	86	81	50-140	5	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182630705006A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859								
Arsenic	10	10.06			101		85-115		
Cadmium	5.00	4.93			99		85-115		
Chromium	50	52.18			104		85-115		
Copper	50	49.44			99		85-115		
Lead	15	15.87			106		85-115		
Zinc	500	494.2			99		85-115		
Batch number: 182630705007A	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860								
Arsenic	10	9.85			99		85-115		
Cadmium	5.00	5.22			104		85-115		
Chromium	50	50.44			101		85-115		
Copper	50	49.8			100		89-120		
Lead	15	14.74			98		85-115		
Zinc	500	528.02			106		85-115		
Batch number: 182630705008A	Sample number(s): 9809861-9809862								
Arsenic	10	9.65			96		85-115		
Cadmium	5.00	4.52			90		85-115		
Chromium	50	49.99			100		85-115		
Copper	50	46.43			93		85-115		
Lead	15	15.36			102		85-115		
Zinc	500	468.5			94		85-115		
Batch number: 182640571401	Sample number(s): 9809835,9809837,9809851-9809854								
Mercury	1.00	0.952			95		85-115		
Batch number: 182640571402	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860								
Mercury	1.00	0.956			96		85-115		
Batch number: 182640571403	Sample number(s): 9809839,9809841,9809843,9809845,9809847,9809849,9809859,9809861-9809862								
Mercury	1.00	0.994			99		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
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LCS/LCSD (continued)

Analysis Name	LCS Spike Added N T U	LCS Conc N T U	LCSD Spike Added N T U	LCSD Conc N T U	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18263121451A	Sample number(s): 9809835,9809837,9809839								
Turbidity	10	9.60			96		90-104		
Batch number: 18263121451B	Sample number(s): 9809841,9809843,9809845,9809847,9809849,9809851,9809854,9809859,9809861								
Turbidity	10	9.60			96		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18263385801A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851,9809859								
Total Suspended Solids	150000	149300			100		89-105		
Batch number: 18266001102A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859								
Total Hardness	40000	38280			96		85-110		
Batch number: 18267001101A	Sample number(s): 9809861								
Total Hardness	40000	38610	40000	38380	97	96	85-110	1	3

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5182632AA	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809853,9809859,9809861 UNSPK: 9809851									
Benzene	N.D.	20	21.48	20	21.33	107	107	80-120	1	30
Chlorobenzene	N.D.	20	20.76	20	20.6	104	103	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	20.78	20	20.17	104	101	80-120	3	30
1,3-Dichlorobenzene	N.D.	20	20.76	20	20.6	104	103	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	20.45	20	20.37	102	102	80-120	0	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 182630009A	Sample number(s): 9809842-9809847,9809849,9809851-9809853 UNSPK: 9809851									
PCB-1016	N.D.	5.54	3.74	6.14	4.49	67	73	50-140	18	36
PCB-1260	N.D.	5.53	4.25	6.13	4.90	77	80	50-140	14	38
Batch number: 182630010A	Sample number(s): 9809835-9809841,9809855-9809857,9809859-9809860 UNSPK: 9809855									
PCB-1016	N.D.	5.96	4.69	6.11	4.56	79	75	50-140	3	36
PCB-1260	N.D.	5.95	5.41	6.10	5.50	91	90	50-140	2	38

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
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MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182630705006A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859 UNSPK: 9809851									
Arsenic	1.43	10	10.91	10	11.92	95	105	70-130	9	20
Cadmium	N.D.	5.00	4.82	5.00	4.99	96	100	70-130	3	20
Chromium	2.47	50	52.78	50	54.04	101	103	70-130	2	20
Copper	N.D.	50	53.45	50	53.49	107	107	70-130	0	20
Lead	2.16	15	16.96	15	16.84	99	98	70-130	1	20
Zinc	13.68	500	518.45	500	520.55	101	101	70-130	0	20
Batch number: 182630705007A	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860 UNSPK: 9809855									
Arsenic	1.39	10	10.7	10	11.09	93	97	70-130	4	20
Cadmium	N.D.	5.00	4.88	5.00	4.87	98	97	70-130	0	20
Chromium	0.779	50	52.45	50	52.68	103	104	70-130	0	20
Copper	N.D.	50	49.17	50	50.24	98	100	70-130	2	20
Lead	N.D.	15	15.77	15	15.95	105	106	70-130	1	20
Zinc	7.54	500	520.42	500	515.18	103	102	70-130	1	20
Batch number: 182640571401	Sample number(s): 9809835,9809837,9809851-9809854 UNSPK: 9809851									
Mercury	N.D.	1.00	1.00	1.00	0.980	100	98	80-120	2	20
Batch number: 182640571402	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860 UNSPK: 9809855									
Mercury	N.D.	1.00	0.976	1.00	0.951	98	95	80-120	3	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18266001102A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859 UNSPK: 9809851									
Total Hardness	109320	80000	185720	80000	191760	96	103	85-110	3	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:41

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Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182630705006A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859 BKG: 9809851			
Arsenic	1.43	1.76	20 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	2.47	1.49	49* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	2.16	2.17	1 (1)	20
Zinc	13.68	17.86	27* (1)	20
Batch number: 182630705007A	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860 BKG: 9809855			
Arsenic	1.39	1.21	13 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.779	1.13	36* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	7.54	8.15	8 (1)	20
Batch number: 182640571401	Sample number(s): 9809835,9809837,9809851-9809854 BKG: 9809851			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182640571402	Sample number(s): 9809836,9809838,9809840,9809842,9809844,9809846,9809848,9809850,9809855-9809858,9809860 BKG: 9809855			
Mercury	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18263121451B	Sample number(s): 9809841,9809843,9809845,9809847,9809849,9809851,9809854,9809859,9809861 BKG: 9809851			
Turbidity	45	38	17*	8
	ug/l	ug/l		
Batch number: 18266001102A	Sample number(s): 9809835,9809837,9809839,9809841,9809843,9809845,9809847,9809849,9809851-9809854,9809859 BKG: 9809851			
Total Hardness	109320	106780	2	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
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Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182632AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9809835	102	97	93	87
9809837	100	98	94	89
9809839	103	98	93	88
9809841	103	99	94	88
9809843	103	98	93	88
9809845	104	99	92	88
9809847	104	99	92	87
9809849	104	102	94	89
9809851	101	99	94	88
9809852	99	99	95	98
9809853	100	98	95	97
9809859	103	98	94	88
9809861	106	100	93	87
Blank	100	98	94	87
LCS	98	99	95	96
MS	99	99	95	98
MSD	100	98	95	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9809842	48	63	46	62
9809843	49	64	48	63
9809844	58	75	57	72
9809845	41	50	40	52
9809846	54	69	53	66
9809847	54	61	52	60
9809849	49	64	49	62
9809851	60	60	58	59
9809852	54	59	53	59
9809853	50	61	49	59
Blank	52	59	53	59
LCS	47	37	46	36
MS	54	59	53	59
MSD	50	61	49	59
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630010A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:41

Group Number: 1988876

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9809835	58	61	56	59
9809836	56	68	56	68
9809837	58	64	56	62
9809838	51	76	50	74
9809839	55	65	54	65
9809840	56	79	56	79
9809841	52	69	51	67
9809855	56	65	56	63
9809856	56	76	54	74
9809857	59	72	59	74
9809859	54	65	52	65
9809860	50	71	50	73
Blank	51	60	50	61
LCS	48	61	46	63
MS	56	76	54	74
MSD	59	72	59	74
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9809861	34	49	33	49
9809862	56	70	54	73
Blank	66	72	63	72
LCS	9*	38	9*	38
LCSD	29*	56	28*	55
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182680023A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9809848	71	74	69	74
9809850	59	76	56	81
Blank	69	65	66	62
LCS	74	62	72	64
LCSD	77	64	75	65
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1988876 Sample # 9809835-62

COC # 556608

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Aroclors - 608 (F)	metals - 200.7/200.8 (F)	VOCs - 8260 (N)	PCB Aroclors - 608	metals - 200.7/200.8 (N)	Hg - 245.1 (N)	hardness - 130.1 (N)	TSS - 160.1	Turbidity - SM2130	Remarks
091818-01-SW-U-A-1	9/18/18	1145	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	filtered PCB/metals
091818-01-SW-U-B-1	9/18/18	1200	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	filtered PCB/metals
091818-01-SW-U-C-1	9/18/18	1220	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	filtered PCB/metals
091818-02-SW-A-A-1		1430	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-02-SW-A-B-1		1445	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-02-SW-A-C-1		1455	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-03-SW-D-A-1		1256	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-03-SW-D-B-1		1315	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-03-SW-D-C-1		1330	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	
091818-03-SW-D-A-2		1305	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	filtered PCB/metals

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 9/21/18

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
				9/19/18	1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.C-4.1 °C 9/19/18

1.C-4.1°

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1988876 Sample # 9809835-60

COC # 556607

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCB Aroclor - 608 (F)	metals - 200.7/200.8 (F)	VOCs - 8260 (N)	PCB Aroclors - 608 (N)	metals - 200.7/200.8 (N)	Hg - 245.1 (N)	hardness - 130.1 (N)	TSS - 160.1	Turbidity - SM2130	Remarks
091818-03-SW-D-G-1	9/18/18	1330	✓		36	✓	✓	✓	✓	✓	✓	✓	✓	✓	MS/MSD
091818-02-SW-A-C-3	9/18/18	1630	✓		12	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Analysis Requested — Preservation and Filtration Codes: F | F,N | | | N | N | N | | | |

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 9/21/18

E-mail address: ryan.mccarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
				9/19/18	1630

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 1.6-4.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227444

Group Number(s): 1988876

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/19/2018 10:30
Number of Packages:	5	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Wesley Miller (2308) at 13:59 on 09/19/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	1.9	IR	Wet	Y	Bagged	N
2	32170023	1.6	IR	Wet	Y	Bagged	N
3	32170023	3.7	IR	Wet	Y	Bagged	N
4	32170023	4.1	IR	Wet	Y	Bagged	N
5	32170023	1.8	IR	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
091818-03-SW-D-C-1 MS/MSD	20	36	Missing TSS and hardness bottles
091818-02-SW-A-C-3	10	12	Missing TSS and hardness bottles

2425 New Holland Pike
Lancaster, PA 17605-2425

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F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 28, 2018 08:46

Project: Rensselaer

Account #: 04285
Group Number: 1989270
SDG: RNS09
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
091918-01-SW-D-A-1 Grab Surface Water	09/19/2018 09:40	9811648
091918-01-SW-D-A-1 Filtered Grab Surface Water	09/19/2018 09:40	9811649
091918-01-SW-D-B-1 Grab Surface Water	09/19/2018 09:45	9811650
091918-01-SW-D-C-1 Grab Surface Water	09/19/2018 09:50	9811651
091918-02-SW-A-A-1 Grab Surface Water	09/19/2018 10:30	9811652
091918-02-SW-A-A-1 Filtered Grab Surface Water	09/19/2018 10:30	9811653
091918-02-SW-A-B-1 Grab Surface Water	09/19/2018 10:40	9811654
091918-02-SW-A-C-1 Grab Surface Water	09/19/2018 10:45	9811655
091918-03-SW-D-A-1 Grab Surface Water	09/19/2018 11:20	9811656
091918-03-SW-D-A-1 Filtered Grab Surface Water	09/19/2018 11:20	9811657
091918-03-SW-D-B-1 Grab Surface Water	09/19/2018 11:25	9811658
091918-03-SW-D-C-1 Grab Surface Water	09/19/2018 11:30	9811659
091918-TB-01 Water	09/19/2018 16:30	9811660

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **091918-01-SW-D-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 09:40
SDG#: RNS09-01

BASF Corporation
ELLE Sample #: WW 9811648
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.79 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.9	0.140	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-01-SW-D-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 09:40
SDG#: RNS09-01

BASF Corporation
ELLE Sample #: WW 9811648
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,800	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 20:34	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 20:34	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 19:53	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:17	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:32	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:17	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:17	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:32	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:17	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 09:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102B	09/23/2018 15:57	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-01-SW-D-A-1 Filtered Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 09:40
SDG#: RNS09-02

BASF Corporation
ELLE Sample #: WW 9811649
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D. K4	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 20:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:19	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:35	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:35	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:19	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:35	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:19	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 09:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-01-SW-D-B-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 09:45
SDG#: RNS09-03

BASF Corporation
ELLE Sample #: WW 9811650
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	13,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **091918-01-SW-D-C-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 09:50
SDG#: RNS09-04

BASF Corporation
ELLE Sample #: WW 9811651
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-02-SW-A-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 10:30
SDG#: RNS09-05

BASF Corporation
ELLE Sample #: WW 9811652
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.91 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-02-SW-A-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 10:30
SDG#: RNS09-05

BASF Corporation
ELLE Sample #: WW 9811652
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,700	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 20:55	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 20:55	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 20:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:24	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:38	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:24	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:24	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:38	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:24	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 09:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 16:13	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 10:30
SDG#: RNS09-06

BASF Corporation
ELLE Sample #: WW 9811653
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.137	0.687	1
14188	PCB-1221	11104-28-2	N.D. D1	0.137	0.687	1
14188	PCB-1232	11141-16-5	N.D. D1	0.137	0.687	1
14188	PCB-1242	53469-21-9	N.D. D1	0.137	0.687	1
14188	PCB-1248	12672-29-6	N.D. D1	0.137	0.687	1
14188	PCB-1254	11097-69-1	N.D. D1	0.137	0.687	1
14188	PCB-1260	11096-82-5	N.D. D1	0.137	0.687	1
14188	PCB-1262	37324-23-5	N.D. D1	0.102	0.687	1
14188	PCB-1268	11100-14-4	N.D. D1	0.102	0.687	1
14188	Total PCBs	1336-36-3	N.D.	0.102	0.687	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D. K4	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 20:26	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:26	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:26	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:26	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 09:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-02-SW-A-B-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 10:40
SDG#: RNS09-07

BASF Corporation
ELLE Sample #: WW 9811654
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	14,000	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801B	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-02-SW-A-C-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 10:45
SDG#: RNS09-08

BASF Corporation
ELLE Sample #: WW 9811655
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-03-SW-D-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 11:20
SDG#: RNS09-09

BASF Corporation
ELLE Sample #: WW 9811656
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	88,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-03-SW-D-A-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 11:20
SDG#: RNS09-09

BASF Corporation
ELLE Sample #: WW 9811656
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2540 D-2011**		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 21:17	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 21:17	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 21:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/26/2018 09:54	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:19	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/26/2018 09:54	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/26/2018 09:54	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:19	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/26/2018 09:54	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 10:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001102A	09/23/2018 16:20	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 11:20
SDG#: RNS09-10

BASF Corporation
ELLE Sample #: WW 9811657
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D. K4	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182630022A	09/23/2018 21:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182630022A	09/20/2018 20:02	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:28	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:48	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:48	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:28	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182640705002A	09/24/2018 14:48	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182640705002A	09/25/2018 15:28	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182640571405	09/24/2018 10:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182640705002	09/22/2018 14:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182640571405	09/22/2018 15:10	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-03-SW-D-B-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 11:25
SDG#: RNS09-11

BASF Corporation
ELLE Sample #: WW 9811658
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	14,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-03-SW-D-C-1 Grab Surface Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 11:30
SDG#: RNS09-12

BASF Corporation
ELLE Sample #: WW 9811659
ELLE Group #: 1989270
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18263121453A	09/20/2018 17:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18264385801A	09/21/2018 13:01	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **091918-TB-01 Water**
COC: 556609

Project Name: **Rensselaer**

Submittal Date/Time: 09/20/2018 10:20
Collection Date/Time: 09/19/2018 16:30
SDG#: RNS09-13TB

BASF Corporation
ELLE Sample #: WW 9811660
ELLE Group #: 1989270
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182651AA	09/22/2018 15:54	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182651AA	09/22/2018 15:54	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 08:46

Group Number: 1989270

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182651AA	Sample number(s): 9811648,9811652,9811656,9811660		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182630022A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182640571405	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657		
Mercury	N.D.	0.050	0.20
Batch number: 182640705002A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18263121453A	Sample number(s): 9811648,9811650-9811652,9811654-9811656,9811658-9811659		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18264385801A	Sample number(s): 9811648,9811650-9811652,9811655-9811656,9811658-9811659		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18264385801B	Sample number(s): 9811654		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18266001102A	Sample number(s): 9811652,9811656		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 08:46

Group Number: 1989270

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000
Batch number: 18266001102B	Sample number(s): 9811648		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182651AA	Sample number(s): 9811648,9811652,9811656,9811660								
Benzene	20	18.57			93		80-120		
Chlorobenzene	20	18.17			91		80-120		
1,2-Dichlorobenzene	20	17.63			88		80-120		
1,3-Dichlorobenzene	20	17.8			89		80-120		
1,4-Dichlorobenzene	20	17.87			89		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182630022A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657								
PCB-1016	5.01	2.91	5.01	2.74	58	55	50-140	6	36
PCB-1260	5.00	3.84	5.00	3.63	77	73	50-140	6	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182640571405	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657								
Mercury	1.00	0.944			94		85-115		
Batch number: 182640705002A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657								
Arsenic	10	10.75			108		85-115		
Cadmium	5.00	5.44			109		85-115		
Chromium	50	50.6			101		85-115		
Copper	50	50.16			100		85-115		
Lead	15	17.13			114		85-115		
Zinc	500	512.5			103		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18263121453A	Sample number(s): 9811648,9811650-9811652,9811654-9811656,9811658-9811659								
Turbidity	10	9.80			98		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18264385801A	Sample number(s): 9811648,9811650-9811652,9811655-9811656,9811658-9811659								
Total Suspended Solids	150000	148000			99		89-105		
Batch number: 18264385801B	Sample number(s): 9811654								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 08:46

Group Number: 1989270

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Suspended Solids	150000	148000			99		89-105		
Batch number: 18266001102A	Sample number(s): 9811652,9811656								
Total Hardness	40000	38280			96		85-110		
Batch number: 18266001102B	Sample number(s): 9811648								
Total Hardness	40000	38280			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182640571405	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657 UNSPK: 9811648									
Mercury	N.D.	1.00	0.998			100		80-120		
Batch number: 182640705002A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657 UNSPK: 9811656									
Arsenic	0.737	10	11.7			110		70-130		
Cadmium	N.D.	5.00	5.43			109		70-130		
Chromium	1.21	50	54.58			107		70-130		
Copper	N.D.	50	58.37			117		70-130		
Lead	N.D.	15	16.62			111		70-130		
Zinc	7.29	500	559.07			110		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182640571405	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657 BKG: 9811648			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182640705002A	Sample number(s): 9811648-9811649,9811652-9811653,9811656-9811657 BKG: 9811656			
Arsenic	0.737	1.10	39* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.21	1.11	9 (1)	20
Copper	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 08:46

Group Number: 1989270

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Lead	N.D.	N.D.	0 (1)	20
Zinc	7.29	N.D.	200* (1)	20
	N T U	N T U		
Batch number: 18263121453A	Sample number(s): 9811648,9811650-9811652,9811654-9811656,9811658-9811659 BKG: 9811650			
Turbidity	14	14	0	8
	ug/l	ug/l		
Batch number: 18264385801A	Sample number(s): 9811648,9811650-9811652,9811655-9811656,9811658-9811659 BKG: 9811652			
Total Suspended Solids	16666.7	16888.9	1 (1)	5
Batch number: 18264385801B	Sample number(s): 9811654 BKG: 9811654			
Total Suspended Solids	14000	14444.5	3 (1)	5
Batch number: 18266001102B	Sample number(s): 9811648 BKG: 9811648			
Total Hardness	81580	85720	5 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9811648	109	104	93	88
9811652	108	101	93	88
9811656	109	99	93	88
9811660	107	101	94	88
Blank	106	98	92	88
LCS	101	100	95	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9811648	51	70	49	72
9811649	52	68	50	70
9811652	51	62	51	64
9811653	47	79	47	80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1989270
Reported: 09/28/2018 08:46

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182630022A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9811656	49	63	47	59
9811657	51	70	50	70
Blank	52	54	51	51
LCS	31*	67	30*	65
LCSD	34	54	32*	55
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1989270 Sample # 9811648-60

COC # 556609

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gebar	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	F metals (Filtered)	N metals (unfiltered)	N mercury	N hardness	# TSS	VOCs – 8260 c	Turbidity – SM2130	Remarks
091918-01-SW-D-A-1	9/19/18	0940	✓		12	2	2	1	1	1	1	1	3	✓	
091918-01-SW-D-B-1	9/19/18	0945	✓		1							1		✓	
091918-01-SW-D-C-1	9/19/18	0950	✓		1							1		✓	
091918-02-SW-A-A-1	9/19/18	1030	✓		12	2	2	1	1	1	1	1	3	✓	
091918-02-SW-A-B-1	9/19/18	1040	✓		1							1		✓	
091918-02-SW-A-C-1	9/19/18	1045	✓		1							1		✓	
091918-03-SW-D-A-1	9/19/18	1120	✓		12	2	2	1	1	1	1	1	3	✓	
091918-03-SW-D-B-1	9/19/18	1125	✓		1							1		✓	
091918-03-SW-D-C-1	9/19/18	1130	✓		1							1		✓	
[redacted] 091918-TB-01	[redacted]	1630	✓		1								1		Trip

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 9/22/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gebar	9/19/18	1635			
				9/20/18	10:20

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.6/4.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227563

Group Number(s): 1989270

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/20/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 11:17 on 09/20/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	4.9	DT	Wet	Y	Bagged	N
2	DT42-01	2.5	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details: Hudson River OU-2

Sample ID on COC	Date/Time on Label	Comments
091918-01-SW-D-A-1	9/19/2018 10:00	1000 ml bottle is correct, all other bottles don't match COC
091918-02-SW-A-A-1	9/19/2018 10:50	1000 ml bottle is correct, all other bottles don't match COC
091918-03-SW-D-A-1	9/19/2018 11:35	1000 ml bottle is correct, all other bottles don't match COC

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: September 28, 2018 15:03

Project: Rensselaer

Account #: 04285
Group Number: 1989926
SDG: RNS10
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092018-01-SW-U-A-1 Grab Surface Water	09/20/2018 08:45	9814787
092018-01-SW-U-A-1 Filtered Grab Surface Water	09/20/2018 08:45	9814788
092018-01-SW-U-B-1 Grab Surface Water	09/20/2018 08:50	9814789
092018-01-SW-U-C-1 Grab Surface Water	09/20/2018 08:55	9814790
092018-02-SW-A-A-1 Grab Surface Water	09/20/2018 09:25	9814791
092018-02-SW-A-A-1 Filtered Grab Surface Water	09/20/2018 09:25	9814792
092018-02-SW-A-B-1 Grab Surface Water	09/20/2018 09:40	9814793
092018-02-SW-A-C-1 Grab Surface Water	09/20/2018 09:45	9814794
092018-03-SW-D-A-1 Grab Surface Water	09/20/2018 08:10	9814795
092018-03-SW-D-B-1 Grab Surface Water	09/20/2018 08:15	9814796
092018-03-SW-D-C-1 Grab Surface Water	09/20/2018 08:20	9814797
092018-03-SW-D-C-1 Filtered Grab Surface Water	09/20/2018 08:20	9814798
092018-TB-01 Water	09/20/2018 14:00	9814799

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **092018-01-SW-U-A-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:45
SDG#: RNS10-01

BASF Corporation
ELLE Sample #: WW 9814787
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	N.D.	0.0930	0.628	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092018-01-SW-U-A-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:45
SDG#: RNS10-01

BASF Corporation
ELLE Sample #: WW 9814787
ELLE Group #: 1989926
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182683AA	09/26/2018 04:11	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182683AA	09/26/2018 04:11	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 01:18	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:08	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:52	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:52	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:52	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:52	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:52	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 16:53	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:45
SDG#: RNS10-02

BASF Corporation
ELLE Sample #: WW 9814788
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 01:29	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:57	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-01-SW-U-B-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:50
SDG#: RNS10-03

BASF Corporation
ELLE Sample #: WW 9814789
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,850	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-01-SW-U-C-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:55
SDG#: RNS10-04

BASF Corporation
ELLE Sample #: WW 9814790
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,460	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-02-SW-A-A-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 09:25
SDG#: RNS10-05

BASF Corporation
ELLE Sample #: WW 9814791
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.71 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,550	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092018-02-SW-A-A-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 09:25
SDG#: RNS10-05

BASF Corporation
ELLE Sample #: WW 9814791
ELLE Group #: 1989926
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182683AA	09/26/2018 04:33	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182683AA	09/26/2018 04:33	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 01:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 13:59	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 17:01	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 09:25
SDG#: RNS10-06

BASF Corporation
ELLE Sample #: WW 9814792
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640054A	09/25/2018 01:50	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640054A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:01	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571401	09/25/2018 07:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571401	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-02-SW-A-B-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 09:40
SDG#: RNS10-07

BASF Corporation
ELLE Sample #: WW 9814793
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,360	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-02-SW-A-C-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 09:45
SDG#: RNS10-08

BASF Corporation
ELLE Sample #: WW 9814794
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121452B	09/21/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-03-SW-D-A-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:10
SDG#: RNS10-09

BASF Corporation
ELLE Sample #: WW 9814795
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121453A	09/21/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-03-SW-D-B-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:15
SDG#: RNS10-10

BASF Corporation
ELLE Sample #: WW 9814796
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.3	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,870	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18264121453A	09/21/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-03-SW-D-C-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:20
SDG#: RNS10-11

BASF Corporation
ELLE Sample #: WW 9814797
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	67,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092018-03-SW-D-C-1 Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:20
SDG#: RNS10-11

BASF Corporation
ELLE Sample #: WW 9814797
ELLE Group #: 1989926
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182683AA	09/26/2018 04:55	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182683AA	09/26/2018 04:55	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640055A	09/26/2018 07:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640055A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:02	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 17:49	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18264121453A	09/21/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385802A	09/24/2018 14:41	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 08:20
SDG#: RNS10-12

BASF Corporation
ELLE Sample #: WW 9814798
ELLE Group #: 1989926
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.90 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182640055A	09/26/2018 07:26	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182640055A	09/24/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:10	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:04	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:04	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:04	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:04	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:04	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092018-TB-01 Water**
COC: 556610

Project Name: **Rensselaer**

Submittal Date/Time: 09/21/2018 10:30
Collection Date/Time: 09/20/2018 14:00
SDG#: RNS10-13TB

BASF Corporation
ELLE Sample #: WW 9814799
ELLE Group #: 1989926
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182683AA	09/26/2018 00:10	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182683AA	09/26/2018 00:10	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 15:03

Group Number: 1989926

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L182683AA	Sample number(s): 9814787,9814791,9814797,9814799		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182640054A	Sample number(s): 9814787-9814788,9814791-9814792		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182640055A	Sample number(s): 9814797-9814798		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182660571401	Sample number(s): 9814787-9814788,9814791-9814792		
Mercury	N.D.	0.050	0.20
Batch number: 182660571402	Sample number(s): 9814797-9814798		
Mercury	N.D.	0.050	0.20
Batch number: 182660705001A	Sample number(s): 9814787-9814788,9814791-9814792,9814797-9814798		
Arsenic	2.0 J	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 15:03

Group Number: 1989926

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182700705002A	Sample number(s): 9814787,9814798		
Arsenic	N.D.	0.68	2.0
	N T U	N T U	N T U
Batch number: 18264121452B	Sample number(s): 9814787,9814789-9814791,9814793-9814794		
Turbidity	0.20 J	0.140	1.00
Batch number: 18264121453A	Sample number(s): 9814795-9814797		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18266001103A	Sample number(s): 9814787,9814791,9814797		
Total Hardness	N.D.	3,000	10,000
Batch number: 18267385802A	Sample number(s): 9814787,9814789-9814791,9814793-9814797		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L182683AA	Sample number(s): 9814787,9814791,9814797,9814799								
Benzene	20	20.81	20	20.83	104	104	80-120	0	30
Chlorobenzene	20	20.84	20	20.89	104	104	80-120	0	30
1,2-Dichlorobenzene	20	20.89	20	21.07	104	105	80-120	1	30
1,3-Dichlorobenzene	20	20.84	20	20.99	104	105	80-120	1	30
1,4-Dichlorobenzene	20	20.86	20	21.19	104	106	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182640054A	Sample number(s): 9814787-9814788,9814791-9814792								
PCB-1016	5.01	5.09	5.01	4.93	102	99	50-140	3	36
PCB-1260	5.00	4.99	5.00	5.33	100	107	50-140	7	38
Batch number: 182640055A	Sample number(s): 9814797-9814798								
PCB-1016	5.01	4.32	5.01	4.30	86	86	50-140	0	36
PCB-1260	5.00	3.52	5.00	4.35	70	87	50-140	21	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182660571401	Sample number(s): 9814787-9814788,9814791-9814792								
Mercury	1.00	0.889			89		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 15:03

Group Number: 1989926

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182660571402	Sample number(s): 9814797-9814798								
Mercury	1.00	0.882			88		85-115		
Batch number: 182660705001A	Sample number(s): 9814787-9814788,9814791-9814792,9814797-9814798								
Arsenic	10	9.92			99		85-115		
Cadmium	5.00	4.62			92		85-115		
Chromium	50	46.36			93		85-115		
Copper	50	49.64			99		85-115		
Lead	15	14			93		85-115		
Zinc	500	476.17			95		85-115		
Batch number: 182700705002A	Sample number(s): 9814787,9814798								
Arsenic	10	10.35			104		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18264121452B	Sample number(s): 9814787,9814789-9814791,9814793-9814794								
Turbidity	10	9.50			95		90-104		
Batch number: 18264121453A	Sample number(s): 9814795-9814797								
Turbidity	10	9.40			94		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18266001103A	Sample number(s): 9814787,9814791,9814797								
Total Hardness	40000	37900			95		85-110		
Batch number: 18267385802A	Sample number(s): 9814787,9814789-9814791,9814793-9814797								
Total Suspended Solids	150000	151600	150000	148300	101	99	89-105	2	5

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182660571402	Sample number(s): 9814797-9814798 UNSPK: 9814797									
Mercury	N.D.	1.00	0.856			86		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 15:03

Group Number: 1989926

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182660571402	Sample number(s): 9814797-9814798 BKG: 9814797			
Mercury	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18264121452B	Sample number(s): 9814787,9814789-9814791,9814793-9814794 BKG: 9814787			
Turbidity	12	12	0	8
Batch number: 18264121453A	Sample number(s): 9814795-9814797 BKG: 9814795			
Turbidity	4.80	4.70	2 (1)	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182683AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9814787	105	104	95	97
9814791	104	101	96	97
9814797	104	102	96	98
9814799	103	103	96	97
Blank	102	103	96	98
LCS	103	101	97	98
LCSD	103	102	97	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182640054A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9814787	66	79	67	83
9814788	64	78	65	80
9814791	74	81	73	83
9814792	62	81	61	85
Blank	78	59	78	59
LCS	85	90	87	91
LCSD	80	92	81	93
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 09/28/2018 15:03

Group Number: 1989926

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182640055A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9814797	65	64	61	63
9814798	67	68	67	68
Blank	64	57	61	58
LCS	68	57	65	58
LCSD	69	75	65	74
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 11610 (4285) Group # 198927 Sample # 981480-98 (98147 87-99) 9/21/18

COC # 556610

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	F PCBs (unfiltered)	F metals (filtered)	N metals (unfiltered)	N mercury	N hardness	TSS	H VOCs - 8260 C	Turbidity - SM2130
092018-01-SW-U-A-1	9/20/18	0845	✓		12	2	2	1	1	1	1	1	3	✓
092018-01-SW-U-B-1	9/20/18	0850	✓		1							1		✓
092018-01-SW-U-C-1	9/20/18	0855	✓		1							1		✓
092018-02-SW-A-A-1	9/20/18	0925	✓		12	2	2	1	1	1	1	1	3	✓
092018-02-SW-A-B-1	9/20/18	0940	✓		1							1		✓
092018-02-SW-A-C-1	9/20/18	0945	✓		1							1		✓
092018-03-SW-D-A-1	9/20/18	0810	✓		1							1		✓
092018-03-SW-D-B-1	9/20/18	0815	✓		1							1		✓
092018-03-SW-D-C-1	9/20/18	0820	✓		12	2	2	1	1	1	1	1	3	✓
092018-TB-01	9/20/18	1400	✓		1								1	✓

Remarks: Trip

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 9/23/18

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	9/20/18	1500			
			Mike	9/21/18	1030

EDD Required? Yes (No)

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.2 / 1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227739

Group Number(s): ~~498427~~ 498426 9/21/18

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/21/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:50 on 09/21/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.2	DT	Wet	Y	Bagged	N
2	DT146	1.0	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 01, 2018 10:47

Project: Rensselaer

Account #: 04285
Group Number: 1990209
SDG: RNS11
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092118-01-SW-U-A-1 Grab Surface Water	09/21/2018 08:50	9816475
092118-01-SW-U-A-1 Filtered Grab Surface Water	09/21/2018 08:50	9816476
092118-01-SW-U-B-1 Grab Surface Water	09/21/2018 09:00	9816477
092118-01-SW-U-C-1 Grab Surface Water	09/21/2018 09:05	9816478
092118-02-SW-A-A-1 Grab Surface Water	09/21/2018 09:30	9816479
092118-02-SW-A-A-1 Filtered Grab Surface Water	09/21/2018 09:30	9816480
092118-02-SW-A-B-1 Grab Surface Water	09/21/2018 09:45	9816481
092118-02-SW-A-C-1 Grab Surface Water	09/21/2018 09:50	9816482
092118-03-SW-D-A-1 Grab Surface Water	09/21/2018 08:05	9816483
092118-03-SW-D-A-1 Filtered Grab Surface Water	09/21/2018 08:05	9816484
092118-03-SW-D-B-1 Grab Surface Water	09/21/2018 08:10	9816485
092118-03-SW-D-C-1 Grab Surface Water	09/21/2018 08:15	9816486
092118-TB-01 Water	09/21/2018 15:00	9816487

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **092118-01-SW-U-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:50
SDG#: RNS11-01

BASF Corporation
ELLE Sample #: WW 9816475
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.1 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	45	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	34,300	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092118-01-SW-U-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:50
SDG#: RNS11-01

BASF Corporation
ELLE Sample #: WW 9816475
ELLE Group #: 1990209
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182692AA	09/26/2018 15:31	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182692AA	09/26/2018 15:31	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 20:36	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:06	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:06	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:06	Deborah A Krady	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:06	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182660705001A	09/25/2018 14:06	Deborah A Krady	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705001	09/24/2018 05:14	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 18:33	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385801B	09/24/2018 14:16	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:50
SDG#: RNS11-02

BASF Corporation
ELLE Sample #: WW 9816476
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.87 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	18.0	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 20:47	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:17	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:17	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:17	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:19	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:17	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:19	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-01-SW-U-B-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:00
SDG#: RNS11-03

BASF Corporation
ELLE Sample #: WW 9816477
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	39	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	32,500	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-01-SW-U-C-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:05
SDG#: RNS11-04

BASF Corporation
ELLE Sample #: WW 9816478
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	29,000	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-02-SW-A-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:30
SDG#: RNS11-05

BASF Corporation
ELLE Sample #: WW 9816479
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.81 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.89 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.9 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	50	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	31,100	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092118-02-SW-A-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:30
SDG#: RNS11-05

BASF Corporation
ELLE Sample #: WW 9816479
ELLE Group #: 1990209
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182692AA	09/26/2018 15:53	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182692AA	09/26/2018 15:53	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 20:58	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 13:50	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 13:50	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 13:50	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:21	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 13:50	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:21	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 18:41	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385801A	09/24/2018 14:16	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:30
SDG#: RNS11-06

BASF Corporation
ELLE Sample #: WW 9816480
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 21:10	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:20	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:20	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:20	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:20	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-02-SW-A-B-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:45
SDG#: RNS11-07

BASF Corporation
ELLE Sample #: WW 9816481
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	34,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-02-SW-A-C-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 09:50
SDG#: RNS11-08

BASF Corporation
ELLE Sample #: WW 9816482
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	30,800	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121451B	09/22/2018 13:10	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-03-SW-D-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:05
SDG#: RNS11-09

BASF Corporation
ELLE Sample #: WW 9816483
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.98 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	12.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	27,700	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092118-03-SW-D-A-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:05
SDG#: RNS11-09

BASF Corporation
ELLE Sample #: WW 9816483
ELLE Group #: 1990209
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182692AA	09/26/2018 16:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182692AA	09/26/2018 16:15	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 21:21	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:22	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:22	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:22	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:25	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:22	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	1	182700705002A	09/28/2018 11:25	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18266001103A	09/23/2018 19:09	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18265121452A	09/22/2018 14:00	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18267385801A	09/24/2018 14:16	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:05
SDG#: RNS11-10

BASF Corporation
ELLE Sample #: WW 9816484
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.0 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 21:32	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:24	Deborah A Krady	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:24	Deborah A Krady	1
06031	Chromium	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:24	Deborah A Krady	1
06033	Copper	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:27	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182660705002A	09/25/2018 14:24	Deborah A Krady	1
06049	Zinc	EPA 200.8 rev 5.4	2	182700705002A	09/28/2018 11:27	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182660571402	09/25/2018 08:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182660705002	09/24/2018 15:30	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182700705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182660571402	09/24/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-03-SW-D-B-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:10
SDG#: RNS11-11

BASF Corporation
ELLE Sample #: WW 9816485
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.280	2.00	2
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	29,300	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121452A	09/22/2018 14:00	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-03-SW-D-C-1 Grab Surface Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 08:15
SDG#: RNS11-12

BASF Corporation
ELLE Sample #: WW 9816486
ELLE Group #: 1990209
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	40	0.280	2.00	2
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,000	3,000	9,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18265121452A	09/22/2018 14:00	Luz M Groff	2
13858	Total Suspended Solids	SM 2540 D-2011	1	18268385801A	09/25/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092118-TB-01 Water**
COC: 577906

Project Name: **Rensselaer**

Submittal Date/Time: 09/22/2018 10:00
Collection Date/Time: 09/21/2018 15:00
SDG#: RNS11-13TB

BASF Corporation
ELLE Sample #: WW 9816487
ELLE Group #: 1990209
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182692AA	09/26/2018 16:37	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182692AA	09/26/2018 16:37	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 1990209
Reported: 10/01/2018 10:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L182692AA	Sample number(s): 9816475,9816479,9816483,9816487		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182700014A	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182660571402	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484		
Mercury	N.D.	0.050	0.20
Batch number: 182660705001A	Sample number(s): 9816475		
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182660705002A	Sample number(s): 9816476,9816479-9816480,9816483-9816484		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Lead	N.D.	1.1	3.0
Batch number: 182700705002A	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484		
Arsenic	N.D.	0.68	2.0
Copper	N.D.	9.9	40.0
Zinc	N.D.	6.2	15.0
	NTU	NTU	NTU
Batch number: 18265121451B	Sample number(s): 9816475,9816477-9816479,9816481-9816482		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:47

Group Number: 1990209

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Turbidity	0.15 J	0.140	1.00
Batch number: 18265121452A	Sample number(s): 9816483,9816485-9816486		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18266001103A	Sample number(s): 9816475,9816479,9816483		
Total Hardness	N.D.	3,000	10,000
Batch number: 18267385801A	Sample number(s): 9816479,9816483		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18267385801B	Sample number(s): 9816475		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18268385801A	Sample number(s): 9816477-9816478,9816481-9816482,9816485-9816486		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L182692AA	Sample number(s): 9816475,9816479,9816483,9816487								
Benzene	20	21.09	20	20.67	105	103	80-120	2	30
Chlorobenzene	20	21.03	20	20.88	105	104	80-120	1	30
1,2-Dichlorobenzene	20	21.19	20	20.7	106	103	80-120	2	30
1,3-Dichlorobenzene	20	21.14	20	20.58	106	103	80-120	3	30
1,4-Dichlorobenzene	20	21.09	20	20.59	105	103	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182700014A	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484								
PCB-1016	5.01	4.03	5.01	3.88	81	77	50-140	4	36
PCB-1260	5.00	3.94	5.00	3.93	79	79	50-140	0	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182660571402	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484								
Mercury	1.00	0.882			88		85-115		
Batch number: 182660705001A	Sample number(s): 9816475								
Cadmium	5.00	4.62			92		85-115		
Chromium	50	46.36			93		85-115		
Copper	50	49.64			99		85-115		
Lead	15	14			93		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:47

Group Number: 1990209

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	476.17			95		85-115		
Batch number: 182660705002A	Sample number(s): 9816476,9816479-9816480,9816483-9816484								
Arsenic	10	10.14			101		85-115		
Cadmium	5.00	5.06			101		85-115		
Chromium	50	55.59			111		85-115		
Lead	15	15.11			101		85-115		
Batch number: 182700705002A	Sample number(s): 9816475-9816476,9816479-9816480,9816483-9816484								
Arsenic	10	10.35			104		85-115		
Copper	50	48.86			98		85-115		
Zinc	500	521.3			104		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18265121451B	Sample number(s): 9816475,9816477-9816479,9816481-9816482								
Turbidity	10	9.30			93		90-104		
Batch number: 18265121452A	Sample number(s): 9816483,9816485-9816486								
Turbidity	10	9.30			93		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18266001103A	Sample number(s): 9816475,9816479,9816483								
Total Hardness	40000	37900			95		85-110		
Batch number: 18267385801A	Sample number(s): 9816479,9816483								
Total Suspended Solids	150000	144100			96		89-105		
Batch number: 18267385801B	Sample number(s): 9816475								
Total Suspended Solids	150000	144100			96		89-105		
Batch number: 18268385801A	Sample number(s): 9816477-9816478,9816481-9816482,9816485-9816486								
Total Suspended Solids	150000	141600	150000	146200	94	97	89-105	3	5

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182660705002A	Sample number(s): 9816476,9816479-9816480,9816483-9816484 UNSPK: 9816479									
Arsenic	0.813	10	10.4			96		70-130		
Cadmium	N.D.	5.00	4.97			99		70-130		
Chromium	0.894	50	56.37			111		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:47

Group Number: 1990209

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Lead	1.80	15	18.07			108		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182660705002A	Sample number(s): 9816476,9816479-9816480,9816483-9816484 BKG: 9816479			
Arsenic	0.813	0.829	2 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.894	1.27	35* (1)	20
Lead	1.80	1.96	8 (1)	20
	N T U	N T U		
Batch number: 18265121451B	Sample number(s): 9816475,9816477-9816479,9816481-9816482 BKG: 9816481			
Turbidity	40	40	0	8
Batch number: 18265121452A	Sample number(s): 9816483,9816485-9816486 BKG: 9816483			
Turbidity	40	40	0	8
	ug/l	ug/l		
Batch number: 18267385801B	Sample number(s): 9816475 BKG: 9816475			
Total Suspended Solids	34285.7	33714.3	2 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182692AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9816475	104	103	95	97
9816479	105	103	96	97
9816483	106	105	95	97
9816487	104	102	96	97
Blank	104	103	95	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 10:47

Group Number: 1990209

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182692AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	105	102	97	98
LCSD	104	104	96	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182700014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9816475	65	62	62	60
9816476	73	69	70	70
9816479	53	57	50	58
9816480	75	67	73	67
9816483	70	62	68	59
9816484	67	66	64	65
Blank	46	33	46	31
LCS	69	46	68	46
LCSD	65	61	62	60
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # U285 Group # 1940209 Sample # 9816475-87

COC # 577906

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	F/N Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130	Remarks
092118-01-SW-U-A-1	9/21/18	0850	✓		13	2	2	1	1	1	1	1	3	1	
092118-01-SW-U-B-1	9/21/18	0900	✓		1							1		✓	turbidity measurement from TSS
092118-01-SW-U-C-1	9/21/18	0905	✓		1							1		✓	turbidity measurement from TSS
092118-02-SW-A-A-1	9/21/18	0930	✓		13	2	2	1	1	1	1	1	3	✓	
092118-02-SW-A-B-1	9/21/18	0945	✓		1							1		✓	turbidity measurement from TSS
092118-02-SW-A-C-1	9/21/18	0950	✓		1							1		✓	turbidity measurement from TSS
092118-03-SW-D-A-1	9/21/18	0805	✓		13	2	2	1	1	1	1	1	3	1	
092118-03-SW-D-B-1	9/21/18	0810	✓		1							1		✓	turbidity measurement from TSS
092118-03-SW-D-C-1	9/21/18	0815	✓		1							1		✓	turbidity measurement from TSS
092118-TB-01	9/21/18	1500	✓										1		

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/24/18

E-mail address: Ryan.McCarthy@AECOM.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/21/18	1530			
			[signature]	9/22/18	1000

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.9-2.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227861

Group Number(s): 1990209

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/22/2018 10:00
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	TB
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): Trip Blank (1 vial)

Unpacked by Carolyn Cyms (964) at 11:27 on 09/22/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.9	DT	Wet	Y	Bagged	N
2	DT42-03	2.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 02, 2018 10:10

Project: Rensselaer

Account #: 04285
Group Number: 1990855
SDG: RNS12
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092418-01-SW-U-A-1 Grab Surface Water	09/24/2018 11:25	9819241
092418-01-SW-U-B-1 Grab Surface Water	09/24/2018 11:30	9819242
092418-01-SW-U-C-1 Grab Surface Water	09/24/2018 11:35	9819243
092418-01-SW-U-C-1 Filt. Grab Surface Water	09/24/2018 11:35	9819244
092418-02-SW-A-A-1 Grab Surface Water	09/24/2018 12:05	9819245
092418-02-SW-A-A-1 Filt. Grab Surface Water	09/24/2018 12:05	9819246
092418-02-SW-A-B-1 Grab Surface Water	09/24/2018 12:10	9819247
092418-02-SW-A-C-1 Grab Surface Water	09/24/2018 12:15	9819248
092418-03-SW-D-A-1 Grab Surface Water	09/24/2018 10:50	9819249
092418-03-SW-D-A-1 Filt. Grab Surface Water	09/24/2018 10:50	9819250
092418-03-SW-D-B-1 Grab Surface Water	09/24/2018 11:05	9819251
092418-03-SW-D-C-1 Grab Surface Water	09/24/2018 11:10	9819252
092418-02-SW-A-A-2 Grab Surface Water	09/24/2018 12:30	9819253
092418-02-SW-A-A-2 Filt. Grab Surface Water	09/24/2018 12:30	9819254
092418-TB-01 Water	09/24/2018	9819255

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **092418-01-SW-U-A-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:25
SDG#: RNS12-01

BASF Corporation
ELLE Sample #: WW 9819241
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,460	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451A	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-01-SW-U-B-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:30
SDG#: RNS12-02

BASF Corporation
ELLE Sample #: WW 9819242
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,310	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451A	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-01-SW-U-C-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:35
SDG#: RNS12-03

BASF Corporation
ELLE Sample #: WW 9819243
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.539	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.539	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.539	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.539	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.539	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.539	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.539	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0797	0.539	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0797	0.539	1
14188	Total PCBs	1336-36-3	N.D.	0.0797	0.539	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.71 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.74 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,570	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092418-01-SW-U-C-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:35
SDG#: RNS12-03

BASF Corporation
ELLE Sample #: WW 9819243
ELLE Group #: 1990855
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 15:49	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 15:49	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:03	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:43	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18269001101A	09/26/2018 10:14	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18268121451A	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-01-SW-U-C-1 Filt. Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:35
SDG#: RNS12-04

BASF Corporation
ELLE Sample #: WW 9819244
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.100	0.502	1
14188	PCB-1221	11104-28-2	N.D. D1	0.100	0.502	1
14188	PCB-1232	11141-16-5	N.D. D1	0.100	0.502	1
14188	PCB-1242	53469-21-9	N.D. D1	0.100	0.502	1
14188	PCB-1248	12672-29-6	N.D. D1	0.100	0.502	1
14188	PCB-1254	11097-69-1	N.D. D1	0.100	0.502	1
14188	PCB-1260	11096-82-5	N.D. D1	0.100	0.502	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0743	0.502	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0743	0.502	1
14188	Total PCBs	1336-36-3	N.D.	0.0743	0.502	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted and the surrogate(s) is compliant.
All results are reported from the first trial.

Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:14	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-01-SW-U-C-1 Filt. Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:35
SDG#: RNS12-04

BASF Corporation
ELLE Sample #: WW 9819244
ELLE Group #: 1990855
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-A-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:05
SDG#: RNS12-05

BASF Corporation
ELLE Sample #: WW 9819245
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	87,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,270	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-A-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:05
SDG#: RNS12-05

BASF Corporation
ELLE Sample #: WW 9819245
ELLE Group #: 1990855
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 16:13	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 16:13	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:25	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:51	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:37	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18269001101A	09/26/2018 10:38	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-A-1 Filt. Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:05
SDG#: RNS12-06

BASF Corporation
ELLE Sample #: WW 9819246
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	N.D.	0.0791	0.534	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:37	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:54	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:39	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-B-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:10
SDG#: RNS12-07

BASF Corporation
ELLE Sample #: WW 9819247
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,120	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-C-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:15
SDG#: RNS12-08

BASF Corporation
ELLE Sample #: WW 9819248
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,630	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-03-SW-D-A-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 10:50
SDG#: RNS12-09

BASF Corporation
ELLE Sample #: WW 9819249
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.80 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	91,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.2	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092418-03-SW-D-A-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 10:50
SDG#: RNS12-09

BASF Corporation
ELLE Sample #: WW 9819249
ELLE Group #: 1990855
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 16:36	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 16:36	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:48	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:56	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18269001101A	09/26/2018 10:46	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-03-SW-D-A-1 Filt. Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 10:50
SDG#: RNS12-10

BASF Corporation
ELLE Sample #: WW 9819250
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.82 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182680023A	09/27/2018 21:59	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182680023A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 13:58	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-03-SW-D-B-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:05
SDG#: RNS12-11

BASF Corporation
ELLE Sample #: WW 9819251
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-03-SW-D-C-1 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 11:10
SDG#: RNS12-12

BASF Corporation
ELLE Sample #: WW 9819252
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18268121451B	09/25/2018 20:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18269385802A	09/26/2018 14:05	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-A-2 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:30
SDG#: RNS12-13

BASF Corporation
ELLE Sample #: WW 9819253
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 17:00	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 17:00	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182690007A	09/28/2018 02:08	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **092418-02-SW-A-A-2 Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:30
SDG#: RNS12-13

BASF Corporation
ELLE Sample #: WW 9819253
ELLE Group #: 1990855
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182690007A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:00	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18269001101A	09/26/2018 10:55	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **092418-02-SW-A-A-2 Filt. Grab Surface Water**
COC: 577911

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018 12:30
SDG#: RNS12-14

BASF Corporation
ELLE Sample #: WW 9819254
ELLE Group #: 1990855
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.68 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182690007A	09/28/2018 02:19	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182690007A	09/26/2018 19:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182690705001A	09/27/2018 14:02	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182690571401	09/27/2018 06:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182690705001	09/27/2018 02:02	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182690571401	09/27/2018 03:13	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **092418-TB-01 Water**
COC: 577913

Project Name: **Rensselaer**

Submittal Date/Time: 09/25/2018 10:30
Collection Date/Time: 09/24/2018
SDG#: RNS12-15TB

BASF Corporation
ELLE Sample #: WW 9819255
ELLE Group #: 1990855
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 11:51	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 11:51	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 1990855
Reported: 10/02/2018 10:10

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182701AA	Sample number(s): 9819243,9819245,9819249,9819253,9819255		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182680023A	Sample number(s): 9819243-9819246,9819249-9819250		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182690007A	Sample number(s): 9819253-9819254		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182690571401	Sample number(s): 9819243-9819246,9819249-9819250,9819253-9819254		
Mercury	N.D.	0.050	0.20
Batch number: 182690705001A	Sample number(s): 9819243-9819246,9819249-9819250,9819253-9819254		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 10:10

Group Number: 1990855

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Batch number: 18268121451A	Sample number(s): 9819241-9819243		
Turbidity	0.15 J	0.140	1.00
Batch number: 18268121451B	Sample number(s): 9819245,9819247-9819249,9819251-9819252		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18269001101A	Sample number(s): 9819243,9819245,9819249,9819253		
Total Hardness	N.D.	3,000	10,000
Batch number: 18269385802A	Sample number(s): 9819241-9819243,9819245,9819247-9819249,9819251-9819252		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182701AA	Sample number(s): 9819243,9819245,9819249,9819253,9819255								
Benzene	20	21.28			106		80-120		
Chlorobenzene	20	22.52			113		80-120		
1,2-Dichlorobenzene	20	22.54			113		80-120		
1,3-Dichlorobenzene	20	22.32			112		80-120		
1,4-Dichlorobenzene	20	22.55			113		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182680023A	Sample number(s): 9819243-9819246,9819249-9819250								
PCB-1016	5.01	4.13	5.01	4.11	83	82	50-140	1	36
PCB-1260	5.00	4.28	5.00	4.07	86	81	50-140	5	38
Batch number: 182690007A	Sample number(s): 9819253-9819254								
PCB-1016	5.01	3.95	5.01	3.24	79	65	50-140	20	36
PCB-1260	5.00	4.08	5.00	3.48	82	70	50-140	16	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182690571401	Sample number(s): 9819243-9819246,9819249-9819250,9819253-9819254								
Mercury	1.00	0.965			96		85-115		
Batch number: 182690705001A	Sample number(s): 9819243-9819246,9819249-9819250,9819253-9819254								
Arsenic	10	10.57			106		85-115		
Cadmium	5.00	5.10			102		85-115		
Chromium	50	50.01			100		85-115		
Copper	50	50.85			102		85-115		
Lead	15	15.54			104		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 10:10

Group Number: 1990855

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	524.54			105		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18268121451A	Sample number(s): 9819241-9819243								
Turbidity	10	9.50			95		90-104		
Batch number: 18268121451B	Sample number(s): 9819245,9819247-9819249,9819251-9819252								
Turbidity	10	9.50			95		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18269001101A	Sample number(s): 9819243,9819245,9819249,9819253								
Total Hardness	40000	36900			92		85-110		
Batch number: 18269385802A	Sample number(s): 9819241-9819243,9819245,9819247-9819249,9819251-9819252								
Total Suspended Solids	150000	151300			101		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18269001101A	Sample number(s): 9819243,9819245,9819249,9819253 UNSPK: 9819243									
Total Hardness	86120	80000	165900			100		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	N T U	N T U		
Batch number: 18268121451B	Sample number(s): 9819245,9819247-9819249,9819251-9819252 BKG: 9819247			
Turbidity	6.80	6.80	0	8
	ug/l	ug/l		
Batch number: 18269001101A	Sample number(s): 9819243,9819245,9819249,9819253 BKG: 9819243			
Total Hardness	86120	87800	2 (1)	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 10:10

Group Number: 1990855

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9819243	94	99	100	92
9819245	94	99	100	94
9819249	95	100	100	93
9819253	95	100	100	94
9819255	95	100	100	93
Blank	94	99	99	94
LCS	96	101	101	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182680023A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9819243	60	64	58	63
9819244	31*	22	30*	22
9819245	66	67	62	69
9819246	69	74	66	72
9819249	66	74	64	73
9819250	73	74	70	74
Blank	69	65	66	62
LCS	74	62	72	64
LCSD	77	64	75	65
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182690007A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9819253	54	63	51	62
9819254	44	38	43	38
Blank	66	57	63	58
LCS	72	76	69	74
LCSD	45	60	42	61
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1990855 Sample # 989241-55

COC # 577911

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered)	PCBs (unfiltered)	Metals (Filtered)	Metals (unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130
092418-01-SW-U-A-1	9/24/18	1125	✓		2							1		1
092418-01-SW-U-B-1	9/24/18	1130	✓		2							1		1
092418-01-SW-U-C-1	9/24/18	1135	✓		13	2	2	1	1	1	1	1	3	1
092418-02-SW-A-A-1	9/24/18	1205	✓		13	2	2	1	1	1	1	1	3	1
092418-02-SW-A-B-1	9/24/18	1210	✓		2							1		1
092418-02-SW-A-C-1	9/24/18	1215	✓		2							1		1
092418-03-SW-D-A-1	9/24/18	1050	✓		13	2	2	1	1	1	1	1	3	1
092418-03-SW-D-B-1	9/24/18	1105	✓		2							1		1
092418-03-SW-D-C-1	9/24/18	1110	✓		2							1		1
092418-02-SW-A-A-2	9/24/18	1230	✓		13	2	2	1	1	1	1		3	

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/27/18

E-mail address: Ryan.McCarthy@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/27/18	1700			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	9/25/18	1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx P Other ____

Temperature upon receipt 1.8/2.3 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 199085 Sample # 98/9241-55

COC # 577913

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ | Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Total # of Containers:

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130
[redacted] 092418-TB-01	9/24/18		✓		1								1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/27/18

E-mail address: Ryan.McCarthy@AECOM.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/24/18	1700			
			[signature]	9/25/18	1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx ✓ Other _____

Temperature upon receipt 1.8/2.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 227986

Group Number(s): 1990855

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/25/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Leah Foreman (12616) at 13:02 on 09/25/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.3	DT	Wet	Y	Bagged	N
2	DT42-01	1.8	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details: Hudson River OU-2

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
092418-01-SW-U-A-1	4	2	(lids look correct, labels were not, labelled per lids)
092418-01-SW-U-B-1	1	2	
092418-01-SW-U-C-1	12	13	

CMC 1964
9/25/18

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 01, 2018 17:54

Project: Rensselaer

Account #: 04285
Group Number: 1991365
SDG: RNS13
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092518-01-SW-D-A-1 Grab Surface Water	09/25/2018 13:00	9821411
092518-01-SW-D-A-1 Filtered Grab Surface Water	09/25/2018 13:00	9821412
092518-01-SW-D-B-1 Grab Surface Water	09/25/2018 13:10	9821413
092518-01-SW-D-C-1 Grab Surface Water	09/25/2018 13:15	9821414
092518-02-SW-A-A-1 Grab Surface Water	09/25/2018 13:45	9821415
092518-02-SW-A-B-1 Grab Surface Water	09/25/2018 13:50	9821416
092518-02-SW-A-B-1 Filtered Grab Surface Water	09/25/2018 13:50	9821417
092518-02-SW-A-C-1 Grab Surface Water	09/25/2018 13:55	9821418
092518-03-SW-U-A-1 Grab Surface Water	09/25/2018 12:25	9821419
092518-03-SW-U-A-1 Filtered Grab Surface Water	09/25/2018 12:25	9821420
092518-03-SW-U-B-1 Grab Surface Water	09/25/2018 12:30	9821421
092518-03-SW-U-C-1 Grab Surface Water	09/25/2018 12:35	9821422
092518-TB-01 Water	09/25/2018 17:00	9821423

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

REVISED

Sample Description: **092518-01-SW-D-A-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:00
SDG#: RNS13-01

BASF Corporation
ELLE Sample #: WW 9821411
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	94,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-01-SW-D-A-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:00
SDG#: RNS13-01

BASF Corporation
ELLE Sample #: WW 9821411
ELLE Group #: 1991365
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 17:24	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 17:24	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 21:43	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:56	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18270001101A	09/27/2018 11:58	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18269121451A	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-01-SW-D-A-1 Filtered Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:00
SDG#: RNS13-02

BASF Corporation
ELLE Sample #: WW 9821412
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 21:55	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:58	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1

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Analysis Report

REVISED

Sample Description: **092518-01-SW-D-B-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:10
SDG#: RNS13-03

BASF Corporation
ELLE Sample #: WW 9821413
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451A	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

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Analysis Report

REVISED

Sample Description: **092518-01-SW-D-C-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:15
SDG#: RNS13-04

BASF Corporation
ELLE Sample #: WW 9821414
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,570	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

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Analysis Report

REVISED

Sample Description: **092518-02-SW-A-A-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:45
SDG#: RNS13-05

BASF Corporation
ELLE Sample #: WW 9821415
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-02-SW-A-B-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:50
SDG#: RNS13-06

BASF Corporation
ELLE Sample #: WW 9821416
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	91,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	13,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-02-SW-A-B-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:50
SDG#: RNS13-06

BASF Corporation
ELLE Sample #: WW 9821416
ELLE Group #: 1991365
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 17:48	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 17:48	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 22:06	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:00	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18270001101A	09/27/2018 12:23	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:50
SDG#: RNS13-07

BASF Corporation
ELLE Sample #: WW 9821417
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700014A	09/28/2018 22:17	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700014A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:07	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1

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Analysis Report

REVISED

Sample Description: **092518-02-SW-A-C-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 13:55
SDG#: RNS13-08

BASF Corporation
ELLE Sample #: WW 9821418
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,910	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-03-SW-U-A-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 12:25
SDG#: RNS13-09

BASF Corporation
ELLE Sample #: WW 9821419
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.0 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	93,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,820	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

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REVISED

Sample Description: **092518-03-SW-U-A-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 12:25
SDG#: RNS13-09

BASF Corporation
ELLE Sample #: WW 9821419
ELLE Group #: 1991365
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 18:12	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 18:12	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700015A	09/29/2018 00:11	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700015A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 11:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18270001101A	09/27/2018 12:31	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-03-SW-U-A-1 Filtered Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 12:25
SDG#: RNS13-10

BASF Corporation
ELLE Sample #: WW 9821420
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182700015A	09/29/2018 00:22	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182700015A	09/27/2018 19:21	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:09	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-03-SW-U-B-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 12:30
SDG#: RNS13-11

BASF Corporation
ELLE Sample #: WW 9821421
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-03-SW-U-C-1 Grab Surface Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 12:35
SDG#: RNS13-12

BASF Corporation
ELLE Sample #: WW 9821422
ELLE Group #: 1991365
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,670	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18269121451B	09/26/2018 20:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18270385802A	09/27/2018 14:17	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **092518-TB-01 Water**
COC: 577908

Project Name: **Rensselaer**

Submittal Date/Time: 09/26/2018 10:25
Collection Date/Time: 09/25/2018 17:00
SDG#: RNS13-13TB

BASF Corporation
ELLE Sample #: **WW 9821423**
ELLE Group #: **1991365**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182701AA	09/27/2018 12:15	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182701AA	09/27/2018 12:15	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 17:54

Group Number: 1991365

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182701AA	Sample number(s): 9821411,9821416,9821419,9821423		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182700014A	Sample number(s): 9821411-9821412,9821416-9821417		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182700015A	Sample number(s): 9821419-9821420		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182710571401	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420		
Mercury	N.D.	0.050	0.20
Batch number: 182710705001A	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 17:54

Group Number: 1991365

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Batch number: 18269121451A	Sample number(s): 9821411,9821413		
Turbidity	0.20 J	0.140	1.00
Batch number: 18269121451B	Sample number(s): 9821414-9821416,9821418-9821419,9821421-9821422		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18270001101A	Sample number(s): 9821411,9821416,9821419		
Total Hardness	N.D.	3,000	10,000
Batch number: 18270385802A	Sample number(s): 9821411,9821413-9821416,9821418-9821419,9821421-9821422		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182701AA	Sample number(s): 9821411,9821416,9821419,9821423								
Benzene	20	21.28			106		80-120		
Chlorobenzene	20	22.52			113		80-120		
1,2-Dichlorobenzene	20	22.54			113		80-120		
1,3-Dichlorobenzene	20	22.32			112		80-120		
1,4-Dichlorobenzene	20	22.55			113		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182700014A	Sample number(s): 9821411-9821412,9821416-9821417								
PCB-1016	5.01	4.03	5.01	3.88	81	77	50-140	4	36
PCB-1260	5.00	3.94	5.00	3.93	79	79	50-140	0	38
Batch number: 182700015A	Sample number(s): 9821419-9821420								
PCB-1016	5.01	3.49	5.01	3.47	70	69	50-140	1	36
PCB-1260	5.00	3.34	5.00	4.11	67	82	50-140	21	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182710571401	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420								
Mercury	1.00	0.963	1.00	0.965	96	96	85-115	0	20
Batch number: 182710705001A	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420								
Arsenic	10	10.44			104		85-115		
Cadmium	5.00	5.12			102		85-115		
Chromium	50	48.1			96		85-115		
Copper	50	50.1			100		85-115		
Lead	15	15.47			103		85-115		

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(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 17:54

Group Number: 1991365

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	524.53			105		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18269121451A	Sample number(s): 9821411,9821413								
Turbidity	10	9.90			99		90-104		
Batch number: 18269121451B	Sample number(s): 9821414-9821416,9821418-9821419,9821421-9821422								
Turbidity	10	9.90			99		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18270001101A	Sample number(s): 9821411,9821416,9821419								
Total Hardness	40000	37980			95		85-110		
Batch number: 18270385802A	Sample number(s): 9821411,9821413-9821416,9821418-9821419,9821421-9821422								
Total Suspended Solids	150000	148800			99		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182710705001A	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420 UNSPK: 9821419									
Arsenic	1.03	10	11.84			108		70-130		
Cadmium	N.D.	5.00	5.27			105		70-130		
Chromium	N.D.	50	50.95			102		70-130		
Copper	N.D.	50	51.88			104		70-130		
Lead	N.D.	15	16.61			111		70-130		
Zinc	8.14	500	526.81			104		70-130		
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18270001101A	Sample number(s): 9821411,9821416,9821419 UNSPK: 9821411									
Total Hardness	94240	80000	172900			98		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 17:54

Group Number: 1991365

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182710705001A	Sample number(s): 9821411-9821412,9821416-9821417,9821419-9821420 BKG: 9821419			
Arsenic	1.03	0.914	12 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	8.14	N.D.	200* (1)	20
	N T U	N T U		
Batch number: 18269121451B	Sample number(s): 9821414-9821416,9821418-9821419,9821421-9821422 BKG: 9821415			
Turbidity	9.40	9.40	0	8
	ug/l	ug/l		
Batch number: 18270001101A	Sample number(s): 9821411,9821416,9821419 BKG: 9821411			
Total Hardness	94240	95940	2 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9821411	95	100	100	92
9821416	95	99	100	93
9821419	94	99	101	93
9821423	95	101	100	93
Blank	94	99	99	94
LCS	96	101	101	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182700014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9821411	68	67	66	67
9821412	64	71	64	68
9821416	72	64	68	66
9821417	68	66	66	66
Blank	46	33	46	31

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

REVISED

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/01/2018 17:54

Group Number: 1991365

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182700014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCS	69	46	68	46
LCSD	65	61	62	60
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182700015A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9821419	64	66	62	68
9821420	64	74	62	74
Blank	69	67	65	68
LCS	68	41	65	40
LCSD	38	72	37	73
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 991365 Sample # 982141-23

COC # 577908

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229808
Sampler: Patrick Cohan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: ☐ Soil ☐ Sediment ☐ Tissue ☐ Water ☐ Potable ☐ Ground ☑ Surface ☐ NPDES ☐ Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F		F,N	N	N	N		H		Remarks
						PCBs (Filtered)	PCBs (Unfiltered)	Metals (Filtered)	Metals (Unfiltered)	Mercury	Hardness	TSS	VOCs - 8260C	Turbidity - SM2130	
092518-01-SW-D-A-1	9/25/18	1300	✓		13	2	2	1	1	1	1	1	3	1	
092518-01-SW-D-B-1	9/25/18	1310	✓		2							1		1	
092518-01-SW-D-C-1	9/25/18	1315	✓		2							1		1	
092518-02-SW-A-A-1	9/25/18	1345	✓		2							1		1	
092518-02-SW-A-B-1	9/25/18	1350	✓		13	2	2	1	1	1	1	1	3	1	
092518-02-SW-A-C-1	9/25/18	1355	✓		2							1		1	
092518-02-SW-D-A-1	9/25/18	1225	✓		13	2	2	1	1	1	1	1	3	1	
092518-02-SW-D-B-1	9/25/18	1230	✓		2						*	1		1	
092518-02-SW-D-C-1	9/25/18	1235	✓		2							1		1	
092518-TB-01	9/25/18	1700	✓		1								1		

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/28/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	9/25/18	1730			
				9/26/18	1025

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.5-1.9 °C

1991365

Kay Hower

From: Gehan, Patrick <Patrick.Gehan@aecom.com>
Sent: Thursday, September 27, 2018 1:03 PM
To: Kay Hower
Cc: Au, Emily L; McCarthy, Ryan
Subject: RE: RNS13-1991365-Rensselaer 09-26-2018_Acknowledgement

EXTERNAL EMAIL*

Kay,

Please see the correction below:

Sample #:	Sample ID:
9821419	092518-03-SW-U-A-1
9821420	092518-03-SW-U-A-1
9821421	092518-03-SW-U-B-1
9821422	092518-03-SW-U-C-1

Sincerely,

Patrick Gehan

-----Original Message-----
From: Kay Hower [mailto:KayHower@eurofinsus.com]
Sent: Thursday, September 27, 2018 12:43 PM
To: McCarthy, Ryan; Gehan, Patrick; Au, Emily L
Subject: RNS13-1991365-Rensselaer 09-26-2018_Acknowledgement

Hello, For this group received yesterday, there are three samples that were labeled differently versus the COC (please see the 1991365d file). We have entered as 'D' per the COC and not 'U' per the label. Please let me know if that is not correct. Thanks, Kay

* WARNING - EXTERNAL: This email originated from outside of Eurofins. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

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Sample Administration Receipt Documentation Log

Doc Log ID: 228124

Group Number(s): 1991365

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/26/2018 10:25
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	HCL
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 092518-TB-01 (Trip Blank)

Unpacked by Christopher Stief (12429) at 13:38 on 09/26/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.3	DT	Wet	Y	Bagged	N
2	DT42-01	1.9	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 02, 2018 12:20

Project: Rensselaer

Account #: 04285
Group Number: 1991874
SDG: RNS14
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092618-01-SW-U-A-1 Grab Surface Water	09/26/2018 08:50	9823686
092618-01-SW-U-A-1 Filtered Grab Surface Water	09/26/2018 08:50	9823687
092618-01-SW-U-B-1 Grab Surface Water	09/26/2018 08:55	9823688
092618-01-SW-U-C-1 Grab Surface Water	09/26/2018 09:00	9823689
092618-02-SW-A-A-1 Grab Surface Water	09/26/2018 09:30	9823690
092618-02-SW-A-A-1 Filtered Grab Surface Water	09/26/2018 09:30	9823691
092618-02-SW-A-B-1 Grab Surface Water	09/26/2018 09:35	9823692
092618-02-SW-A-C-1 Grab Surface Water	09/26/2018 09:40	9823693
092618-03-SW-D-A-1 Grab Surface Water	09/26/2018 08:10	9823694
092618-03-SW-D-A-1 Filtered Grab Surface Water	09/26/2018 08:10	9823695
092618-03-SW-D-B-1 Grab Surface Water	09/26/2018 08:15	9823696
092618-03-SW-D-C-1 Grab Surface Water	09/26/2018 08:20	9823697
092618-01-SW-U-A-3 Grab Surface Water	09/26/2018 14:00	9823698
092618-01-SW-U-A-3 Filtered Grab Surface Water	09/26/2018 14:00	9823699
092618-TB-01 Water	09/26/2018 14:00	9823700

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **092618-01-SW-U-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:50
SDG#: RNS14-01

BASF Corporation
ELLE Sample #: WW 9823686
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.89 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	99,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,060	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092618-01-SW-U-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:50
SDG#: RNS14-01

BASF Corporation
ELLE Sample #: WW 9823686
ELLE Group #: 1991874
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182721AA	09/29/2018 16:01	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182721AA	09/29/2018 16:01	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 15:51	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:13	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 21:32	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:50
SDG#: RNS14-02

BASF Corporation
ELLE Sample #: WW 9823687
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:03	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:16	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **092618-01-SW-U-B-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:55
SDG#: RNS14-03

BASF Corporation
ELLE Sample #: WW 9823688
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,910	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **092618-01-SW-U-C-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:00
SDG#: RNS14-04

BASF Corporation
ELLE Sample #: WW 9823689
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,010	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-02-SW-A-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:30
SDG#: RNS14-05

BASF Corporation
ELLE Sample #: WW 9823690
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.70 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	94,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092618-02-SW-A-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:30
SDG#: RNS14-05

BASF Corporation
ELLE Sample #: WW 9823690
ELLE Group #: 1991874
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182721AA	09/29/2018 16:24	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182721AA	09/29/2018 16:24	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705001A	09/28/2018 12:18	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705001	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 21:39	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:30
SDG#: RNS14-06

BASF Corporation
ELLE Sample #: WW 9823691
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.70 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:12	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:12	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571401	09/28/2018 10:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571401	09/28/2018 05:33	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **092618-02-SW-A-B-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:35
SDG#: RNS14-07

BASF Corporation
ELLE Sample #: WW 9823692
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,610	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-02-SW-A-C-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 09:40
SDG#: RNS14-08

BASF Corporation
ELLE Sample #: WW 9823693
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,570	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-03-SW-D-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:10
SDG#: RNS14-09

BASF Corporation
ELLE Sample #: WW 9823694
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.99 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	100,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,210	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092618-03-SW-D-A-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:10
SDG#: RNS14-09

BASF Corporation
ELLE Sample #: WW 9823694
ELLE Group #: 1991874
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182721AA	09/29/2018 16:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182721AA	09/29/2018 16:48	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:37	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:15	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:43	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:15	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:43	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:43	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:43	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571402	10/01/2018 07:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571402	09/28/2018 15:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 21:47	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:10
SDG#: RNS14-10

BASF Corporation
ELLE Sample #: WW 9823695
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.91 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.75 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:48	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:18	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:18	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571402	10/01/2018 07:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571402	09/28/2018 15:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **092618-03-SW-D-B-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:15
SDG#: RNS14-11

BASF Corporation
ELLE Sample #: WW 9823696
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,210	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-03-SW-D-C-1 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 08:20
SDG#: RNS14-12

BASF Corporation
ELLE Sample #: WW 9823697
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18270121451B	09/27/2018 18:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18271385801A	09/28/2018 11:56	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-01-SW-U-A-3 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 14:00
SDG#: RNS14-13

BASF Corporation
ELLE Sample #: WW 9823698
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	N.D.	0.0791	0.534	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D. K4	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.84 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D. K4	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182721AA	09/29/2018 17:12	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182721AA	09/29/2018 17:12	Linda C Pape	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 16:59	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:17	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-01-SW-U-A-3 Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 14:00
SDG#: RNS14-13

BASF Corporation
ELLE Sample #: WW 9823698
ELLE Group #: 1991874
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 14:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:17	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:17	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:17	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571402	10/01/2018 06:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571402	09/28/2018 15:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-01-SW-U-A-3 Filtered Grab Surface Water**
COC: 577914

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 14:00
SDG#: RNS14-14

BASF Corporation
ELLE Sample #: WW 9823699
ELLE Group #: 1991874
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.134	0.668	1
14188	PCB-1221	11104-28-2	N.D. D1	0.134	0.668	1
14188	PCB-1232	11141-16-5	N.D. D1	0.134	0.668	1
14188	PCB-1242	53469-21-9	N.D. D1	0.134	0.668	1
14188	PCB-1248	12672-29-6	N.D. D1	0.134	0.668	1
14188	PCB-1254	11097-69-1	N.D. D1	0.134	0.668	1
14188	PCB-1260	11096-82-5	N.D. D1	0.134	0.668	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0989	0.668	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0989	0.668	1
14188	Total PCBs	1336-36-3	N.D.	0.0989	0.668	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.85 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182710012A	10/01/2018 17:11	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182710012A	09/30/2018 14:48	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:47	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182710705002A	10/01/2018 15:21	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:47	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182710705002A	09/28/2018 14:47	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182710571402	10/01/2018 07:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182710705002	09/28/2018 03:42	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182710571402	09/28/2018 15:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092618-TB-01 Water**
COC: 577910

Project Name: **Rensselaer**

Submittal Date/Time: 09/27/2018 10:30
Collection Date/Time: 09/26/2018 14:00
SDG#: RNS14-15TB

BASF Corporation
ELLE Sample #: **WW 9823700**
ELLE Group #: **1991874**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182721AA	09/29/2018 17:36	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182721AA	09/29/2018 17:36	Linda C Pape	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 12:20

Group Number: 1991874

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182721AA	Sample number(s): 9823686,9823690,9823694,9823698,9823700		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182710012A	Sample number(s): 9823686-9823687,9823690-9823691,9823694-9823695,9823698-9823699		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182710571401	Sample number(s): 9823686-9823687,9823690-9823691		
Mercury	N.D.	0.050	0.20
Batch number: 182710571402	Sample number(s): 9823694-9823695,9823698-9823699		
Mercury	N.D.	0.050	0.20
Batch number: 182710705001A	Sample number(s): 9823686-9823687,9823690		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182710705002A	Sample number(s): 9823691,9823694-9823695,9823698-9823699		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	NTU	NTU	NTU

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 12:20

Group Number: 1991874

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Batch number: 18270121451B	Sample number(s): 9823686,9823688-9823690,9823692-9823694,9823696-9823697		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18271385801A	Sample number(s): 9823686,9823688-9823690,9823692-9823694,9823696-9823697		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18272001101A	Sample number(s): 9823686,9823690,9823694		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182721AA	Sample number(s): 9823686,9823690,9823694,9823698,9823700								
Benzene	20	22.06	20	21.75	110	109	80-120	1	30
Chlorobenzene	20	22.78	20	22.53	114	113	80-120	1	30
1,2-Dichlorobenzene	20	22.63	20	22.6	113	113	80-120	0	30
1,3-Dichlorobenzene	20	23.05	20	22.79	115	114	80-120	1	30
1,4-Dichlorobenzene	20	23.21	20	23.01	116	115	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182710012A	Sample number(s): 9823686-9823687,9823690-9823691,9823694-9823695,9823698-9823699								
PCB-1016	5.01	3.12	5.01	3.23	62	65	50-140	3	36
PCB-1260	5.00	4.07	5.00	4.17	81	83	50-140	2	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182710571401	Sample number(s): 9823686-9823687,9823690-9823691								
Mercury	1.00	0.963	1.00	0.965	96	96	85-115	0	20
Batch number: 182710571402	Sample number(s): 9823694-9823695,9823698-9823699								
Mercury	1.00	0.939			94		85-115		
Batch number: 182710705001A	Sample number(s): 9823686-9823687,9823690								
Arsenic	10	10.44			104		85-115		
Cadmium	5.00	5.12			102		85-115		
Chromium	50	48.1			96		85-115		
Copper	50	50.1			100		85-115		
Lead	15	15.47			103		85-115		
Zinc	500	524.53			105		85-115		
Batch number: 182710705002A	Sample number(s): 9823691,9823694-9823695,9823698-9823699								
Arsenic	10	11.19			112		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 12:20

Group Number: 1991874

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.04			101		85-115		
Chromium	50	50.95			102		85-115		
Copper	50	55.82			112		85-115		
Lead	15	15.32			102		85-115		
Zinc	500	506.77			101		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18270121451B	Sample number(s): 9823686,9823688-9823690,9823692-9823694,9823696-9823697								
Turbidity	10	9.80			98		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18271385801A	Sample number(s): 9823686,9823688-9823690,9823692-9823694,9823696-9823697								
Total Suspended Solids	150000	148500			99		89-105		
Batch number: 18272001101A	Sample number(s): 9823686,9823690,9823694								
Total Hardness	40000	38610			97		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182710571402	Sample number(s): 9823694-9823695,9823698-9823699 UNSPK: 9823698									
Mercury	N.D.	1.00	0.961			96		80-120		
Batch number: 182710705002A	Sample number(s): 9823691,9823694-9823695,9823698-9823699 UNSPK: 9823698									
Arsenic	N.D.	10	11.28			113		70-130		
Cadmium	N.D.	5.00	5.08			102		70-130		
Chromium	0.839	50	50.73			100		70-130		
Copper	N.D.	50	55.72			111		70-130		
Lead	N.D.	15	15.49			103		70-130		
Zinc	N.D.	500	505.96			101		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 12:20

Group Number: 1991874

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182710571402	Sample number(s): 9823694-9823695,9823698-9823699 BKG: 9823698			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182710705002A	Sample number(s): 9823691,9823694-9823695,9823698-9823699 BKG: 9823698			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.839	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18270121451B	Sample number(s): 9823686,9823688-9823690,9823692-9823694,9823696-9823697 BKG: 9823686			
Turbidity	8.10	8.10	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182721AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9823686	96	102	98	92
9823690	95	100	98	92
9823694	96	100	97	93
9823698	94	99	98	92
9823700	96	101	98	92
Blank	95	100	99	93
LCS	96	102	100	96
LCSD	96	98	100	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182710012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9823686	62	69	60	69
9823687	59	78	57	75
9823690	56	69	53	69
9823691	62	72	59	68

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/02/2018 12:20

Group Number: 1991874

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182710012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9823694	60	67	57	67
9823695	60	75	59	76
9823698	57	81	55	79
9823699	60	87	58	84
Blank	52	33	49	32
LCS	39	76	36	74
LCSD	46	81	44	82
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1991874 Sample # 9823686-700

COC # 577914

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F,N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260C	Turbidity - SM2130
092618-01-SW-U-A-1	9/26/18	0850	✓		13	2	2	1	1	1	1	1	3	1
092618-01-SW-U-B-1	9/26/18	0855	✓		2							1		1
092618-01-SW-U-C-1	9/26/18	0900	✓		2							1		1
092618-02-SW-A-A-1	9/26/18	0930	✓		13	2	2	1	1	1	1	1	3	1
092618-02-SW-A-B-1	9/26/18	0935	✓		2							1		1
092618-02-SW-A-C-1	9/26/18	0940	✓		2							1		1
092618-03-SW-D-A-1	9/26/18	0810	✓		13	2	2	1	1	1	1	1	3	1
092618-03-SW-D-B-1	9/26/18	0815	✓		2							1		1
092618-03-SW-D-C-1	9/26/18	0820	✓		2							1		1
092618-01-SW-U-A-3	9/26/18	1400	✓		10	2	2	1	1	1			3	

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/29/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	9/26/18	1500			
				9/27/18	1030

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 4.5/1.6 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1991874 Sample # 9823686-700

COC # 577910

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260C	Turbidity - SM2130
092618-TB-01	9/26/18	1400	✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/29/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/26/18	1500			
			[signature]	9/27/18	1036

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 4.5/1.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 228255

Group Number(s): 1991874

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/27/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 1 HCl Tripblank

Unpacked by Nicole Reiff (25684) at 13:07 on 09/27/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	4.5	DT	Wet	Y	Bagged	N
2	DT146	1.6	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details: Hudson River OU-2

Sample ID on COC	Date/Time on Label	Comments
092618-02-SW-A-B-1	9/26/2018 09:30	85 bottle code
092618-02-SW-A-C-1	9/26/2018 09:30	85 bottle code

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 04, 2018 16:48

Project: Rensselaer

Account #: 04285
Group Number: 1992449
SDG: RNS15
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092718-01-SW-U-A-1 Grab Surface Water	09/27/2018 08:50	9826115
092718-01-SW-U-B-1 Grab Surface Water	09/27/2018 09:00	9826116
092718-01-SW-U-C-1 Grab Surface Water	09/27/2018 09:05	9826117
092718-01-SW-U-C-1 Filtered Grab Surface Water	09/27/2018 09:05	9826118
092718-02-SW-A-A-1 Grab Surface Water	09/27/2018 09:40	9826119
092718-02-SW-A-A-1 Filtered Grab Surface Water	09/27/2018 09:40	9826120
092718-02-SW-A-B-1 Grab Surface Water	09/27/2018 09:45	9826121
092718-02-SW-A-C-1 Grab Surface Water	09/27/2018 09:50	9826122
092718-03-SW-D-A-1 Grab Surface Water	09/27/2018 08:00	9826123
092718-03-SW-D-B-1 Grab Surface Water	09/27/2018 08:10	9826124
092718-03-SW-D-B-1 Filtered Grab Surface Water	09/27/2018 08:10	9826125
092718-03-SW-D-C-1 Grab Surface Water	09/27/2018 08:15	9826126
092718-TB-01 Water	09/27/2018	9826127

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **092718-01-SW-U-A-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:50
SDG#: RNS15-01

BASF Corporation
ELLE Sample #: WW 9826115
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	34,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385801A	10/01/2018 14:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-01-SW-U-B-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:00
SDG#: RNS15-02

BASF Corporation
ELLE Sample #: WW 9826116
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385801A	10/01/2018 14:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-01-SW-U-C-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:05
SDG#: RNS15-03

BASF Corporation
ELLE Sample #: WW 9826117
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.91 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.86 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	19,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092718-01-SW-U-C-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:05
SDG#: RNS15-03

BASF Corporation
ELLE Sample #: WW 9826117
ELLE Group #: 1992449
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182751AA	10/02/2018 23:04	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182751AA	10/02/2018 23:04	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 12:24	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 15:37	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 15:37	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 15:37	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 15:37	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 15:37	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/03/2018 08:47	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 22:09	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385801A	10/01/2018 14:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-01-SW-U-C-1 Filtered Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:05
SDG#: RNS15-04

BASF Corporation
ELLE Sample #: WW 9826118
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D. K4	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 12:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:02	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-02-SW-A-A-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:40
SDG#: RNS15-05

BASF Corporation
ELLE Sample #: WW 9826119
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.543	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.543	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0804	0.543	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0804	0.543	1
14188	Total PCBs	1336-36-3	N.D.	0.0804	0.543	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.87 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.81 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.6 J	1.1	3.0	1
06049	Zinc	7440-66-6	6.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	28	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	36,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092718-02-SW-A-A-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:40
SDG#: RNS15-05

BASF Corporation
ELLE Sample #: WW 9826119
ELLE Group #: 1992449
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182751AA	10/02/2018 23:26	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182751AA	10/02/2018 23:26	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 12:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:05	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:05	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:05	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:05	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:05	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/03/2018 08:58	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 22:17	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385801A	10/01/2018 14:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:40
SDG#: RNS15-06

BASF Corporation
ELLE Sample #: WW 9826120
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.539	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.539	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.539	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.539	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.539	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.539	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.539	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0797	0.539	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0797	0.539	1
14188	Total PCBs	1336-36-3	N.D.	0.0797	0.539	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D. K4	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 12:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:07	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-02-SW-A-B-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:45
SDG#: RNS15-07

BASF Corporation
ELLE Sample #: WW 9826121
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385802A	10/01/2018 15:24	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-02-SW-A-C-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 09:50
SDG#: RNS15-08

BASF Corporation
ELLE Sample #: WW 9826122
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	19	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	26,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385802A	10/01/2018 15:24	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-03-SW-D-A-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:00
SDG#: RNS15-09

BASF Corporation
ELLE Sample #: WW 9826123
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	17,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385802A	10/01/2018 15:24	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-03-SW-D-B-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:10
SDG#: RNS15-10

BASF Corporation
ELLE Sample #: WW 9826124
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.94 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.76 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092718-03-SW-D-B-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:10
SDG#: RNS15-10

BASF Corporation
ELLE Sample #: WW 9826124
ELLE Group #: 1992449
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182751AA	10/02/2018 23:48	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182751AA	10/02/2018 23:48	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 13:10	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:09	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:09	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:09	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:09	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:09	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/03/2018 08:59	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 22:25	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385802A	10/01/2018 15:24	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:10
SDG#: RNS15-11

BASF Corporation
ELLE Sample #: WW 9826125
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.71 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D. K4	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 13:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182720705001A	10/02/2018 16:12	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182720571401	10/02/2018 06:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182720705001	10/01/2018 15:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182720571401	10/01/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-03-SW-D-C-1 Grab Surface Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018 08:15
SDG#: RNS15-12

BASF Corporation
ELLE Sample #: WW 9826126
ELLE Group #: 1992449
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18271121453A	09/28/2018 18:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18274385802A	10/01/2018 15:24	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092718-TB-01 Water**
COC: 577535

Project Name: **Rensselaer**

Submittal Date/Time: 09/28/2018 10:25
Collection Date/Time: 09/27/2018
SDG#: RNS15-13TB

BASF Corporation
ELLE Sample #: **WW 9826127**
ELLE Group #: **1992449**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182751AA	10/02/2018 20:54	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182751AA	10/02/2018 20:54	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/04/2018 16:48

Group Number: 1992449

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L182751AA	Sample number(s): 9826117,9826119,9826124,9826127		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182760020A	Sample number(s): 9826117-9826120,9826124-9826125		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182720571401	Sample number(s): 9826117-9826120,9826124-9826125		
Mercury	N.D.	0.050	0.20
Batch number: 182720705001A	Sample number(s): 9826117-9826120,9826124-9826125		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18271121453A	Sample number(s): 9826115-9826117,9826119,9826121-9826124,9826126		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18272001101A	Sample number(s): 9826117,9826119,9826124		
Total Hardness	N.D.	3,000	10,000
Batch number: 18274385801A	Sample number(s): 9826115-9826117,9826119		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18274385802A	Sample number(s): 9826121-9826124,9826126		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/04/2018 16:48

Group Number: 1992449

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L182751AA	Sample number(s): 9826117,9826119,9826124,9826127								
Benzene	20	21.1			105		80-120		
Chlorobenzene	20	20.86			104		80-120		
1,2-Dichlorobenzene	20	20.82			104		80-120		
1,3-Dichlorobenzene	20	20.63			103		80-120		
1,4-Dichlorobenzene	20	20.61			103		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182760020A	Sample number(s): 9826117-9826120,9826124-9826125								
PCB-1016	5.01	4.40	5.01	4.25	88	85	50-140	3	36
PCB-1260	5.00	5.17	5.00	4.87	103	97	50-140	6	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182720571401	Sample number(s): 9826117-9826120,9826124-9826125								
Mercury	1.00	0.896			90		85-115		
Batch number: 182720705001A	Sample number(s): 9826117-9826120,9826124-9826125								
Arsenic	10	10.45			105		85-115		
Cadmium	5.00	4.96			99		85-115		
Chromium	50	47.13			94		85-115		
Copper	50	46.97			94		85-115		
Lead	15	15.27			102		85-115		
Zinc	500	486.9			97		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18271121453A	Sample number(s): 9826115-9826117,9826119,9826121-9826124,9826126								
Turbidity	10	10			100		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18272001101A	Sample number(s): 9826117,9826119,9826124								
Total Hardness	40000	38610			97		85-110		
Batch number: 18274385801A	Sample number(s): 9826115-9826117,9826119								
Total Suspended Solids	150000	138800			93		89-105		
Batch number: 18274385802A	Sample number(s): 9826121-9826124,9826126								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/04/2018 16:48

Group Number: 1992449

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Suspended Solids	150000	143000			95		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182720705001A	Sample number(s): 9826117-9826120,9826124-9826125 UNSPK: 9826117									
Arsenic	0.913	10	11.15			102		70-130		
Cadmium	N.D.	5.00	4.76			95		70-130		
Chromium	0.861	50	46.45			91		70-130		
Copper	N.D.	50	48.06			96		70-130		
Lead	N.D.	15	16.57			110		70-130		
Zinc	N.D.	500	503.4			101		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182720705001A	Sample number(s): 9826117-9826120,9826124-9826125 BKG: 9826117			
Arsenic	0.913	0.905	1 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.861	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18271121453A	Sample number(s): 9826115-9826117,9826119,9826121-9826124,9826126 BKG: 9826115			
Turbidity	22	23	4	8

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/04/2018 16:48

Group Number: 1992449

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182751AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9826117	103	104	96	99
9826119	102	104	97	100
9826124	102	103	97	99
9826127	102	103	96	99
Blank	103	103	97	101
LCS	102	102	98	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182760020A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9826117	64	71	62	70
9826118	67	79	65	75
9826119	64	75	64	74
9826120	76	84	75	83
9826124	72	82	71	77
9826125	78	84	77	78
Blank	42	79	43	77
LCS	76	82	77	80
LCSD	75	93	71	93
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1992449 Sample # 9826115-27

COC # 577535

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F,N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
092718-01-SW-U-A-1	9/27/18	0850	✓		2							1		1
092718-01-SW-U-B-1	9/27/18	0900	✓		2							1		1
092718-01-SW-U-C-1	9/27/18	0905	✓		13	2	2	1	1	1	1	1	3	1
092718-02-SW-A-A-1	9/27/18	0940	✓		13	2	2	1	1	1	1	1	3	1
092718-02-SW-A-B-1	9/27/18	0945	✓		2							1		1
092718-02-SW-A-C-1	9/27/18	0950	✓		2							1		1
092718-03-SW-D-A-1	9/27/18	0800	✓		2							1		1
092718-03-SW-D-B-1	9/27/18	0810	✓		13	2	2	1	1	1	1	1	3	1
092718-03-SW-D-C-1	9/27/18	0815	✓		2							1		1
092718-TB-01	9/27/18		✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/30/18

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	9/27/18	1530			
			[signature]	9/28/18	0845

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.9-1.5 °C 9-28-18

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Sample Administration Receipt Documentation Log

Doc Log ID: 228424

Group Number(s): 1992449

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/28/2018 10:25
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 092718-TB-01 (1 of 1)

Unpacked by Melvin Sanchez (8943) at 12:43 on 09/28/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.4	DT	Wet	Y	Bagged	N
2	DT131	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 08, 2018 14:59

Project: Rensselaer

Account #: 04285
Group Number: 1992832
SDG: RNS16
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
092818-01-SW-U-A-1 Grab Surface Water	09/28/2018 09:20	9827896
092818-01-SW-U-A-1 Filtered Grab Surface Water	09/28/2018 09:20	9827897
092818-01-SW-U-B-1 Grab Surface Water	09/28/2018 09:25	9827898
092818-01-SW-U-C-1 Grab Surface Water	09/28/2018 09:30	9827899
092818-02-SW-A-A-1 Grab Surface Water	09/28/2018 10:00	9827900
092818-02-SW-A-A-1 Filtered Grab Surface Water	09/28/2018 10:00	9827901
092818-02-SW-A-B-1 Grab Surface Water	09/28/2018 10:05	9827902
092818-02-SW-A-C-1 Grab Surface Water	09/28/2018 10:10	9827903
092818-03-SW-D-A-1 Grab Surface Water	09/28/2018 08:20	9827904
092818-03-SW-D-B-1 Grab Surface Water	09/28/2018 08:25	9827905
092818-03-SW-D-B-1 MS Grab Surface Water	09/28/2018 08:25	9827906
092818-03-SW-D-B-1 MSD Grab Surface Water	09/28/2018 08:25	9827907
092818-03-SW-D-B-1 DUP Grab Surface Water	09/28/2018 08:25	9827908
092818-03-SW-D-B-1 Filtered Grab Surface Water	09/28/2018 08:25	9827909
092818-03-SW-D-B-1 MS Filtered Grab Surface Water	09/28/2018 08:25	9827910
092818-03-SW-D-B-1 MSD Filtered Grab Surface Water	09/28/2018 08:25	9827911
092818-03-SW-D-B-1 DUP Filtered Grab Surface Water	09/28/2018 08:25	9827912
092818-03-SW-D-C-1 Grab Surface Water	09/28/2018 08:30	9827913
092818-TB-01 Water	09/28/2018 19:00	9827914

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **092818-01-SW-U-A-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 09:20
SDG#: RNS16-01

BASF Corporation
ELLE Sample #: WW 9827896
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.94 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.73 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	100,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	20	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	26,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092818-01-SW-U-A-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 09:20
SDG#: RNS16-01

BASF Corporation
ELLE Sample #: WW 9827896
ELLE Group #: 1992832
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 15:03	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 15:03	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 22:33	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:05	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 13:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 23:38	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 09:20
SDG#: RNS16-02

BASF Corporation
ELLE Sample #: WW 9827897
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.105	0.527	1
14188	PCB-1221	11104-28-2	N.D. D1	0.105	0.527	1
14188	PCB-1232	11141-16-5	N.D. D1	0.105	0.527	1
14188	PCB-1242	53469-21-9	N.D. D1	0.105	0.527	1
14188	PCB-1248	12672-29-6	N.D. D1	0.105	0.527	1
14188	PCB-1254	11097-69-1	N.D. D1	0.105	0.527	1
14188	PCB-1260	11096-82-5	N.D. D1	0.105	0.527	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0781	0.527	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0781	0.527	1
14188	Total PCBs	1336-36-3	N.D.	0.0781	0.527	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.81 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	6.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.053 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 22:44	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:39	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 14:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-01-SW-U-B-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 09:25
SDG#: RNS16-03

BASF Corporation
ELLE Sample #: WW 9827898
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	17	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	22,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-01-SW-U-C-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 09:30
SDG#: RNS16-04

BASF Corporation
ELLE Sample #: WW 9827899
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	16	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	18,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-02-SW-A-A-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 10:00
SDG#: RNS16-05

BASF Corporation
ELLE Sample #: WW 9827900
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.80 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	88,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	21	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	27,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092818-02-SW-A-A-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 10:00
SDG#: RNS16-05

BASF Corporation
ELLE Sample #: WW 9827900
ELLE Group #: 1992832
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 14:41	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 14:41	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 22:55	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 18:08	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 13:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 23:45	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 10:00
SDG#: RNS16-06

BASF Corporation
ELLE Sample #: WW 9827901
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 23:07	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:40	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 14:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-02-SW-A-B-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 10:05
SDG#: RNS16-07

BASF Corporation
ELLE Sample #: WW 9827902
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	20	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	24,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-02-SW-A-C-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 10:10
SDG#: RNS16-08

BASF Corporation
ELLE Sample #: WW 9827903
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	17	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	21,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-A-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:20
SDG#: RNS16-09

BASF Corporation
ELLE Sample #: WW 9827904
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	17,300	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10BKG

BASF Corporation
ELLE Sample #: WW 9827905
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.73 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	93,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	14,800	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10BKG

BASF Corporation
ELLE Sample #: WW 9827905
ELLE Group #: 1992832
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 13:36	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 13:36	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 23:41	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/01/2018 20:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:24	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 12:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/29/2018 23:53	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MS Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10MS

BASF Corporation
ELLE Sample #: WW 9827906
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	20	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	19	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	20	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	20	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.27 D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	5.13 D2	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	9.41	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.5	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	46.2	0.70	4.0	1
06033	Copper	7440-50-8	49.1	9.9	40.0	1
06035	Lead	7439-92-1	15.4	1.1	3.0	1
06049	Zinc	7440-66-6	530	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.93	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	172,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 13:57	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 13:57	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/07/2018 23:52	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MS Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10MS

BASF Corporation
ELLE Sample #: WW 9827906
ELLE Group #: 1992832
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/01/2018 20:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:33	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 12:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/30/2018 00:01	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MSD Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10MSD

BASF Corporation
ELLE Sample #: WW 9827907
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	20	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	19	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	20	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	20	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.83 D2	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	5.86 D2	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	10.7	0.0881	0.595	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.2	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	46.1	0.70	4.0	1
06033	Copper	7440-50-8	49.1	9.9	40.0	1
06035	Lead	7439-92-1	15.4	1.1	3.0	1
06049	Zinc	7440-66-6	520	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	172,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 14:19	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 14:19	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/08/2018 00:03	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MSD Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10MSD

BASF Corporation
ELLE Sample #: WW 9827907
ELLE Group #: 1992832
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780010A	10/01/2018 20:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:35	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 12:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/30/2018 00:09	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 DUP Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-10DUP

BASF Corporation
ELLE Sample #: WW 9827908
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	95,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,400	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705001A	10/02/2018 17:30	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571401	10/01/2018 12:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705001	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571401	10/01/2018 08:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18272001101A	09/30/2018 00:36	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-11BKG

BASF Corporation
ELLE Sample #: WW 9827909
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.070 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 01:57	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:15	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 13:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MS Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-11MS

BASF Corporation
ELLE Sample #: WW 9827910
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.90 D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	5.77 D2	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	10.7	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.2	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	46.8	0.70	4.0	1
06033	Copper	7440-50-8	48.0	9.9	40.0	1
06035	Lead	7439-92-1	15.4	1.1	3.0	1
06049	Zinc	7440-66-6	509	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.95	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 02:08	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:20	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 13:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 MSD Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-11MSD

BASF Corporation
ELLE Sample #: WW 9827911
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.86 D2	0.107	0.536	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.536	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.536	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.536	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.536	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.536	1
14188	PCB-1260	11096-82-5	5.44 D2	0.107	0.536	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0794	0.536	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0794	0.536	1
14188	Total PCBs	1336-36-3	10.3	0.0794	0.536	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.0	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	47.7	0.70	4.0	1
06033	Copper	7440-50-8	48.5	9.9	40.0	1
06035	Lead	7439-92-1	15.7	1.1	3.0	1
06049	Zinc	7440-66-6	502	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.95	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 02:19	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:22	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 14:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-B-1 DUP Filtered Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:25
SDG#: RNS16-11DUP

BASF Corporation
ELLE Sample #: WW 9827912
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182740705002A	10/02/2018 21:19	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182740571402	10/01/2018 13:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182740705002	10/02/2018 06:26	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182740571402	10/01/2018 08:25	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-03-SW-D-C-1 Grab Surface Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 08:30
SDG#: RNS16-12

BASF Corporation
ELLE Sample #: WW 9827913
ELLE Group #: 1992832
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	14,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18272121452A	09/29/2018 15:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18275385801A	10/02/2018 15:33	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **092818-TB-01 Water**
COC: 577537

Project Name: **Rensselaer**

Submittal Date/Time: 09/29/2018 09:45
Collection Date/Time: 09/28/2018 19:00
SDG#: RNS16-13TB

BASF Corporation
ELLE Sample #: WW 9827914
ELLE Group #: 1992832
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182762AA	10/03/2018 13:14	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182762AA	10/03/2018 13:14	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182762AA	Sample number(s): 9827896,9827900,9827905-9827907,9827914		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182780010A	Sample number(s): 9827896-9827897,9827900-9827901,9827905-9827907		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182780011A	Sample number(s): 9827909-9827911		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182740571401	Sample number(s): 9827896,9827900,9827905-9827908		
Mercury	N.D.	0.050	0.20
Batch number: 182740571402	Sample number(s): 9827897,9827901,9827909-9827912		
Mercury	N.D.	0.050	0.20
Batch number: 182740705001A	Sample number(s): 9827896,9827900,9827905-9827908		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182740705002A	Sample number(s): 9827897,9827901,9827909-9827912		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18272121452A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18272001101A	Sample number(s): 9827896,9827900,9827905-9827908		
Total Hardness	N.D.	3,000	10,000
Batch number: 18275385801A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182762AA	Sample number(s): 9827896,9827900,9827905-9827907,9827914								
Benzene	20	19.85	20	19.99	99	100	80-120	1	30
Chlorobenzene	20	19.39	20	19.71	97	99	80-120	2	30
1,2-Dichlorobenzene	20	18.97	20	19.32	95	97	80-120	2	30
1,3-Dichlorobenzene	20	18.62	20	19.32	93	97	80-120	4	30
1,4-Dichlorobenzene	20	19.12	20	19.11	96	96	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182780010A	Sample number(s): 9827896-9827897,9827900-9827901,9827905-9827907								
PCB-1016	5.01	3.74			75		50-140		
PCB-1260	5.00	4.66			93		50-140		
Batch number: 182780011A	Sample number(s): 9827909-9827911								
PCB-1016	5.01	3.92			78		50-140		
PCB-1260	5.00	4.97			99		50-140		
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182740571401	Sample number(s): 9827896,9827900,9827905-9827908								
Mercury	1.00	0.941			94		85-115		
Batch number: 182740571402	Sample number(s): 9827897,9827901,9827909-9827912								
Mercury	1.00	1.03			103		85-115		
Batch number: 182740705001A	Sample number(s): 9827896,9827900,9827905-9827908								
Arsenic	10	10.68			107		85-115		
Cadmium	5.00	4.98			100		85-115		
Chromium	50	47.67			95		85-115		
Copper	50	47.41			95		85-115		
Lead	15	14.57			97		85-115		
Zinc	500	535.6			107		85-115		
Batch number: 182740705002A	Sample number(s): 9827897,9827901,9827909-9827912								
Arsenic	10	10.24			102		85-115		
Cadmium	5.00	5.04			101		85-115		
Chromium	50	48.35			97		85-115		
Copper	50	48.53			97		85-115		
Lead	15	15.8			105		85-115		
Zinc	500	531.9			106		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18272121452A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913								
Turbidity	10	9.60			96		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18272001101A	Sample number(s): 9827896,9827900,9827905-9827908								
Total Hardness	40000	38610			97		85-110		
Batch number: 18275385801A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913								
Total Suspended Solids	150000	141800			95		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5182762AA	Sample number(s): 9827896,9827900,9827905-9827907,9827914 UNSPK: 9827905									
Benzene	N.D.	20	20.89	20	21.05	104	105	80-120	1	30
Chlorobenzene	N.D.	20	20.43	20	20.16	102	101	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	N.D.	20	19.49	20	19.23	97	96	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	19.72	20	19.74	99	99	80-120	0	30
1,4-Dichlorobenzene	N.D.	20	19.55	20	19.63	98	98	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182780010A	Sample number(s): 9827896-9827897,9827900-9827901,9827905-9827907 UNSPK: 9827905									
PCB-1016	N.D.	5.66	4.27	5.96	4.83	75	81	50-140	12	36
PCB-1260	N.D.	5.66	5.13	5.95	5.86	91	98	50-140	13	38
Batch number: 182780011A	Sample number(s): 9827909-9827911 UNSPK: 9827909									
PCB-1016	N.D.	5.72	4.90	5.37	4.86	86	91	50-140	1	36
PCB-1260	N.D.	5.71	5.77	5.36	5.44	101	101	50-140	6	38
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182740571401	Sample number(s): 9827896,9827900,9827905-9827908 UNSPK: 9827905									
Mercury	N.D.	1.00	0.933	1.00	0.909	93	91	80-120	3	20
Batch number: 182740571402	Sample number(s): 9827897,9827901,9827909-9827912 UNSPK: 9827909									
Mercury	0.0701	1.00	0.947	1.00	0.948	88	88	80-120	0	20
Batch number: 182740705001A	Sample number(s): 9827896,9827900,9827905-9827908 UNSPK: 9827905									
Arsenic	0.735	10	11.54	10	11.24	108	105	70-130	3	20
Cadmium	N.D.	5.00	5.07	5.00	4.90	101	98	70-130	3	20
Chromium	N.D.	50	46.17	50	46.14	92	92	70-130	0	20
Copper	N.D.	50	49.05	50	49.14	98	98	70-130	0	20
Lead	N.D.	15	15.35	15	15.35	102	102	70-130	0	20
Zinc	N.D.	500	530.1	500	520.3	106	104	70-130	2	20
Batch number: 182740705002A	Sample number(s): 9827897,9827901,9827909-9827912 UNSPK: 9827909									
Arsenic	N.D.	10	11.16	10	11.02	112	110	70-130	1	20
Cadmium	N.D.	5.00	4.94	5.00	5.12	99	102	70-130	4	20
Chromium	N.D.	50	46.77	50	47.69	94	95	70-130	2	20
Copper	N.D.	50	47.97	50	48.5	96	97	70-130	1	20
Lead	N.D.	15	15.4	15	15.73	103	105	70-130	2	20
Zinc	N.D.	500	508.5	500	501.6	102	100	70-130	1	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18272001101A	Sample number(s): 9827896,9827900,9827905-9827908 UNSPK: 9827905									
Total Hardness	93040	80000	171940	80000	172240	99	99	85-110	0	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182740571401	Sample number(s): 9827896,9827900,9827905-9827908 BKG: 9827905			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182740571402	Sample number(s): 9827897,9827901,9827909-9827912 BKG: 9827909			
Mercury	0.0701	N.D.	200* (1)	20
Batch number: 182740705001A	Sample number(s): 9827896,9827900,9827905-9827908 BKG: 9827905			
Arsenic	0.735	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 182740705002A	Sample number(s): 9827897,9827901,9827909-9827912 BKG: 9827909			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18272121452A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913 BKG: 9827905			
Turbidity	13	13	0	8
	ug/l	ug/l		
Batch number: 18272001101A	Sample number(s): 9827896,9827900,9827905-9827908 BKG: 9827905			
Total Hardness	93040	95140	2 (1)	7
Batch number: 18275385801A	Sample number(s): 9827896,9827898-9827900,9827902-9827905,9827908,9827913 BKG: 9827905			
Total Suspended Solids	14800	16400	10* (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182762AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9827896	100	99	95	84

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182762AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9827900	100	98	99	88
9827905	101	102	95	88
9827906	102	96	99	99
9827907	97	96	96	96
9827914	101	99	95	90
Blank	100	99	95	89
LCS	97	99	97	97
LCSD	97	96	98	98
MS	102	96	99	99
MSD	97	96	96	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182780010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9827896	68	85	66	80
9827897	62	76	58	68
9827900	67	88	64	87
9827901	71	87	68	83
9827905	77	87	72	88
9827906	58	78	57	72
9827907	61	82	57	81
Blank	59	83	58	75
LCS	53	83	51	78
MS	58	78	57	72
MSD	61	82	57	81
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182780011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9827909	66	86	62	86
9827910	68	87	63	84
9827911	77	83	73	80
Blank	61	72	60	70
LCS	44	78	41	76
MS	68	87	63	84
MSD	77	83	73	80

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 14:59

Group Number: 1992832

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182780011A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # U285 Group # 1492832 Sample # 9827896-914

COC # 577537

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	PCBs (Filtered)	PCBs (Unfiltered)	Metals (Filtered)	Metals (Unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130	Remarks
092818-01-SW-U-A-1	9/28/18	0920	✓					✓						13	2	2	1	1	1	1	1	3	1	
092818-01-SW-U-B-1	9/28/18	0925	✓					✓						2							1		1	
092818-01-SW-U-C-1	9/28/18	0930	✓					✓						2							1		1	
092818-02-SW-A-A-1	9/28/18	1000	✓					✓						13	2	2	1	1	1	1	1	3	1	
092818-02-SW-A-B-1	9/28/18	1005	✓					✓						2							1		1	
092818-02-SW-A-C-1	9/28/18	1010	✓					✓						2							1		1	
092818-03-SW-D-A-1	9/28/18	0820	✓					✓						2							1		1	
092818-03-SW-D-B-1	9/28/18	0825	✓					✓						13	2	2	1	1	1	1	1	3	1	MS/MSD
092818-03-SW-D-C-1	9/28/18	0830	✓					✓						2							1		1	
092818-TB-01	9/28/18	1400	✓					✓						1								1		

Analysis Requested
Preservation and Filtration Codes: F | | FN | N | N | N | | H | |

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 9/30/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by		Date	Time	Received by	Date	Time
		9/28/18	1630			
Relinquished by		Date	Time	Received by	Date	Time
Relinquished by		Date	Time	Received by	Date	Time
Relinquished by		Date	Time	Received by	Date	Time
Relinquished by		Date	Time	Received by	9-29-18	945

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.6-1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 228560

Group Number(s): 1992832

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	09/29/2018 9:45
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Melvin Sanchez (8943) at 11:59 on 09/29/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.4	DT	Wet	Y	Bagged	N
2	DT131	0.6	DT	Wet	Y	Bagged	N
3	DT131	0.8	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
092818-03-SW-D-B-1	36	13	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 08, 2018 17:55

Project: Rensselaer

Account #: 04285
Group Number: 1993371
SDG: RNS17
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100118-01-SW-U-A-1 Grab Surface Water	10/01/2018 14:00	9830590
100118-01-SW-U-A-1 Filtered Grab Surface Water	10/01/2018 14:00	9830591
100118-01-SW-U-B-1 Grab Surface Water	10/01/2018 14:05	9830592
100118-01-SW-U-C-1 Grab Surface Water	10/01/2018 14:10	9830593
100118-02-SW-A-A-1 Grab Surface Water	10/01/2018 14:30	9830594
100118-02-SW-A-B-1 Grab Surface Water	10/01/2018 14:35	9830595
100118-02-SW-A-B-1 Filtered Grab Surface Water	10/01/2018 14:35	9830596
100118-02-SW-A-C-1 Grab Surface Water	10/01/2018 14:40	9830597
100118-03-SW-D-A-1 Grab Surface Water	10/01/2018 13:20	9830598
100118-03-SW-D-B-1 Grab Surface Water	10/01/2018 13:25	9830599
100118-03-SW-D-C-1 Grab Surface Water	10/01/2018 13:30	9830600
100118-03-SW-D-C-1 Filtered Grab Surface Water	10/01/2018 13:30	9830601
100118-02-SW-A-B-2 Grab Surface Water	10/01/2018 14:55	9830602
100118-02-SW-A-B-2 Filtered Grab Surface Water	10/01/2018 14:55	9830603
100118-TB-01 Water	10/01/2018 17:15	9830604

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100118-01-SW-U-A-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:00
SDG#: RNS17-01

BASF Corporation
ELLE Sample #: WW 9830590
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.2 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,850	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100118-01-SW-U-A-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:00
SDG#: RNS17-01

BASF Corporation
ELLE Sample #: WW 9830590
ELLE Group #: 1993371
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182772AA	10/04/2018 16:47	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182772AA	10/04/2018 16:47	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 13:32	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:20	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:20	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:27	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:27	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:20	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:20	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:35	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 09:36	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18275121451A	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385802A	10/03/2018 11:43	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:00
SDG#: RNS17-02

BASF Corporation
ELLE Sample #: WW 9830591
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.541	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.541	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.541	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.541	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.541	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.541	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.541	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0801	0.541	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0801	0.541	1
14188	Total PCBs	1336-36-3	N.D.	0.0801	0.541	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.6 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 13:44	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:25	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:25	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:29	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:29	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:25	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:25	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:37	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-01-SW-U-B-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:05
SDG#: RNS17-03

BASF Corporation
ELLE Sample #: WW 9830592
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,850	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451A	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385802A	10/03/2018 11:43	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-01-SW-U-C-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:10
SDG#: RNS17-04

BASF Corporation
ELLE Sample #: WW 9830593
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,960	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451A	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385802A	10/03/2018 11:43	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **100118-02-SW-A-A-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:30
SDG#: RNS17-05

BASF Corporation
ELLE Sample #: WW 9830594
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451A	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385802A	10/03/2018 11:44	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:35
SDG#: RNS17-06

BASF Corporation
ELLE Sample #: WW 9830595
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.530	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.530	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.530	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.530	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.530	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.530	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.530	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0784	0.530	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0784	0.530	1
14188	Total PCBs	1336-36-3	N.D.	0.0784	0.530	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	84,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:35
SDG#: RNS17-06

BASF Corporation
ELLE Sample #: WW 9830595
ELLE Group #: 1993371
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182761AA	10/03/2018 19:44	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182761AA	10/03/2018 19:44	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760020A	10/04/2018 13:55	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760020A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:26	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:26	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:34	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:34	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:26	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:26	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:39	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 10:23	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18275121451A	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385802A	10/03/2018 11:44	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:35
SDG#: RNS17-07

BASF Corporation
ELLE Sample #: WW 9830596
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.9 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760021A	10/04/2018 15:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760021A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:28	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:28	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:36	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:36	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:28	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:28	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:46	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **100118-02-SW-A-C-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:40
SDG#: RNS17-08

BASF Corporation
ELLE Sample #: WW 9830597
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,680	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451B	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385803A	10/03/2018 23:58	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-03-SW-D-A-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 13:20
SDG#: RNS17-09

BASF Corporation
ELLE Sample #: WW 9830598
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451B	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385803A	10/03/2018 23:58	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-03-SW-D-B-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 13:25
SDG#: RNS17-10

BASF Corporation
ELLE Sample #: WW 9830599
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18275121451B	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385803A	10/03/2018 23:58	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-03-SW-D-C-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 13:30
SDG#: RNS17-11

BASF Corporation
ELLE Sample #: WW 9830600
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	N.D.	0.0791	0.534	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,740	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100118-03-SW-D-C-1 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 13:30
SDG#: RNS17-11

BASF Corporation
ELLE Sample #: WW 9830600
ELLE Group #: 1993371
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182772AA	10/04/2018 17:10	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182772AA	10/04/2018 17:10	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760021A	10/04/2018 16:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760021A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:08	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:08	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:18	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:18	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:08	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:08	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:48	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 10:31	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18275121451B	10/02/2018 19:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385803A	10/03/2018 23:58	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 13:30
SDG#: RNS17-12

BASF Corporation
ELLE Sample #: WW 9830601
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	11.8	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760021A	10/04/2018 16:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760021A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:30	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:30	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:38	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:38	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:30	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:30	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:50	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-2 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:55
SDG#: RNS17-13

BASF Corporation
ELLE Sample #: WW 9830602
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182772AA	10/04/2018 17:34	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182772AA	10/04/2018 17:34	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760021A	10/04/2018 16:28	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-2 Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:55
SDG#: RNS17-13

BASF Corporation
ELLE Sample #: WW 9830602
ELLE Group #: 1993371
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760021A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:32	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:32	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:40	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:40	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:32	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:32	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:25	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 10:39	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **100118-02-SW-A-B-2 Filtered Grab Surface Water**
COC: 577582

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 14:55
SDG#: RNS17-14

BASF Corporation
ELLE Sample #: WW 9830603
ELLE Group #: 1993371
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760021A	10/04/2018 16:38	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760021A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:33	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:33	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:42	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705008A	10/08/2018 13:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:33	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705008A	10/06/2018 13:33	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182760571401	10/04/2018 15:52	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182760705001	10/03/2018 15:15	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182780705008	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182760571401	10/03/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **100118-TB-01 Water**
COC: 577583

Project Name: **Rensselaer**

Submittal Date/Time: 10/02/2018 10:25
Collection Date/Time: 10/01/2018 17:15
SDG#: RNS17-15TB

BASF Corporation
ELLE Sample #: **WW 9830604**
ELLE Group #: **1993371**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182761AA	10/03/2018 17:22	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182761AA	10/03/2018 17:22	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182761AA	Sample number(s): 9830595,9830604		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: W182772AA	Sample number(s): 9830590,9830600,9830602		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182760020A	Sample number(s): 9830590-9830591,9830595		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182760021A	Sample number(s): 9830596,9830600-9830603		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182760571401	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603		
Mercury	N.D.	0.050	0.20
Batch number: 182780705008A	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18275121451A	Sample number(s): 9830590,9830592-9830595		
Turbidity	0.15 J	0.140	1.00
Batch number: 18275121451B	Sample number(s): 9830597-9830600		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18276385802A	Sample number(s): 9830590,9830592-9830595		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18276385803A	Sample number(s): 9830597-9830600		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18277001101A	Sample number(s): 9830590,9830595,9830600,9830602		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W182761AA	Sample number(s): 9830595,9830604								
Benzene	20	21.83			109		80-120		
Chlorobenzene	20	22.04			110		80-120		
1,2-Dichlorobenzene	20	22.23			111		80-120		
1,3-Dichlorobenzene	20	22.64			113		80-120		
1,4-Dichlorobenzene	20	22.7			113		80-120		
Batch number: W182772AA	Sample number(s): 9830590,9830600,9830602								
Benzene	20	21.57	20	22.26	108	111	80-120	3	30
Chlorobenzene	20	22.1	20	22.53	111	113	80-120	2	30
1,2-Dichlorobenzene	20	22.61	20	22.87	113	114	80-120	1	30
1,3-Dichlorobenzene	20	22.84	20	23.14	114	116	80-120	1	30
1,4-Dichlorobenzene	20	23	20	23.27	115	116	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182760020A	Sample number(s): 9830590-9830591,9830595								
PCB-1016	5.01	4.40	5.01	4.25	88	85	50-140	3	36
PCB-1260	5.00	5.17	5.00	4.87	103	97	50-140	6	38
Batch number: 182760021A	Sample number(s): 9830596,9830600-9830603								
PCB-1016	5.01	4.59	5.01	4.63	92	92	50-140	1	36
PCB-1260	5.00	4.59	5.00	4.75	92	95	50-140	3	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182760571401	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603								
Mercury	1.00	0.939			94		85-115		
Batch number: 182780705008A	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603								
Arsenic	10	10.31			103		85-115		
Cadmium	5.00	4.82			96		85-115		
Chromium	50	51.66			103		85-115		
Copper	50	53.69			107		85-115		
Lead	15	14.8			99		85-115		
Zinc	500	513.3			103		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18275121451A	Sample number(s): 9830590,9830592-9830595								
Turbidity	10	9.60			96		90-104		
Batch number: 18275121451B	Sample number(s): 9830597-9830600								
Turbidity	10	9.60			96		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18276385802A	Sample number(s): 9830590,9830592-9830595								
Total Suspended Solids	150000	142600			95		89-105		
Batch number: 18276385803A	Sample number(s): 9830597-9830600								
Total Suspended Solids	150000	149800			100		89-105		
Batch number: 18277001101A	Sample number(s): 9830590,9830595,9830600,9830602								
Total Hardness	40000	38420			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182760571401	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603 UNSPK: 9830602									
Mercury	N.D.	1.00	0.902			90		80-120		
Batch number: 182780705008A	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603 UNSPK: 9830600									
Arsenic	N.D.	10	10.99			110		70-130		
Cadmium	N.D.	5.00	4.80			96		70-130		
Chromium	N.D.	50	52.88			106		70-130		
Copper	N.D.	50	55.69			111		70-130		
Lead	N.D.	15	15.76			105		70-130		
Zinc	N.D.	500	512			102		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18277001101A	Sample number(s): 9830590,9830595,9830600,9830602 UNSPK: 9830590									
Total Hardness	85980	80000	168360			103		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182760571401	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603 BKG: 9830602			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182780705008A	Sample number(s): 9830590-9830591,9830595-9830596,9830600-9830603 BKG: 9830600			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18275121451B	Sample number(s): 9830597-9830600 BKG: 9830597			
Turbidity	9.80	9.90	1	8
	ug/l	ug/l		
Batch number: 18277001101A	Sample number(s): 9830590,9830595,9830600,9830602 BKG: 9830590			
Total Hardness	85980	86480	1 (1)	7

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182761AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9830595	94	99	100	95
9830604	94	99	100	95
Blank	94	99	100	95
LCS	94	102	101	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182772AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9830590	94	101	97	93
9830600	93	97	98	93
9830602	95	100	98	93
Blank	93	100	98	94
LCS	93	103	99	96
LCSD	95	102	99	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182760020A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9830590	75	78	71	75
9830591	67	79	68	80
9830595	76	78	73	76
Blank	42	79	43	77
LCS	76	82	77	80
LCSD	75	93	71	93
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182760021A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9830596	82	85	80	86
9830600	70	80	68	81
9830601	70	82	67	83
9830602	69	82	69	81
9830603	72	86	72	86

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/08/2018 17:55

Group Number: 1993371

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182760021A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	77	95	79	98
LCS	85	96	87	96
LCSD	78	97	79	97
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Sample Administration Receipt Documentation Log

Doc Log ID: 228704

Group Number(s): 1993371

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/02/2018 10:25
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Carolyn Cyms (964) at 11:58 on 10/02/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.8	DT	Wet	Y	Bagged	N
2	DT42-01	1.1	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

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F 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 09, 2018 13:50

Project: Rensselaer

Account #: 04285
Group Number: 1994042
SDG: RNS18
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100218-01-SW-U-A-1 Grab Surface Water	10/02/2018 08:40	9833497
100218-01-SW-U-A-1 Filtered Grab Surface Water	10/02/2018 08:40	9833498
100218-01-SW-U-B-1 Grab Surface Water	10/02/2018 08:45	9833499
100218-01-SW-U-C-1 Grab Surface Water	10/02/2018 08:50	9833500
100218-02-SW-A-A-1 Grab Surface Water	10/02/2018 10:35	9833501
100218-02-SW-A-A-1 Filtered Grab Surface Water	10/02/2018 10:35	9833502
100218-02-SW-A-B-1 Grab Surface Water	10/02/2018 10:40	9833503
100218-02-SW-A-C-1 Grab Surface Water	10/02/2018 10:45	9833504
100218-03-SW-D-A-1 Grab Surface Water	10/02/2018 08:00	9833505
100218-03-SW-D-A-1 Filtered Grab Surface Water	10/02/2018 08:00	9833506
100218-03-SW-D-B-1 Grab Surface Water	10/02/2018 08:05	9833507
100218-03-SW-D-C-1 Grab Surface Water	10/02/2018 08:10	9833508
100218-TB-01 Water	10/02/2018 14:00	9833509

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100218-01-SW-U-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:40
SDG#: RNS18-01

BASF Corporation
ELLE Sample #: WW 9833497
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.9 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	N.D.	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100218-01-SW-U-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:40
SDG#: RNS18-01

BASF Corporation
ELLE Sample #: WW 9833497
ELLE Group #: 1994042
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182763AA	10/04/2018 02:23	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182763AA	10/04/2018 02:23	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 18:33	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:13	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:13	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:26	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:26	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:13	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:13	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:30	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 10:59	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18276121451A	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:40
SDG#: RNS18-02

BASF Corporation
ELLE Sample #: WW 9833498
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 18:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:31	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:31	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:35	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:35	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:31	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:31	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:36	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-01-SW-U-B-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:45
SDG#: RNS18-03

BASF Corporation
ELLE Sample #: WW 9833499
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451A	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-01-SW-U-C-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:50
SDG#: RNS18-04

BASF Corporation
ELLE Sample #: WW 9833500
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.6	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451A	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-02-SW-A-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 10:35
SDG#: RNS18-05

BASF Corporation
ELLE Sample #: WW 9833501
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.104	0.521	1
14188	PCB-1221	11104-28-2	N.D. D1	0.104	0.521	1
14188	PCB-1232	11141-16-5	N.D. D1	0.104	0.521	1
14188	PCB-1242	53469-21-9	N.D. D1	0.104	0.521	1
14188	PCB-1248	12672-29-6	N.D. D1	0.104	0.521	1
14188	PCB-1254	11097-69-1	N.D. D1	0.104	0.521	1
14188	PCB-1260	11096-82-5	N.D. D1	0.104	0.521	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0771	0.521	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0771	0.521	1
14188	Total PCBs	1336-36-3	N.D.	0.0771	0.521	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.78 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100218-02-SW-A-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 10:35
SDG#: RNS18-05

BASF Corporation
ELLE Sample #: WW 9833501
ELLE Group #: 1994042
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182763AA	10/04/2018 02:45	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182763AA	10/04/2018 02:45	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 18:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:33	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:33	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:37	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:37	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:33	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:33	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:16	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 11:07	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18276121451A	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 10:35
SDG#: RNS18-06

BASF Corporation
ELLE Sample #: WW 9833502
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 19:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:35	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:35	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:42	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:42	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:35	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:35	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:38	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-02-SW-A-B-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 10:40
SDG#: RNS18-07

BASF Corporation
ELLE Sample #: WW 9833503
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451B	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

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Sample Description: **100218-02-SW-A-C-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 10:45
SDG#: RNS18-08

BASF Corporation
ELLE Sample #: WW 9833504
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	2.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,220	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451B	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-03-SW-D-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:00
SDG#: RNS18-09

BASF Corporation
ELLE Sample #: WW 9833505
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	1,570 J	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100218-03-SW-D-A-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:00
SDG#: RNS18-09

BASF Corporation
ELLE Sample #: WW 9833505
ELLE Group #: 1994042
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182763AA	10/04/2018 03:07	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182763AA	10/04/2018 03:07	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 19:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:36	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:36	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:44	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:44	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:36	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:36	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:40	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18277001101A	10/04/2018 11:15	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18276121451B	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:00
SDG#: RNS18-10

BASF Corporation
ELLE Sample #: WW 9833506
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	16.6	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182760026A	10/04/2018 19:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182760026A	10/03/2018 22:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:38	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:38	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:46	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182770705001A	10/08/2018 20:46	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:38	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182770705001A	10/06/2018 14:38	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182770571401	10/08/2018 13:42	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182770705001	10/05/2018 05:55	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182770571401	10/05/2018 07:00	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-03-SW-D-B-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:05
SDG#: RNS18-11

BASF Corporation
ELLE Sample #: WW 9833507
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	N.D.	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451B	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-03-SW-D-C-1 Grab Surface Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 08:10
SDG#: RNS18-12

BASF Corporation
ELLE Sample #: WW 9833508
ELLE Group #: 1994042
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	29,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18276121451B	10/03/2018 19:15	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18276385804A	10/03/2018 01:05	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100218-TB-01 Water**
COC: 577909

Project Name: **Rensselaer**

Submittal Date/Time: 10/03/2018 10:30
Collection Date/Time: 10/02/2018 14:00
SDG#: RNS18-13TB

BASF Corporation
ELLE Sample #: **WW 9833509**
ELLE Group #: **1994042**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182763AA	10/03/2018 23:31	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182763AA	10/03/2018 23:31	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/09/2018 13:50

Group Number: 1994042

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182763AA	Sample number(s): 9833497,9833501,9833505,9833509		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182760026A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182770571401	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506		
Mercury	N.D.	0.050	0.20
Batch number: 182770705001A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18276121451A	Sample number(s): 9833497,9833499-9833501		
Turbidity	0.20 J	0.140	1.00
Batch number: 18276121451B	Sample number(s): 9833503-9833505,9833507-9833508		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18276385804A	Sample number(s): 9833497,9833499-9833501,9833503-9833505,9833507-9833508		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18277001101A	Sample number(s): 9833497,9833501,9833505		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/09/2018 13:50

Group Number: 1994042

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182763AA	Sample number(s): 9833497,9833501,9833505,9833509								
Benzene	20	20.24	20	19.88	101	99	80-120	2	30
Chlorobenzene	20	19.36	20	19.7	97	98	80-120	2	30
1,2-Dichlorobenzene	20	19.17	20	19.32	96	97	80-120	1	30
1,3-Dichlorobenzene	20	18.86	20	19.18	94	96	80-120	2	30
1,4-Dichlorobenzene	20	18.96	20	19.19	95	96	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182760026A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506								
PCB-1016	5.01	4.44	5.01	3.30	89	66	50-140	29	36
PCB-1260	5.00	5.11	5.00	3.33	102	67	50-140	42*	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182770571401	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506								
Mercury	1.00	0.996			100		85-115		
Batch number: 182770705001A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506								
Arsenic	10	10.23			102		85-115		
Cadmium	5.00	5.26			105		85-115		
Chromium	50	49.36			99		85-115		
Copper	50	51.27			103		85-115		
Lead	15	15.11			101		85-115		
Zinc	500	536.7			107		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18276121451A	Sample number(s): 9833497,9833499-9833501								
Turbidity	10	9.50			95		90-104		
Batch number: 18276121451B	Sample number(s): 9833503-9833505,9833507-9833508								
Turbidity	10	9.50			95		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18276385804A	Sample number(s): 9833497,9833499-9833501,9833503-9833505,9833507-9833508								
Total Suspended Solids	150000	144100			96		89-105		
Batch number: 18277001101A	Sample number(s): 9833497,9833501,9833505								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/09/2018 13:50

Group Number: 1994042

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	38420			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182770571401	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506 UNSPK: 9833501									
Mercury	N.D.	1.00	0.995			99		80-120		
Batch number: 182770705001A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506 UNSPK: 9833497									
Arsenic	0.739	10	10.84			101		70-130		
Cadmium	N.D.	5.00	5.09			102		70-130		
Chromium	N.D.	50	49.57			99		70-130		
Copper	N.D.	50	51.59			103		70-130		
Lead	N.D.	15	15.4			103		70-130		
Zinc	14.88	500	534.1			104		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182770571401	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506 BKG: 9833501			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182770705001A	Sample number(s): 9833497-9833498,9833501-9833502,9833505-9833506 BKG: 9833497			
Arsenic	0.739	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	14.88	14.62	2 (1)	20
	N T U	N T U		
Batch number: 18276121451B	Sample number(s): 9833503-9833505,9833507-9833508 BKG: 9833503			

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/09/2018 13:50

Group Number: 1994042

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	N T U	N T U		
Turbidity	7.40	7.30	1	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182763AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9833497	109	102	94	86
9833501	109	103	91	83
9833505	112	103	94	86
9833509	108	103	93	88
Blank	101	99	94	88
LCS	99	100	97	98
LCSD	100	98	97	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182760026A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9833497	71	84	72	82
9833498	76	92	76	89
9833501	71	79	70	79
9833502	82	93	79	90
9833505	71	86	71	82
9833506	74	91	74	87
Blank	68	84	69	85
LCS	76	103	79	97
LCSD	51	43	53	42
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1994042 Sample # 9833497-509

COC # 577909

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehon	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
100218-01-SW-U-A-1	10/2/18	0840	✓		13	2	2	1	1	1	1	1	3	1	
100218-01-SW-U-B-1	10/2/18	0845	✓		2							1		1	
100218-01-SW-U-C-1	10/2/18	0850	✓		2							1		1	
100218-02-SW-A-A-1	10/2/18	1035	✓		13	2	2	1	1	1	1	1	3	1	
100218-02-SW-A-B-1	10/2/18	1040	✓		2							1		1	
100218-02-SW-A-C-1	10/2/18	1045	✓		2							1		1	
100218-03-SW-D-A-1	10/2/18	0800	✓		13	2	2	1	1	1	1	1	3	1	
100218-03-SW-D-B-1	10/2/18	0805	✓		2							1		1	
100218-03-SW-D-C-1	10/2/18	0810	✓		2							1		1	
100218-TB-01	10/2/18	1400	✓		1								1		

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/4/18

E-mail address: _____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by		Date 10/2/18	Time 1430	Received by
Relinquished by		Date	Time	Received by
Relinquished by		Date	Time	Received by
Relinquished by		Date	Time	Received by
Relinquished by		Date	Time	Received by

Received by: Date 10/3/18 Time 1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx ✓ Other _____

Temperature upon receipt 1.8 | 1.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 228877

Group Number(s): 1994042

Client: BASF

Hudson River

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/03/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:28 on 10/03/2018

Samples Chilled Details: Hudson River

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.8	DT	Wet	Y	Bagged	N
2	DT146	1.5	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 12, 2018 09:31

Project: Rensselaer

Account #: 04285
Group Number: 1994677
SDG: RNS19
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100318-01-SW-U-A-1 Grab Surface Water	10/03/2018 09:50	9836060
100318-01-SW-U-A-1 Filtered Grab Surface Water	10/03/2018 09:50	9836061
100318-01-SW-U-B-1 Grab Surface Water	10/03/2018 09:55	9836062
100318-01-SW-U-C-1 Grab Surface Water	10/03/2018 10:00	9836063
100318-02-SW-A-A-1 Grab Surface Water	10/03/2018 10:30	9836064
100318-02-SW-A-A-1 Filtered Grab Surface Water	10/03/2018 10:30	9836065
100318-02-SW-A-B-1 Grab Surface Water	10/03/2018 10:35	9836066
100318-02-SW-A-C-1 Grab Surface Water	10/03/2018 10:40	9836067
100318-03-SW-D-A-1 Grab Surface Water	10/03/2018 09:15	9836068
100318-03-SW-D-B-1 Grab Surface Water	10/03/2018 09:20	9836069
100318-03-SW-D-B-1 Filtered Grab Surface Water	10/03/2018 09:20	9836070
100318-03-SW-D-C-1 Grab Surface Water	10/03/2018 09:25	9836071
100318-01-SW-U-A-3 Grab Surface Water	10/03/2018 12:20	9836072
100318-01-SW-U-A-3 Filtered Grab Surface Water	10/03/2018 12:20	9836073
00318-TB-01 Water	10/03/2018	9836074

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100318-01-SW-U-A-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:50
SDG#: RNS19-01

BASF Corporation
ELLE Sample #: WW 9836060
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-A-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:50
SDG#: RNS19-01

BASF Corporation
ELLE Sample #: WW 9836060
ELLE Group #: 1994677
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 13:39	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 13:39	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/08/2018 00:15	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:17	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:17	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:18	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:18	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:17	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:17	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:07	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 14:29	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18277121451A	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:50
SDG#: RNS19-02

BASF Corporation
ELLE Sample #: WW 9836061
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.543	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.543	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0804	0.543	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0804	0.543	1
14188	Total PCBs	1336-36-3	N.D.	0.0804	0.543	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.3 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/08/2018 00:26	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:29	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:29	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:28	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:28	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:29	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:29	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:09	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-B-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:55
SDG#: RNS19-03

BASF Corporation
ELLE Sample #: WW 9836062
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451A	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **100318-01-SW-U-C-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:00
SDG#: RNS19-04

BASF Corporation
ELLE Sample #: WW 9836063
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,060	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451A	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-02-SW-A-A-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:30
SDG#: RNS19-05

BASF Corporation
ELLE Sample #: WW 9836064
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.104	0.521	1
14188	PCB-1221	11104-28-2	N.D. D1	0.104	0.521	1
14188	PCB-1232	11141-16-5	N.D. D1	0.104	0.521	1
14188	PCB-1242	53469-21-9	N.D. D1	0.104	0.521	1
14188	PCB-1248	12672-29-6	N.D. D1	0.104	0.521	1
14188	PCB-1254	11097-69-1	N.D. D1	0.104	0.521	1
14188	PCB-1260	11096-82-5	N.D. D1	0.104	0.521	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0771	0.521	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0771	0.521	1
14188	Total PCBs	1336-36-3	N.D.	0.0771	0.521	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,250	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100318-02-SW-A-A-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:30
SDG#: RNS19-05

BASF Corporation
ELLE Sample #: WW 9836064
ELLE Group #: 1994677
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 15:03	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 15:03	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/08/2018 00:37	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:34	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:34	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:34	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:34	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:11	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 14:37	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18277121451A	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:30
SDG#: RNS19-06

BASF Corporation
ELLE Sample #: WW 9836065
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.536	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.536	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.536	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.536	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.536	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.536	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.536	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0794	0.536	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0794	0.536	1
14188	Total PCBs	1336-36-3	N.D.	0.0794	0.536	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780010A	10/08/2018 00:49	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780010A	10/05/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:36	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:36	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:35	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:35	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:36	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:36	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:13	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-02-SW-A-B-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:35
SDG#: RNS19-07

BASF Corporation
ELLE Sample #: WW 9836066
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,060	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451B	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-02-SW-A-C-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 10:40
SDG#: RNS19-08

BASF Corporation
ELLE Sample #: WW 9836067
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,910	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451B	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-03-SW-D-A-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:15
SDG#: RNS19-09

BASF Corporation
ELLE Sample #: WW 9836068
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451B	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-03-SW-D-B-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:20
SDG#: RNS19-10

BASF Corporation
ELLE Sample #: WW 9836069
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.76 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100318-03-SW-D-B-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:20
SDG#: RNS19-10

BASF Corporation
ELLE Sample #: WW 9836069
ELLE Group #: 1994677
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 15:27	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 15:27	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 00:21	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:38	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:38	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:37	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:37	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:38	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:38	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:15	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 14:44	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18277121451B	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:20
SDG#: RNS19-11

BASF Corporation
ELLE Sample #: WW 9836070
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 02:31	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:39	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:39	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:39	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:39	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:39	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:39	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:17	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-03-SW-D-C-1 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 09:25
SDG#: RNS19-12

BASF Corporation
ELLE Sample #: WW 9836071
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18277121451B	10/04/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18278385802A	10/05/2018 16:53	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-A-3 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 12:20
SDG#: RNS19-13

BASF Corporation
ELLE Sample #: WW 9836072
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 15:51	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 15:51	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 02:42	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:41	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:41	Bradley M Berlot	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-A-3 Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 12:20
SDG#: RNS19-13

BASF Corporation
ELLE Sample #: WW 9836072
ELLE Group #: 1994677
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:40	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:41	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:41	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:19	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100318-01-SW-U-A-3 Filtered Grab Surface Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018 12:20
SDG#: RNS19-14

BASF Corporation
ELLE Sample #: WW 9836073
ELLE Group #: 1994677
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	9.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182780011A	10/08/2018 02:53	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182780011A	10/06/2018 16:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:43	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:43	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:42	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182780705001A	10/09/2018 07:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:43	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182780705001A	10/06/2018 15:43	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182780571401	10/08/2018 14:21	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182780705001	10/06/2018 01:25	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182780571401	10/08/2018 06:55	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **00318-TB-01 Water**
COC: 577907

Project Name: **Rensselaer**

Submittal Date/Time: 10/04/2018 10:30
Collection Date/Time: 10/03/2018
SDG#: RNS19-15TB

BASF Corporation
ELLE Sample #: WW 9836074
ELLE Group #: 1994677
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 11:41	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 11:41	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 1994677
Reported: 10/12/2018 09:31

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182821AA	Sample number(s): 9836060,9836064,9836069,9836072,9836074		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182780010A	Sample number(s): 9836060-9836061,9836064-9836065		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182780011A	Sample number(s): 9836070,9836072-9836073		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182820060A	Sample number(s): 9836069		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 09:31

Group Number: 1994677

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total PCBs	N.D.	0.0740	0.500
Batch number: 182780571401	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073		
Mercury	N.D.	0.050	0.20
Batch number: 182780705001A	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18277121451A	Sample number(s): 9836060,9836062-9836064		
Turbidity	0.20 J	0.140	1.00
Batch number: 18277121451B	Sample number(s): 9836066-9836069,9836071		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18278385802A	Sample number(s): 9836060,9836062-9836064,9836066-9836069,9836071		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18280001101A	Sample number(s): 9836060,9836064,9836069		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182821AA	Sample number(s): 9836060,9836064,9836069,9836072,9836074								
Benzene	20	21.46			107		80-120		
Chlorobenzene	20	21.76			109		80-120		
1,2-Dichlorobenzene	20	21.79			109		80-120		
1,3-Dichlorobenzene	20	22.11			111		80-120		
1,4-Dichlorobenzene	20	22.29			111		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182780010A	Sample number(s): 9836060-9836061,9836064-9836065								
PCB-1016	5.01	3.74			75		50-140		
PCB-1260	5.00	4.66			93		50-140		
Batch number: 182780011A	Sample number(s): 9836070,9836072-9836073								

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 09:31

Group Number: 1994677

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1016	5.01	3.92			78		50-140		
PCB-1260	5.00	4.97			99		50-140		
Batch number: 182820060A	Sample number(s): 9836069								
PCB-1016	5.01	5.00	5.01	4.50	100	90	50-140	11	36
PCB-1260	5.00	4.90	5.00	4.54	98	91	50-140	8	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182780571401	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073								
Mercury	1.00	0.907			91		85-115		
Batch number: 182780705001A	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073								
Arsenic	10	9.87			99		85-115		
Cadmium	5.00	4.93			99		85-115		
Chromium	50	52.63			105		85-115		
Copper	50	51.24			102		85-115		
Lead	15	15.29			102		85-115		
Zinc	500	506.9			101		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18277121451A	Sample number(s): 9836060,9836062-9836064								
Turbidity	10	9.50			95		90-104		
Batch number: 18277121451B	Sample number(s): 9836066-9836069,9836071								
Turbidity	10	9.50			95		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18278385802A	Sample number(s): 9836060,9836062-9836064,9836066-9836069,9836071								
Total Suspended Solids	150000	143400			96		89-105		
Batch number: 18280001101A	Sample number(s): 9836060,9836064,9836069								
Total Hardness	40000	38290			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W182821AA	Sample number(s): 9836060,9836064,9836069,9836072,9836074 UNSPK: 9836060									
Benzene	N.D.	20	23.48	20	23.43	117	117	80-120	0	30
Chlorobenzene	N.D.	20	23.41	20	23.86	117	119	80-120	2	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 09:31

Group Number: 1994677

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	N.D.	20	22.85	20	23.46	114	117	80-120	3	30
1,3-Dichlorobenzene	N.D.	20	23.4	20	23.94	117	120	80-120	2	30
1,4-Dichlorobenzene	N.D.	20	23.29	20	23.83	116	119	80-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 182780705001A	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073 UNSPK: 9836060									
Arsenic	N.D.	10	10.96			110		70-130		
Cadmium	N.D.	5.00	4.82			96		70-130		
Chromium	N.D.	50	50.68			101		70-130		
Copper	N.D.	50	51.98			104		70-130		
Lead	N.D.	15	16.54			110		70-130		
Zinc	13.73	500	526.4			103		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182780705001A	Sample number(s): 9836060-9836061,9836064-9836065,9836069-9836070,9836072-9836073 BKG: 9836060			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13.73	13.32	3 (1)	20
	N T U	N T U		
Batch number: 18277121451B	Sample number(s): 9836066-9836069,9836071 BKG: 9836071			
Turbidity	8.80	8.90	1	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 09:31

Group Number: 1994677

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182821AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9836060	93	100	100	92
9836064	93	98	99	94
9836069	92	100	99	92
9836072	94	100	99	93
9836074	93	98	100	93
Blank	94	100	99	93
LCS	95	97	101	96
MS	93	101	101	96
MSD	94	101	100	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182780010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9836060	71	80	69	79
9836061	78	82	76	77
9836064	53	57	50	58
9836065	73	83	70	79
Blank	59	83	58	75
LCS	53	83	51	78
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182780011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9836070	60	85	57	81
9836072	61	100	59	94
9836073	63	104	62	97
Blank	61	72	60	70
LCS	44	78	41	76
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820060A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9836069	70	79	69	78
Blank	82	95	77	93
LCS	82	92	81	94
LCSD	74	84	72	87

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 1994677
Reported: 10/12/2018 09:31

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820060A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1994677 Sample # 9836060-74

COC # 577907

Client Information

Client: BASF

Acct. #:

Project Name/#: Hudson River OU-2

PWSID #:

Project Manager: John Bleiler

P.O. #: 229608

Sampler: Patrick Gehan

Quote #:

State where samples were collected: NY

For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F/N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM 2130
100318-01-SW-U-A-1	10/3/18	0950	✓		13	2	2	1	1	1	1	1	3	1
100318-01-SW-U-B-1	10/3/18	0955	✓		2							1		1
100318-01-SW-U-C-1	10/3/18	1000	✓		2							1		1
100318-02-SW-A-A-1	10/3/18	1030	✓		13	2	2	1	1	1	1	1	3	1
100318-02-SW-A-B-1	10/3/18	1035	✓		2							1		1
100318-02-SW-A-C-1	10/3/18	1040	✓		2							1		1
100318-03-SW-D-A-1	10/3/18	0915	✓		2							1		1
100318-03-SW-D-B-1	10/3/18	0920	✓		13	2	2	1	1	1	1	1	3	1
100318-03-SW-D-C-1	10/3/18	0925	✓		2							1		1
100318-01-SW-U-A-3	10/3/18	1220	✓		10	2	2	1	1	1			3	

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/5/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/3/18	1600			
			[signature]	10/4/18	10:30

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.8-1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229021

Group Number(s): 1994677

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/04/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 12:13 on 10/04/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.0	DT	Wet	Y	Bagged	N
2	DT42-03	0.8	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
U-A-1	10/03/2018 08:40	All bottles
U-B-1	10/03/2018 08:45	All bottles
U-B-1	10/03/2018 08:50	All bottles
A-A-1	10/03/2018 10:35	3 vials, one 1L plastic, four 250mL amber glass, one 250mL plastic
A-A-1	10/03/2018 --	Four 250 mL plastic
A-B-1	10/03/2018 10:40	All bottles
A-C-1	10/03/2018 10:45	All bottles

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 11, 2018 09:37

Project: Rensselaer

Account #: 04285
Group Number: 1995372
SDG: RNS20
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100418-01-SW-U-A-1 Grab Surface Water	10/04/2018 08:40	9838887
100418-01-SW-U-A-1 Grab Surface Water	10/04/2018 08:40	9838888
100418-01-SW-U-B-1 Grab Surface Water	10/04/2018 08:50	9838889
100418-01-SW-U-C-1 Grab Surface Water	10/04/2018 08:55	9838890
100418-02-SW-A-A-1 Grab Surface Water	10/04/2018 09:15	9838891
100418-02-SW-A-A-1 Grab Surface Water	10/04/2018 09:15	9838892
100418-02-SW-A-B-1 Grab Surface Water	10/04/2018 09:25	9838893
100418-02-SW-A-C-1 Grab Surface Water	10/04/2018 09:30	9838894
100418-03-SW-D-A-1 Grab Surface Water	10/04/2018 08:00	9838895
100418-03-SW-D-A-1 Grab Surface Water	10/04/2018 08:00	9838896
100418-03-SW-D-B-1 Grab Surface Water	10/04/2018 08:15	9838897
100418-03-SW-D-C-1 Grab Surface Water	10/04/2018 08:20	9838898
100418-TB-01 Water	10/04/2018 14:00	9838899

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100418-01-SW-U-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:40
SDG#: RNS20-01

BASF Corporation
ELLE Sample #: WW 9838887
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.1 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	17.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	27	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	38,400	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100418-01-SW-U-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:40
SDG#: RNS20-01

BASF Corporation
ELLE Sample #: WW 9838887
ELLE Group #: 1995372
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 16:15	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 16:15	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 18:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:43	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 15:53	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-01-SW-U-A-1 Grab Surface Water**
Filtered
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:40
SDG#: RNS20-02

BASF Corporation
ELLE Sample #: WW 9838888
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.68 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.6 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 18:18	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:45	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-01-SW-U-B-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:50
SDG#: RNS20-03

BASF Corporation
ELLE Sample #: WW 9838889
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	40,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-01-SW-U-C-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:55
SDG#: RNS20-04

BASF Corporation
ELLE Sample #: WW 9838890
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	27	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	37,400	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-02-SW-A-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 09:15
SDG#: RNS20-05

BASF Corporation
ELLE Sample #: WW 9838891
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.76 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	15.3	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	24	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	33,200	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100418-02-SW-A-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 09:15
SDG#: RNS20-05

BASF Corporation
ELLE Sample #: WW 9838891
ELLE Group #: 1995372
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 16:39	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 16:39	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 18:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:52	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	2	182810571402	10/10/2018 07:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 16:01	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-02-SW-A-A-1 Grab Surface Water**
Filtered
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 09:15
SDG#: RNS20-06

BASF Corporation
ELLE Sample #: WW 9838892
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 18:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:54	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-02-SW-A-B-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 09:25
SDG#: RNS20-07

BASF Corporation
ELLE Sample #: WW 9838893
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	31,200	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-02-SW-A-C-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 09:30
SDG#: RNS20-08

BASF Corporation
ELLE Sample #: WW 9838894
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	21	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	26,200	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-03-SW-D-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:00
SDG#: RNS20-09

BASF Corporation
ELLE Sample #: WW 9838895
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.88 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	19.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	33	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	49,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100418-03-SW-D-A-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:00
SDG#: RNS20-09

BASF Corporation
ELLE Sample #: WW 9838895
ELLE Group #: 1995372
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 17:03	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 17:03	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 18:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:56	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 16:08	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-03-SW-D-A-1 Grab Surface Water Filtered**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:00
SDG#: RNS20-10

BASF Corporation
ELLE Sample #: WW 9838896
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 19:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182810014A	10/09/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:58	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-03-SW-D-B-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:15
SDG#: RNS20-11

BASF Corporation
ELLE Sample #: WW 9838897
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	24	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	33,800	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-03-SW-D-C-1 Grab Surface Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 08:20
SDG#: RNS20-12

BASF Corporation
ELLE Sample #: WW 9838898
ELLE Group #: 1995372
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18278121451A	10/05/2018 18:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18281385803A	10/08/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100418-TB-01 Water**
COC: 577584

Project Name: **Rensselaer**

Submittal Date/Time: 10/05/2018 10:30
Collection Date/Time: 10/04/2018 14:00
SDG#: RNS20-13TB

BASF Corporation
ELLE Sample #: WW 9838899
ELLE Group #: 1995372
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182821AA	10/09/2018 12:05	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182821AA	10/09/2018 12:05	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/11/2018 09:37

Group Number: 1995372

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182821AA	Sample number(s): 9838887,9838891,9838895,9838899		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182810014A	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182810571402	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896		
Mercury	N.D.	0.050	0.20
Batch number: 182810705002A	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18278121451A	Sample number(s): 9838887,9838889-9838891,9838893-9838895,9838897-9838898		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18280001101A	Sample number(s): 9838887,9838891,9838895		
Total Hardness	N.D.	3,000	10,000
Batch number: 18281385803A	Sample number(s): 9838887,9838889-9838891,9838893-9838895,9838897-9838898		
Total Suspended Solids	N.D.	1,000	3,000

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/11/2018 09:37

Group Number: 1995372

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182821AA	Sample number(s): 9838887,9838891,9838895,9838899								
Benzene	20	21.46			107		80-120		
Chlorobenzene	20	21.76			109		80-120		
1,2-Dichlorobenzene	20	21.79			109		80-120		
1,3-Dichlorobenzene	20	22.11			111		80-120		
1,4-Dichlorobenzene	20	22.29			111		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182810014A	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896								
PCB-1016	5.01	3.92	5.01	4.60	78	92	50-140	16	36
PCB-1260	5.00	3.38	5.00	3.66	68	73	50-140	8	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182810571402	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896								
Mercury	1.00	1.02			102		85-115		
Batch number: 182810705002A	Sample number(s): 9838887-9838888,9838891-9838892,9838895-9838896								
Arsenic	10	10.27			103		85-115		
Cadmium	5.00	4.90			98		85-115		
Chromium	50	47.21			94		85-115		
Copper	50	48.8			98		85-115		
Lead	15	15.12			101		85-115		
Zinc	500	501.81			100		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18278121451A	Sample number(s): 9838887,9838889-9838891,9838893-9838895,9838897-9838898								
Turbidity	10	9.40			94		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18280001101A	Sample number(s): 9838887,9838891,9838895								
Total Hardness	40000	38290			96		85-110		
Batch number: 18281385803A	Sample number(s): 9838887,9838889-9838891,9838893-9838895,9838897-9838898								
Total Suspended Solids	150000	144300	150000	144200	96	96	89-105	0	5

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/11/2018 09:37

Group Number: 1995372

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc N T U	DUP Conc N T U	DUP RPD	DUP RPD Max
Batch number: 18278121451A	Sample number(s): 9838887,9838889-9838891,9838893-9838895,9838897-9838898 BKG: 9838887			
Turbidity	27	27	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182821AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9838887	94	99	99	92
9838891	94	100	99	92
9838895	94	99	99	92
9838899	94	101	100	93
Blank	94	100	99	93
LCS	95	97	101	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182810014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9838887	65	74	69	79
9838888	70	78	71	87
9838891	74	59	77	65
9838892	72	79	72	88
9838895	74	71	75	81
9838896	71	73	73	88
Blank	70	63	74	71
LCS	64	67	64	75
LCSD	72	69	75	79
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 199537 Sample # 9838887-99

COC # 577584

Client Information

Client: BASF
Acct. #:
Project Name/#: Hudson River OU-2
PWSID #:
Project Manager: John Bleiler
P.O. #: 229608
Sampler: Patrick Gehan
Quote #:
State where samples were collected: NY
For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ | Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ___

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs – 8260c H	Turbidity – SM2130	
100418-01-SW-U-A-1	10/4/18	0840	✓		13	2	2	1	1	1	1	1	3	1	
100418-01-SW-U-B-1	10/4/18	0850	✓		2							1		1	
100418-01-SW-U-C-1	10/4/18	0855	✓		2							1		1	
100418-02-SW-A-A-1	10/4/18	0915	✓		13	2	2	1	1	1	1	1	3	1	
100418-02-SW-A-B-1	10/4/18	0925	✓		2							1		1	
100418-02-SW-A-C-1	10/4/18	0930	✓		2							1		1	
100418-03-SW-D-A-1	10/4/18	0800	✓		13	2	2	1	1	1	1	1	3	1	
100418-03-SW-D-B-1	10/4/18	0815	✓		2							1		1	
100418-03-SW-D-C-1	10/4/18	0820	✓		2							1		1	
100418-TB-01	10/4/18	1400	✓		1								1		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/6/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/4/18	1600			
			[signature]	10/5/18	10:30

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.7-0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229174

Group Number(s): 1995372

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/05/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	HCL
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): U-A-1 (One vial)

Unpacked by Conrad Burkholder (12671) at 12:16 on 10/05/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.7	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 12, 2018 13:45

Project: Rensselaer

Account #: 04285
Group Number: 1995750
SDG: RNS21
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100518-01-SW-U-A-1 Grab Surface Water	10/05/2018 08:45	9840529
100518-01-SW-U-B-1 Grab Surface Water	10/05/2018 08:50	9840530
100518-01-SW-U-B-1MS Grab Surface Water	10/05/2018 08:50	9840531
100518-01-SW-U-B-1MSD Grab Surface Water	10/05/2018 08:50	9840532
100518-01-SW-U-B-1DUP Grab Surface Water	10/05/2018 08:50	9840533
100518-01-SW-U-B-1 Grab Surface Water	10/05/2018 08:50	9840534
100518-01-SW-U-B-1MS Grab Surface Water	10/05/2018 08:50	9840535
100518-01-SW-U-B-1MSD Grab Surface Water	10/05/2018 08:50	9840536
100518-01-SW-U-B-1DUP Grab Surface Water	10/05/2018 08:50	9840537
100518-01-SW-U-C-1 Grab Surface Water	10/05/2018 09:00	9840538
100518-02-SW-A-A-1 Grab Surface Water	10/05/2018 09:40	9840539
100518-02-SW-A-A-1 Grab Surface Water	10/05/2018 09:40	9840540
100518-02-SW-A-B-1 Grab Surface Water	10/05/2018 09:45	9840541
100518-02-SW-A-C-1 Grab Surface Water	10/05/2018 09:50	9840542
100518-03-SW-D-A-1 Grab Surface Water	10/05/2018 08:00	9840543
100518-03-SW-D-B-1 Grab Surface Water	10/05/2018 08:10	9840544
100518-03-SW-D-B-1 Grab Surface Water	10/05/2018 08:10	9840545
100518-03-SW-D-C-1 Grab Surface Water	10/05/2018 08:15	9840546
100518-TB-01 Water	10/05/2018 16:00	9840547

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100518-01-SW-U-A-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:45
SDG#: RNS21-01

BASF Corporation
ELLE Sample #: WW 9840529
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	24	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,200	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02BKG

BASF Corporation
ELLE Sample #: WW 9840530
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.4	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	27,200	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02BKG

BASF Corporation
ELLE Sample #: WW 9840530
ELLE Group #: 1995750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 00:34	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 00:34	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820003A	10/10/2018 21:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820003A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:30	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 16:36	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MS Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02MS

BASF Corporation
ELLE Sample #: WW 9840531
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	22	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	23	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	22	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.07 D2	0.109	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.543	1
14188	PCB-1260	11096-82-5	5.12 D1	0.109	0.543	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0804	0.543	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0804	0.543	1
14188	Total PCBs	1336-36-3	9.18	0.0804	0.543	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.0	0.68	2.0	1
06028	Cadmium	7440-43-9	4.8	0.15	1.0	1
06031	Chromium	7440-47-3	49.3	0.70	4.0	1
06033	Copper	7440-50-8	50.1	9.9	40.0	1
06035	Lead	7439-92-1	16.3	1.1	3.0	1
06049	Zinc	7440-66-6	499	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	1.0	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	162,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 00:56	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 00:56	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820003A	10/10/2018 22:05	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MS Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02MS

BASF Corporation
ELLE Sample #: WW 9840531
ELLE Group #: 1995750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820003A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:36	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 16:45	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MSD Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02MSD

BASF Corporation
ELLE Sample #: WW 9840532
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	24	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	23	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.01 D2	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	5.03 D2	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	9.04	0.0811	0.548	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.3	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	48.8	0.70	4.0	1
06033	Copper	7440-50-8	50.5	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	495	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.99	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	155,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 01:18	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 01:18	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820003A	10/10/2018 22:15	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MSD Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02MSD

BASF Corporation
ELLE Sample #: WW 9840532
ELLE Group #: 1995750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820003A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:39	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 17:14	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1DUP Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-02DUP

BASF Corporation
ELLE Sample #: WW 9840533
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.78 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	24	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	27,000	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 21:34	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 17:22	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1 Grab Surface Water**
Filtered
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-03BKG

BASF Corporation
ELLE Sample #: WW 9840534
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.1 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:22	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:05	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MS Grab Surface Water Filtered**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-03MS

BASF Corporation
ELLE Sample #: WW 9840535
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.97 D2	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	5.46 D2	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	9.42	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.1	0.68	2.0	1
06028	Cadmium	7440-43-9	5.0	0.15	1.0	1
06031	Chromium	7440-47-3	50.6	0.70	4.0	1
06033	Copper	7440-50-8	50.3	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	521	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.99	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:00	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:13	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1MSD Grab Surface Water Filtered**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-03MSD

BASF Corporation
ELLE Sample #: WW 9840536
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.34 D2	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	4.75 D2	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	8.09	0.0791	0.534	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	12.1	0.68	2.0	1
06028	Cadmium	7440-43-9	5.3	0.15	1.0	1
06031	Chromium	7440-47-3	49.2	0.70	4.0	1
06033	Copper	7440-50-8	51.2	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	538	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.99	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:11	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:15	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-B-1DUP Grab Surface Water Filtered**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:50
SDG#: RNS21-03DUP

BASF Corporation
ELLE Sample #: WW 9840537
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.9 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:10	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-01-SW-U-C-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:00
SDG#: RNS21-04

BASF Corporation
ELLE Sample #: WW 9840538
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	24,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-02-SW-A-A-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:40
SDG#: RNS21-05

BASF Corporation
ELLE Sample #: WW 9840539
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	1 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.530	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.530	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.530	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.530	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.530	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.530	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.530	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0784	0.530	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0784	0.530	1
14188	Total PCBs	1336-36-3	N.D.	0.0784	0.530	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.94 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	9.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	25,000	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100518-02-SW-A-A-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:40
SDG#: RNS21-05

BASF Corporation
ELLE Sample #: WW 9840539
ELLE Group #: 1995750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 06:03	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 06:03	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:33	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:00	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 17:29	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-02-SW-A-A-1 Grab Surface Water Filtered**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:40
SDG#: RNS21-06

BASF Corporation
ELLE Sample #: WW 9840540
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:45	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:39	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-02-SW-A-B-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:45
SDG#: RNS21-07

BASF Corporation
ELLE Sample #: WW 9840541
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	21	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	25,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-02-SW-A-C-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 09:50
SDG#: RNS21-08

BASF Corporation
ELLE Sample #: WW 9840542
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	22,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-03-SW-D-A-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:00
SDG#: RNS21-09

BASF Corporation
ELLE Sample #: WW 9840543
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	27,400	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-03-SW-D-B-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:10
SDG#: RNS21-10

BASF Corporation
ELLE Sample #: WW 9840544
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	1 J	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.2 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.92 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	6.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	23	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	28,000	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100518-03-SW-D-B-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:10
SDG#: RNS21-10

BASF Corporation
ELLE Sample #: WW 9840544
ELLE Group #: 1995750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 06:25	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 06:25	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 17:56	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182810705002A	10/09/2018 22:02	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182810571402	10/10/2018 07:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705002	10/09/2018 09:53	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571402	10/09/2018 11:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18280001101A	10/07/2018 17:36	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-03-SW-D-B-1 Grab Surface Water**
Filtered
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:10
SDG#: RNS21-11

BASF Corporation
ELLE Sample #: WW 9840545
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.95 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820004A	10/10/2018 18:08	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820004A	10/09/2018 19:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705001A	10/12/2018 05:42	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182810571403	10/10/2018 07:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182810705004	10/09/2018 09:53	Denise L Trimby	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	182840705001	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182810571403	10/09/2018 11:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-03-SW-D-C-1 Grab Surface Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 08:15
SDG#: RNS21-12

BASF Corporation
ELLE Sample #: WW 9840546
ELLE Group #: 1995750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	22	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	25,600	2,000	6,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18279121451B	10/06/2018 13:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18282385803A	10/09/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100518-TB-01 Water**
COC: 577585

Project Name: **Rensselaer**

Submittal Date/Time: 10/06/2018 09:40
Collection Date/Time: 10/05/2018 16:00
SDG#: RNS21-13TB

BASF Corporation
ELLE Sample #: WW 9840547
ELLE Group #: 1995750
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182832AA	10/11/2018 00:13	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182832AA	10/11/2018 00:13	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1995750
Reported: 10/12/2018 13:45

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L182832AA	Sample number(s): 9840530-9840532,9840539,9840544,9840547		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182820003A	Sample number(s): 9840530-9840532		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182820004A	Sample number(s): 9840534-9840536,9840539-9840540,9840544-9840545		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182810571402	Sample number(s): 9840530-9840533,9840539,9840544		
Mercury	N.D.	0.050	0.20
Batch number: 182810571403	Sample number(s): 9840534-9840537,9840540,9840545		
Mercury	N.D.	0.050	0.20
Batch number: 182810705002A	Sample number(s): 9840530-9840533,9840539,9840544		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 13:45

Group Number: 1995750

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182840705001A	Sample number(s): 9840534-9840537,9840540,9840545		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18279121451B	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18280001101A	Sample number(s): 9840530-9840533,9840539,9840544		
Total Hardness	N.D.	3,000	10,000
Batch number: 18282385803A	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L182832AA	Sample number(s): 9840530-9840532,9840539,9840544,9840547								
Benzene	20	20.01			100		80-120		
Chlorobenzene	20	20.84			104		80-120		
1,2-Dichlorobenzene	20	21.04			105		80-120		
1,3-Dichlorobenzene	20	20.93			105		80-120		
1,4-Dichlorobenzene	20	21.04			105		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182820003A	Sample number(s): 9840530-9840532								
PCB-1016	5.01	3.21			64		50-140		
PCB-1260	5.00	4.55			91		50-140		
Batch number: 182820004A	Sample number(s): 9840534-9840536,9840539-9840540,9840544-9840545								
PCB-1016	5.01	3.56			71		50-140		
PCB-1260	5.00	4.77			95		50-140		
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 13:45

Group Number: 1995750

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182810571402	Sample number(s): 9840530-9840533,9840539,9840544								
Mercury	1.00	1.02			102		85-115		
Batch number: 182810571403	Sample number(s): 9840534-9840537,9840540,9840545								
Mercury	1.00	0.991			99		85-115		
Batch number: 182810705002A	Sample number(s): 9840530-9840533,9840539,9840544								
Arsenic	10	10.27			103		85-115		
Cadmium	5.00	4.90			98		85-115		
Chromium	50	47.21			94		85-115		
Copper	50	48.8			98		85-115		
Lead	15	15.12			101		85-115		
Zinc	500	501.81			100		85-115		
Batch number: 182840705001A	Sample number(s): 9840534-9840537,9840540,9840545								
Arsenic	10	10.78			108		85-115		
Cadmium	5.00	4.91			98		85-115		
Chromium	50	49.42			99		85-115		
Copper	50	48.92			98		85-115		
Lead	15	15.34			102		85-115		
Zinc	500	526.1			105		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18279121451B	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546								
Turbidity	10	9.50			95		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18280001101A	Sample number(s): 9840530-9840533,9840539,9840544								
Total Hardness	40000	38290			96		85-110		
Batch number: 18282385803A	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546								
Total Suspended Solids	150000	147700			98		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: L182832AA	Sample number(s): 9840530-9840532,9840539,9840544,9840547 UNSPK: 9840530									
Benzene	N.D.	20	21.4	20	22.24	107	111	80-120	4	30
Chlorobenzene	N.D.	20	22.24	20	22.92	111	115	80-120	3	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 13:45

Group Number: 1995750

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	N.D.	20	21.77	20	22.77	109	114	80-120	4	30
1,3-Dichlorobenzene	1.18	20	23.44	20	24.36	111	116	80-120	4	30
1,4-Dichlorobenzene	N.D.	20	21.78	20	23.01	109	115	80-120	5	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182820003A	Sample number(s): 9840530-9840532 UNSPK: 9840530									
PCB-1016	N.D.	5.44	4.07	5.49	4.01	75	73	50-140	1	36
PCB-1260	N.D.	5.43	5.12	5.48	5.03	94	92	50-140	2	38
Batch number: 182820004A	Sample number(s): 9840534-9840536,9840539-9840540,9840544-9840545 UNSPK: 9840534									
PCB-1016	N.D.	5.69	3.97	5.35	3.34	70	62	50-140	17	36
PCB-1260	N.D.	5.68	5.46	5.34	4.75	96	89	50-140	14	38
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182810571402	Sample number(s): 9840530-9840533,9840539,9840544 UNSPK: 9840530									
Mercury	N.D.	1.00	1.01	1.00	0.986	101	99	80-120	2	20
Batch number: 182810571403	Sample number(s): 9840534-9840537,9840540,9840545 UNSPK: 9840534									
Mercury	N.D.	1.00	0.994	1.00	0.988	99	99	80-120	1	20
Batch number: 182810705002A	Sample number(s): 9840530-9840533,9840539,9840544 UNSPK: 9840530									
Arsenic	N.D.	10	10.98	10	10.33	110	103	70-130	6	20
Cadmium	N.D.	5.00	4.84	5.00	4.92	97	98	70-130	2	20
Chromium	1.03	50	49.27	50	48.81	96	96	70-130	1	20
Copper	N.D.	50	50.05	50	50.47	100	101	70-130	1	20
Lead	N.D.	15	16.34	15	16.21	109	108	70-130	1	20
Zinc	15.4	500	498.99	500	494.98	97	96	70-130	1	20
Batch number: 182840705001A	Sample number(s): 9840534-9840537,9840540,9840545 UNSPK: 9840534									
Arsenic	1.07	10	11.12	10	12.06	100	110	70-130	8	20
Cadmium	N.D.	5.00	5.02	5.00	5.29	100	106	70-130	5	20
Chromium	1.25	50	50.57	50	49.16	99	96	70-130	3	20
Copper	N.D.	50	50.3	50	51.16	101	102	70-130	2	20
Lead	N.D.	15	15.82	15	15.78	105	105	70-130	0	20
Zinc	14	500	521	500	538	101	105	70-130	3	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18280001101A	Sample number(s): 9840530-9840533,9840539,9840544 UNSPK: 9840530									
Total Hardness	73460	80000	162460	80000	154820	111*	102	85-110	5	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 13:45

Group Number: 1995750

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182810571402	Sample number(s): 9840530-9840533,9840539,9840544 BKG: 9840530			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182810571403	Sample number(s): 9840534-9840537,9840540,9840545 BKG: 9840534			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182810705002A	Sample number(s): 9840530-9840533,9840539,9840544 BKG: 9840530			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.03	0.776	28* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	15.4	N.D.	200* (1)	20
Batch number: 182840705001A	Sample number(s): 9840534-9840537,9840540,9840545 BKG: 9840534			
Arsenic	1.07	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.25	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	14	7.88	56* (1)	20
	N T U	N T U		
Batch number: 18279121451B	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546 BKG: 9840530			
Turbidity	23	24	4	8
	ug/l	ug/l		
Batch number: 18280001101A	Sample number(s): 9840530-9840533,9840539,9840544 BKG: 9840530			
Total Hardness	73460	75580	3 (1)	7
Batch number: 18282385803A	Sample number(s): 9840529-9840530,9840533,9840538-9840539,9840541-9840544,9840546 BKG: 9840530			
Total Suspended Solids	27200	27000	1 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182832AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9840530	103	103	96	98

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/12/2018 13:45

Group Number: 1995750

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182832AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9840531	103	101	99	100
9840532	103	101	99	101
9840539	103	104	98	99
9840544	103	101	99	98
9840547	103	102	98	98
Blank	102	103	98	98
LCS	102	101	99	100
MS	103	101	99	100
MSD	103	101	99	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9840530	66	79	64	82
9840531	59	79	57	83
9840532	60	77	60	79
Blank	57	85	57	85
LCS	42	88	40	90
MS	59	79	57	83
MSD	60	77	60	79
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9840534	56	78	52	73
9840535	53	90	48	84
9840536	52	80	47	72
9840539	59	75	56	69
9840540	62	81	56	74
9840544	64	84	58	77
9840545	60	88	56	77
Blank	64	70	59	66
LCS	46	67	42	63
MS	53	90	48	84
MSD	52	80	47	72
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation Group Number: 1995750
Reported: 10/12/2018 13:45

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1995750 Sample # 9840529-47

COC # 577585

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	F,N Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
100518-01-SW-U-A-1	10/5/18	0845	✓		2							1		1	
100518-01-SW-U-B-1	10/5/18	0850	✓		35	6	6	3	3	3	3	1	9	1	MS/MSD
100518-01-SW-U-C-1	10/5/18	0900	✓		2							1		1	
100518-02-SW-A-A-1	10/5/18	0940	✓		13	2	2	1	1	1	1	1	3	1	
100518-02-SW-A-B-1	10/5/18	0945	✓		2							1		1	
100518-02-SW-A-C-1	10/5/18	0950	✓		2							1		1	
100518-03-SW-D-A-1	10/5/18	0800	✓		2							1		1	
100518-03-SW-D-B-1	10/5/18	0810	✓		13	2	2	1	1	1	1	1	3	1	
100518-03-SW-D-C-1	10/5/18	0815	✓		2							1		1	
100518-TB-01	10/5/18	1600	✓		1								1		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/7/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/5/18	1630			
			[signature]	10/5/18	0940

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.4-0.5 °C

AMC 964 10/5/18

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Sample Administration Receipt Documentation Log

Doc Log ID: 229315

Group Number(s): 1995750

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/06/2018 9:40
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Carolyn Cyms (964) at 10:34 on 10/06/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.5	DT	Wet	Y	Bagged	N
2	DT42-01	0.4	DT	Wet	Y	Bagged	N
3	DT42-01	0.5	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/8/19 – 10/14/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 10/8/19 through 10/14/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one exceedance of the water quality criteria (chlorobenzene). The chlorobenzene exceedance (6 µg/l vs threshold of 5 µg/l) on 10/14/19 was at the downstream background (Buoy 3) location. The sample was collected approximately 1.5 hours before low tide.

Typically, field turbidity readings from the YSI EXO2 sonde were typically observed to be less than 10 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 10 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically less than 20 mg/L and never higher than 35 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
100919-03-SW-D-A-1	8:00:00 AM	AROCLOR-1242	N	ug/l	0.2	0.035	J		D	33	9.70	0.59	Low Tide	20.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00:00 AM
101019-01-SW-U-A-1	7:45:00 AM	CHLOROBENZENE	N	ug/l	5	0.8	J		U	26	6.41	1.78	Low Tide	11.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45:00 AM
101019-01-SW-U-A-1	7:45:00 AM	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.5			U	26	6.41	1.78	Low Tide	11.3	Moon Pool, Double Silt Curtain, Bubble Curtain	7:45:00 AM
101419-03-SW-D-A-1	9:00:00 AM	AROCLOR-1242	N	ug/l	0.2	0.179			D	32	5.76	0.12	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00:00 AM
101419-03-SW-D-A-1	9:00:00 AM	BENZENE	N	ug/l	10	0.8	J		D	32	5.76	0.12	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00:00 AM
101419-03-SW-D-A-1	9:00:00 AM	CHLOROBENZENE	N	ug/l	5	6		X	D	32	5.76	0.12	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00:00 AM
101419-03-SW-D-A-1	9:00:00 AM	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.6			D	32	5.76	0.12	Outgoing (Ebb)	10.1	Moon Pool, Double Silt Curtain, Bubble Curtain	9:00:00 AM

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 10, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191008058
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/8/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *10-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191008058	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100819-01-SW-U-A-1
Work Order:	**191008058**	**Collection Date:**	10/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191008058-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 2:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 2:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 2:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 2:13:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/9/2019 2:13:00 PM
Surr: 4-Bromofluorobenzene	**94.4**	76.5-125		%REC	1	10/9/2019 2:13:00 PM
Surr: Toluene-d8	**97.2**	80.4-121		%REC	1	10/9/2019 2:13:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/9/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.2**	2.0		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100819-02-SW-A-A-1
Work Order:	**191008058**	**Collection Date:**	10/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191008058-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 2:34:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 2:34:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 2:34:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 2:34:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/9/2019 2:34:00 PM
Surr: 4-Bromofluorobenzene	**99.5**	76.5-125		%REC	1	10/9/2019 2:34:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	10/9/2019 2:34:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/9/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**21.4**	2.0		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100819-03-SW-D-B-1
Work Order:	**191008058**	**Collection Date:**	10/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191008058-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 2:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/9/2019 2:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 2:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 2:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 2:56:00 PM
Surr: 1,2-Dichloroethane-d4	**99.5**	80.9-122		%REC	1	10/9/2019 2:56:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	10/9/2019 2:56:00 PM
Surr: Toluene-d8	**97.0**	80.4-121		%REC	1	10/9/2019 2:56:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/9/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**14.7**	1.3		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT: AECOM Environment
Work Order: **191008058**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100819-04-SW-B-A-1
Collection Date: 10/8/2019
Lab Sample ID: 191008058-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 3:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/9/2019 3:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 3:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 3:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 3:17:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	10/9/2019 3:17:00 PM
Surr: 4-Bromofluorobenzene	**99.2**	76.5-125		%REC	1	10/9/2019 3:17:00 PM
Surr: Toluene-d8	**93.2**	80.4-121		%REC	1	10/9/2019 3:17:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/9/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**13.6**	1.3		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100819-05-SW-B-A-1
Work Order:	**191008058**	**Collection Date:**	10/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191008058-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/9/2019)						
TSS (Residue, Non-Filterable)	**12.7**	1.3		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100819-04-SW-B-A-2
Work Order:	**191008058**	**Collection Date:**	10/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191008058-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Acetone	**ND**	5.0		µg/L	1	10/9/2019 3:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/9/2019 3:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 3:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 3:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 3:39:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	10/9/2019 3:39:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/9/2019 3:39:00 PM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	10/9/2019 3:39:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/9/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.4**	1.0		mg/L	1	10/9/2019

Adirondack Environmental Services, Inc

Date: *10-Oct-19*

CLIENT: AECOM Environment
Work Order: **191008058**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100819-TB01
Collection Date: 10/8/2019
Lab Sample ID: 191008058-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Acetone	**4.1**	5.0	J	µg/L	1	10/9/2019 4:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/9/2019 4:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/9/2019 4:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Benzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/9/2019 4:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Toluene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/9/2019 4:01:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/9/2019 4:01:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/9/2019 4:01:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	10/9/2019 4:01:00 PM

CLIENT: AECOM Environment
Work Order: 191008058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76058

LCS

SeqNo: **2717832** **PrepDate:10/9/2019** TestNo: **SM2540D** RunNo: **176250**
Samp ID: **LCS-76058** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	484	40.0	496	0	97.6	86.5	114	0	0		

DUP

SeqNo: **2717840** **PrepDate:10/9/2019** TestNo: **SM2540D** RunNo: **176250**
Samp ID: **191009042-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	736	40.0	0	0	0	0	0	640	14.0	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191008058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

mblk

SeqNo: **2716968** TestNo: **SW8260C** RunNo: **176205**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.15	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.2	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	4.03	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	0.25	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.51	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.98	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49.12	5.0	50	0	98.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191008058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

lcs

SeqNo: **2716966** TestNo: **SW8260C** RunNo: **176205**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.31	1.0	10	0	93.1	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.91	1.0	10	0	99.1	72.3	118	0	0		
1,1,2-Trichloroethane	9.36	1.0	10	0	93.6	73.1	123	0	0		
1,1-Dichloroethane	9.6	1.0	10	0	96	73.2	127	0	0		
1,1-Dichloroethene	9.34	1.0	10	0	93.4	70.3	128	0	0		
1,2,3-Trichloropropane	4.05	1.0	5	0	81	68.4	115	0	0		
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	71	124	0	0		
1,2-Dichloroethane	9.27	1.0	10	0	92.7	72.5	127	0	0		
1,3-Dichlorobenzene	8.11	1.0	10	0	81.1	72.2	121	0	0		
1,3-Dichloropropane	4.79	1.0	5	0	95.8	76	122	0	0		
1,4-Dichlorobenzene	7.52	1.0	10	0	75.2	71.7	127	0	0		
2-Butanone	10.07	5.0	10	0	101	65.1	132	0	0		
4-Methyl-2-pentanone	8.4	5.0	10	0	84	68.7	118	0	0		
Acetone	13.5	5.0	10	0	135	69.2	133	0	0		S
Benzene	8.97	1.0	10	0	89.7	71.2	122	0	0		
Carbon disulfide	3.74	1.0	5	0	74.8	67.8	134	0	0		
Carbon tetrachloride	9.37	1.0	10	0	93.7	74.5	122	0	0		
Chlorobenzene	8.6	1.0	10	0	86	72.7	124	0	0		
Chloroethane	10.58	1.0	10	0	106	72.3	136	0	0		
Chloroform	8.97	1.0	10	0	89.7	71.6	133	0	0		
Dibromochloromethane	9.14	1.0	10	0	91.4	70.6	124	0	0		
Ethylbenzene	9.43	1.0	10	0	94.3	70.9	126	0	0		
Methylene chloride	9.67	1.0	10	0	96.7	66.3	130	0	0		
Tetrachloroethene	9.74	1.0	10	0	97.4	72.4	119	0	0		
Toluene	9.72	1.0	10	0	97.2	71.8	116	0	0		
trans-1,2-Dichloroethene	9.56	1.0	10	0	95.6	70.3	120	0	0		
Trichloroethene	8.68	1.0	10	0	86.8	73	127	0	0		
Vinyl chloride	11.93	1.0	10	0	119	65.2	134	0	0		
Xylenes, Total	26.29	1.0	30	0	87.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.5	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.12	5.0	50	0	94.2	76.5	125	0	0		
Surr: Toluene-d8	48.3	5.0	50	0	96.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191008058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

ms	SeqNo: **2717659**	TestNo: **SW8260C**	RunNo: **176205**
	Samp ID: **191008058-001b (100819-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.83	1.0	10	0	88.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.15	1.0	10	0	91.5	70.1	123	0	0		
1,1,2-Trichloroethane	8.43	1.0	10	0	84.3	72.1	119	0	0		
1,1-Dichloroethane	8.9	1.0	10	0	89	70.4	126	0	0		
1,1-Dichloroethene	8.8	1.0	10	0	88	70.2	125	0	0		
1,2,3-Trichloropropane	3.76	1.0	5	0	75.2	53.7	101	0	0		
1,2-Dichlorobenzene	7.91	1.0	10	0	79.1	70.2	123	0	0		
1,2-Dichloroethane	8.45	1.0	10	0	84.5	73.5	126	0	0		
1,3-Dichlorobenzene	7.52	1.0	10	0	75.2	70.4	124	0	0		
1,3-Dichloropropane	4.29	1.0	5	0	85.8	64	125	0	0		
1,4-Dichlorobenzene	7.25	1.0	10	0	72.5	70.8	127	0	0		
2-Butanone	6.5	5.0	10	0	65	60.5	123	0	0		
4-Methyl-2-pentanone	7.85	5.0	10	0	78.5	52.8	133	0	0		
Acetone	9.91	5.0	10	0	99.1	56.3	135	0	0		
Benzene	8.27	1.0	10	0	82.7	70.2	127	0	0		
Carbon disulfide	3.69	1.0	5	0	73.8	62.2	130	0	0		
Carbon tetrachloride	8.74	1.0	10	0	87.4	56.4	137	0	0		
Chlorobenzene	7.59	1.0	10	0	75.9	72.7	128	0	0		
Chloroethane	10.35	1.0	10	0	104	71.3	135	0	0		
Chloroform	8.49	1.0	10	0	84.9	70.2	125	0	0		
Dibromochloromethane	8.37	1.0	10	0	83.7	69.5	123	0	0		
Ethylbenzene	8.17	1.0	10	0	81.7	71.9	129	0	0		
Methylene chloride	8.43	1.0	10	0	84.3	65.3	123	0	0		
Tetrachloroethene	8.89	1.0	10	0	88.9	74.5	121	0	0		
Toluene	8.42	1.0	10	0	84.2	73	122	0	0		
trans-1,2-Dichloroethene	8.95	1.0	10	0	89.5	69.1	133	0	0		
Trichloroethene	7.64	1.0	10	0	76.4	71.1	126	0	0		
Vinyl chloride	11.57	1.0	10	0	116	65	137	0	0		
Xylenes, Total	22.47	1.0	30	0	74.9	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	52.7	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.51	5.0	50	0	93	76.5	125	0	0		
Surr: Toluene-d8	48.26	5.0	50	0	96.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191008058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176205

msd	SeqNo: **2717660**	TestNo: **SW8260C**	RunNo: **176205**
	Samp ID: **191008058-001b (100819-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.11	1.0	10	0	81.1	71.6	126	8.83	8.50	20.4	
1,1,2,2-Tetrachloroethane	9.12	1.0	10	0	91.2	70.1	123	9.15	0.328	18.6	
1,1,2-Trichloroethane	8.03	1.0	10	0	80.3	72.1	119	8.43	4.86	20	
1,1-Dichloroethane	8.68	1.0	10	0	86.8	70.4	126	8.9	2.50	19.2	
1,1-Dichloroethene	8.39	1.0	10	0	83.9	70.2	125	8.8	4.77	16.1	
1,2,3-Trichloropropane	3.78	1.0	5	0	75.6	53.7	101	3.76	0.531	20	
1,2-Dichlorobenzene	7.84	1.0	10	0	78.4	70.2	123	7.91	0.889	17.9	
1,2-Dichloroethane	8.08	1.0	10	0	80.8	73.5	126	8.45	4.48	15.6	
1,3-Dichlorobenzene	7.78	1.0	10	0	77.8	70.4	124	7.52	3.40	14.3	
1,3-Dichloropropane	4.09	1.0	5	0	81.8	64	125	4.29	4.77	0	
1,4-Dichlorobenzene	7.55	1.0	10	0	75.5	70.8	127	7.25	4.05	14.4	
2-Butanone	8.4	5.0	10	0	84	60.5	123	6.5	25.5	15	Z
4-Methyl-2-pentanone	7.65	5.0	10	0	76.5	52.8	133	7.85	2.58	11.9	
Acetone	10.03	5.0	10	0	100	56.3	135	9.91	1.20	10.6	
Benzene	8	1.0	10	0	80	70.2	127	8.27	3.32	18.4	
Carbon disulfide	3.45	1.0	5	0	69	62.2	130	3.69	6.72	13.1	
Carbon tetrachloride	8.42	1.0	10	0	84.2	56.4	137	8.74	3.73	20.3	
Chlorobenzene	7.63	1.0	10	0	76.3	72.7	128	7.59	0.526	19.6	
Chloroethane	10.03	1.0	10	0	100	71.3	135	10.35	3.14	27.8	
Chloroform	8.09	1.0	10	0	80.9	70.2	125	8.49	4.83	20.3	
Dibromochloromethane	8	1.0	10	0	80	69.5	123	8.37	4.52	18.8	
Ethylbenzene	8.08	1.0	10	0	80.8	71.9	129	8.17	1.11	16.3	
Methylene chloride	8.01	1.0	10	0	80.1	65.3	123	8.43	5.11	21.4	
Tetrachloroethene	8.73	1.0	10	0	87.3	74.5	121	8.89	1.82	20.9	
Toluene	8.05	1.0	10	0	80.5	73	122	8.42	4.49	19.4	
trans-1,2-Dichloroethene	8.65	1.0	10	0	86.5	69.1	133	8.95	3.41	16.1	
Trichloroethene	7.54	1.0	10	0	75.4	71.1	126	7.64	1.32	16.6	
Vinyl chloride	10.9	1.0	10	0	109	65	137	11.57	5.96	20.5	
Xylenes, Total	22.38	1.0	30	0	74.6	72	130	22.47	0.401	16.1	
Surr: 1,2-Dichloroethane-d4	51.78	5.0	50	0	104	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.38	5.0	50	0	92.8	76.5	125	0	0	0	
Surr: Toluene-d8	47.75	5.0	50	0	95.5	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

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CHAIN OF CUSTODY RECORD

AES Work Order # 191008058

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100819-01-SW-U-A-1	10/8/19	1335	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
002	100819-02-SW-A-A-1	10/8/19	1350	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
003	100819-03-SW-D-B-1	10/8/19	1415	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
004	100819-04-SW-B-A-1	10/8/19	1315	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
005	100819-05-SW-B-A-1	10/8/19	1425	A	W		✓	2	VOCs (trip blank received)
	↓	↓	↓	A	↓		↓	1	TSS
				P					
006	100819-04-SW-B-A-2	10/8/19	1330	A	W		✓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
				P					
007	100819-TB01 Lot # VOA-F45-2	JM 10/8/19		A	TB			1	trip blank
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/8/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/8/19 4:55pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental

Demo
191008058

Adirondack Environmental Services, Inc

191008058

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191008058

TAT: **2**

DateDue: 10/10/2019

10/8/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191008058-001	100819-01-SW-U-A-1	Water	10/8/2019	10/10/2019	B	A					
191008058-002	100819-02-SW-A-A-1	Water	10/8/2019	10/10/2019	B	A					
191008058-003	100819-03-SW-D-B-1	Water	10/8/2019	10/10/2019	B	A					
191008058-004	100819-04-SW-B-A-1	Water	10/8/2019	10/10/2019	B	A					
191008058-005	100819-05-SW-B-A-1	Water	10/8/2019	10/10/2019		A					
191008058-006	100819-04-SW-B-A-2	Water	10/8/2019	10/10/2019	B	A					
191008058-007	100819-TB01	Trip Blank	10/8/2019	10/10/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by MDH 10-8-19

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Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 11, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191009069
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/9/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *11-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191009069	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT: AECOM Environment
Work Order: **191009069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100919-01-SW-U-A-1
Collection Date: 10/9/2019
Lab Sample ID: 191009069-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
PCB, Total	**ND**	0.065		µg/L	1	10/9/2019 7:31:46 PM
Surr: Decachlorobiphenyl	**90.8**	57.1-135		%REC	1	10/9/2019 7:31:46 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Acetone	**ND**	5.0		µg/L	1	10/10/2019 9:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/10/2019 9:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Benzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/10/2019 9:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Toluene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-01-SW-U-A-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/10/2019 9:44:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	10/10/2019 9:44:00 PM
Surr: 4-Bromofluorobenzene	**90.7**	76.5-125		%REC	1	10/10/2019 9:44:00 PM
Surr: Toluene-d8	**94.0**	80.4-121		%REC	1	10/10/2019 9:44:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**35.0**	2.0		mg/L	1	10/10/2019

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-02-SW-A-B-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
PCB, Total	**ND**	0.065		µg/L	1	10/9/2019 7:45:05 PM
Surr: Decachlorobiphenyl	**92.0**	57.1-135		%REC	1	10/9/2019 7:45:05 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Acetone	**ND**	5.0		µg/L	1	10/10/2019 10:06:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/10/2019 10:06:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/10/2019 10:06:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Benzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/10/2019 10:06:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Toluene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-02-SW-A-B-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/10/2019 10:06:00 PM
Surr: 1,2-Dichloroethane-d4	**99.4**	80.9-122		%REC	1	10/10/2019 10:06:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/10/2019 10:06:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/10/2019 10:06:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**32.2**	2.0		mg/L	1	10/10/2019

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-03-SW-D-A-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1242	**0.035**	0.065	J	µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/9/2019 7:58:24 PM
PCB, Total	**0.035**	0.065	J	µg/L	1	10/9/2019 7:58:24 PM
Surr: Decachlorobiphenyl	**89.0**	57.1-135		%REC	1	10/9/2019 7:58:24 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Acetone	**ND**	5.0		µg/L	1	10/10/2019 10:27:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/10/2019 10:27:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Benzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/10/2019 10:27:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Toluene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-03-SW-D-A-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/10/2019 10:27:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	10/10/2019 10:27:00 PM
Surr: 4-Bromofluorobenzene	**97.5**	76.5-125		%REC	1	10/10/2019 10:27:00 PM
Surr: Toluene-d8	**94.0**	80.4-121		%REC	1	10/10/2019 10:27:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**20.8**	2.0		mg/L	1	10/10/2019

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT: AECOM Environment
Work Order: **191009069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 100919-04-SW-B-A-1
Collection Date: 10/9/2019
Lab Sample ID: 191009069-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/9/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
PCB, Total	**ND**	0.065		µg/L	1	10/9/2019 8:11:45 PM
Surr: Decachlorobiphenyl	**90.0**	57.1-135		%REC	1	10/9/2019 8:11:45 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Acetone	**ND**	5.0		µg/L	1	10/10/2019 10:49:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/10/2019 10:49:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Benzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/10/2019 10:49:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Toluene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-04-SW-B-A-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/10/2019 10:49:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/10/2019 10:49:00 PM
Surr: 4-Bromofluorobenzene	**95.5**	76.5-125		%REC	1	10/10/2019 10:49:00 PM
Surr: Toluene-d8	**96.0**	80.4-121		%REC	1	10/10/2019 10:49:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/10/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**30.0**	2.0		mg/L	1	10/10/2019

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-05-SW-B-A-1
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/10/2019)						
TSS (Residue, Non-Filterable)	**16.7**	1.3		mg/L	1	10/10/2019

Adirondack Environmental Services, Inc

Date: *11-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	100919-TB01
Work Order:	**191009069**	**Collection Date:**	10/9/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191009069-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Methylene chloride	**1.9**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Acetone	**5.0**	5.0		µg/L	1	10/10/2019 11:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/10/2019 11:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Benzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/10/2019 11:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Toluene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/10/2019 11:10:00 PM
Surr: 1,2-Dichloroethane-d4	**99.8**	80.9-122		%REC	1	10/10/2019 11:10:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	10/10/2019 11:10:00 PM
Surr: Toluene-d8	**95.2**	80.4-121		%REC	1	10/10/2019 11:10:00 PM

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76036

DUP

SeqNo: **2717434** **PrepDate:10/9/2019** TestNo: **E608** RunNo: **176231**
Samp ID: **191009072-001** **PrepRef:** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	13.0	0	0	0	0	0	0	0	30	
Aroclor 1221	ND	13.0	0	0	0	0	0	0	0	30	
Aroclor 1232	ND	13.0	0	0	0	0	0	0	0	30	
Aroclor 1242	171.1	13.0	0	0	0	0	0	145.6	16.1	31.2	
Aroclor 1248	ND	13.0	0	0	0	0	0	0	0	30	
Aroclor 1254	ND	13.0	0	0	0	0	0	0	0	30	
Aroclor 1260	ND	13.0	0	0	0	0	0	0	0	30	
Surr: Decachlorobiphenyl	0.12	0	0.1	0	120	48.8	140	0	0	0	

mblk

SeqNo: **2717436** **PrepDate:10/9/2019** TestNo: **E608** RunNo: **176232**
Samp ID: **mb-76036** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.082	0	0.1	0	82	51.5	144	0	0		

mblk

SeqNo: **2718282** **PrepDate:10/9/2019** TestNo: **E608** RunNo: **176276**
Samp ID: **mb-76036** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	ND	0	0.1	0	0	51.5	144	0	0		S

lcs

SeqNo: **2717430** **PrepDate:10/9/2019** TestNo: **E608** RunNo: **176232**
Samp ID: **lcs-76036** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.048	0	0.1	0	48	51.5	144	0	0		S

MBLK

SeqNo: **2717393** **PrepDate:10/9/2019** TestNo: **SW8082A** RunNo: **176231**
Samp ID: **MB-76036** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76036

MBLK

SeqNo: **2717393** PrepDate:**10/9/2019** TestNo: **SW8082A** RunNo: **176231**
Samp ID: **MB-76036** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.113	0.0100	0.1	0	113	57.1	135	0	0		

LCS

SeqNo: **2717394** PrepDate:**10/9/2019** TestNo: **SW8082A** RunNo: **176231**
Samp ID: **LCS-76036** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4892	0.0650	0.5	0	97.8	60	140	0	0		
PCB, Total	0.4892	0.0650	0.5	0	97.8	60	140	0	0		
Surr: Decachlorobiphenyl	0.089	0.0100	0.1	0	89	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76084

LCS

SeqNo: **2718849** **PrepDate:10/10/2019** TestNo: **SM2540D** RunNo: **176301**
Samp ID: **LCS-76084** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	460	40.0	496	0	92.7	86.5	114	0	0		

DUP

SeqNo: **2718851** **PrepDate:10/10/2019** TestNo: **SM2540D** RunNo: **176301**
Samp ID: **191009064-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	664	20.0	0	0	0	0	0	608	8.81	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176283

mblk

SeqNo: **2718468** TestNo: **SW8260C** RunNo: **176283**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.22	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	4.36	5.0									J
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	50.42	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.46	5.0	50	0	90.9	76.5	125	0	0		
Surr: Toluene-d8	47.09	5.0	50	0	94.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176283

lcs

SeqNo: **2718466** TestNo: **SW8260C** RunNo: **176283**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.14	1.0	10	0	81.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.25	1.0	10	0	92.5	72.3	118	0	0		
1,1,2-Trichloroethane	8.7	1.0	10	0	87	73.1	123	0	0		
1,1-Dichloroethane	8.83	1.0	10	0	88.3	73.2	127	0	0		
1,1-Dichloroethene	8.03	1.0	10	0	80.3	70.3	128	0	0		
1,2,3-Trichloropropane	3.76	1.0	5	0	75.2	68.4	115	0	0		
1,2-Dichlorobenzene	7.91	1.0	10	0	79.1	71	124	0	0		
1,2-Dichloroethane	8.62	1.0	10	0	86.2	72.5	127	0	0		
1,3-Dichlorobenzene	7.84	1.0	10	0	78.4	72.2	121	0	0		
1,3-Dichloropropane	4.55	1.0	5	0	91	76	122	0	0		
1,4-Dichlorobenzene	7.68	1.0	10	0	76.8	71.7	127	0	0		
2-Butanone	8.62	5.0	10	0	86.2	65.1	132	0	0		
4-Methyl-2-pentanone	7.65	5.0	10	0	76.5	68.7	118	0	0		
Acetone	11.36	5.0	10	0	114	69.2	133	0	0		
Benzene	8.3	1.0	10	0	83	71.2	122	0	0		
Carbon disulfide	3.39	1.0	5	0	67.8	67.8	134	0	0		
Carbon tetrachloride	7.99	1.0	10	0	79.9	74.5	122	0	0		
Chlorobenzene	8.06	1.0	10	0	80.6	72.7	124	0	0		
Chloroethane	10.72	1.0	10	0	107	72.3	136	0	0		
Chloroform	8.39	1.0	10	0	83.9	71.6	133	0	0		
Dibromochloromethane	8.82	1.0	10	0	88.2	70.6	124	0	0		
Ethylbenzene	8.45	1.0	10	0	84.5	70.9	126	0	0		
Methylene chloride	8.78	1.0	10	0	87.8	66.3	130	0	0		
Tetrachloroethene	9.3	1.0	10	0	93	72.4	119	0	0		
Toluene	8.28	1.0	10	0	82.8	71.8	116	0	0		
trans-1,2-Dichloroethene	8.98	1.0	10	0	89.8	70.3	120	0	0		
Trichloroethene	7.79	1.0	10	0	77.9	73	127	0	0		
Vinyl chloride	10.53	1.0	10	0	105	65.2	134	0	0		
Xylenes, Total	23.58	1.0	30	0	78.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.8	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.65	5.0	50	0	95.3	76.5	125	0	0		
Surr: Toluene-d8	48.48	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176283

ms	SeqNo: **2718474**	TestNo: **SW8260C**	RunNo: **176283**
	Samp ID: **191009069-001b (100919-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/10/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.89	1.0	10	0	88.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	10.4	1.0	10	0	104	70.1	123	0	0		
1,1,2-Trichloroethane	9.06	1.0	10	0	90.6	72.1	119	0	0		
1,1-Dichloroethane	9.26	1.0	10	0	92.6	70.4	126	0	0		
1,1-Dichloroethene	8.55	1.0	10	0	85.5	70.2	125	0	0		
1,2,3-Trichloropropane	4.37	1.0	5	0	87.4	53.7	101	0	0		
1,2-Dichlorobenzene	7.97	1.0	10	0	79.7	70.2	123	0	0		
1,2-Dichloroethane	8.24	1.0	10	0	82.4	73.5	126	0	0		
1,3-Dichlorobenzene	8.21	1.0	10	0	82.1	70.4	124	0	0		
1,3-Dichloropropane	4.61	1.0	5	0	92.2	64	125	0	0		
1,4-Dichlorobenzene	7.73	1.0	10	0	77.3	70.8	127	0	0		
2-Butanone	6.49	5.0	10	0	64.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.15	5.0	10	0	81.5	52.8	133	0	0		
Acetone	9.6	5.0	10	0	96	56.3	135	0	0		
Benzene	8.76	1.0	10	0	87.6	70.2	127	0	0		
Carbon disulfide	3.53	1.0	5	0	70.6	62.2	130	0	0		
Carbon tetrachloride	9.15	1.0	10	0	91.5	56.4	137	0	0		
Chlorobenzene	9.49	1.0	10	0	94.9	72.7	128	0	0		
Chloroethane	10.08	1.0	10	0	101	71.3	135	0	0		
Chloroform	8.57	1.0	10	0	85.7	70.2	125	0	0		
Dibromochloromethane	9.25	1.0	10	0	92.5	69.5	123	0	0		
Ethylbenzene	10.06	1.0	10	0	101	71.9	129	0	0		
Methylene chloride	8.38	1.0	10	0	83.8	65.3	123	0	0		
Tetrachloroethene	9.92	1.0	10	0	99.2	74.5	121	0	0		
Toluene	8.69	1.0	10	0	86.9	73	122	0	0		
trans-1,2-Dichloroethene	9.05	1.0	10	0	90.5	69.1	133	0	0		
Trichloroethene	8.41	1.0	10	0	84.1	71.1	126	0	0		
Vinyl chloride	10.23	1.0	10	0	102	65	137	0	0		
Xylenes, Total	28.09	1.0	30	0	93.6	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.9	5.0	50	0	99.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.82	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	49.2	5.0	50	0	98.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191009069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176283

msd

SeqNo: **2718475** TestNo: **SW8260C** RunNo: **176283**
Samp ID: **191009069-001b (100919-01-SW-U-** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.96	1.0	10	0	79.6	71.6	126	8.89	11.0	20.4	
1,1,2,2-Tetrachloroethane	9.39	1.0	10	0	93.9	70.1	123	10.4	10.2	18.6	
1,1,2-Trichloroethane	8.44	1.0	10	0	84.4	72.1	119	9.06	7.09	20	
1,1-Dichloroethane	8.24	1.0	10	0	82.4	70.4	126	9.26	11.7	19.2	
1,1-Dichloroethene	8	1.0	10	0	80	70.2	125	8.55	6.65	16.1	
1,2,3-Trichloropropane	3.69	1.0	5	0	73.8	53.7	101	4.37	16.9	20	
1,2-Dichlorobenzene	8.02	1.0	10	0	80.2	70.2	123	7.97	0.625	17.9	
1,2-Dichloroethane	8.01	1.0	10	0	80.1	73.5	126	8.24	2.83	15.6	
1,3-Dichlorobenzene	7.88	1.0	10	0	78.8	70.4	124	8.21	4.10	14.3	
1,3-Dichloropropane	4.2	1.0	5	0	84	64	125	4.61	9.31	0	
1,4-Dichlorobenzene	7.83	1.0	10	0	78.3	70.8	127	7.73	1.29	14.4	
2-Butanone	8.56	5.0	10	0	85.6	60.5	123	6.49	27.5	15	Z
4-Methyl-2-pentanone	7.88	5.0	10	0	78.8	52.8	133	8.15	3.37	11.9	
Acetone	8.94	5.0	10	0	89.4	56.3	135	9.6	7.12	10.6	
Benzene	7.91	1.0	10	0	79.1	70.2	127	8.76	10.2	18.4	
Carbon disulfide	3.29	1.0	5	0	65.8	62.2	130	3.53	7.04	13.1	
Carbon tetrachloride	8.21	1.0	10	0	82.1	56.4	137	9.15	10.8	20.3	
Chlorobenzene	7.99	1.0	10	0	79.9	72.7	128	9.49	17.2	19.6	
Chloroethane	9.02	1.0	10	0	90.2	71.3	135	10.08	11.1	27.8	
Chloroform	8.08	1.0	10	0	80.8	70.2	125	8.57	5.89	20.3	
Dibromochloromethane	8.55	1.0	10	0	85.5	69.5	123	9.25	7.87	18.8	
Ethylbenzene	8.45	1.0	10	0	84.5	71.9	129	10.06	17.4	16.3	Z
Methylene chloride	7.64	1.0	10	0	76.4	65.3	123	8.38	9.24	21.4	
Tetrachloroethene	8.93	1.0	10	0	89.3	74.5	121	9.92	10.5	20.9	
Toluene	7.83	1.0	10	0	78.3	73	122	8.69	10.4	19.4	
trans-1,2-Dichloroethene	8.07	1.0	10	0	80.7	69.1	133	9.05	11.4	16.1	
Trichloroethene	7.45	1.0	10	0	74.5	71.1	126	8.41	12.1	16.6	
Vinyl chloride	9.49	1.0	10	0	94.9	65	137	10.23	7.51	20.5	
Xylenes, Total	23.44	1.0	30	0	78.1	72	130	28.09	18.0	16.1	Z
Surr: 1,2-Dichloroethane-d4	50.14	5.0	50	0	100	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.87	5.0	50	0	95.7	76.5	125	0	0	0	
Surr: Toluene-d8	47.5	5.0	50	0	95	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

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Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191009069

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patricia Cochran
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	100919-01-SW-U-A-1	10/9/19	0810	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
002	100919-02-SW-A-B-1	10/9/19	0830	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
003	100919-03-SW-D-A-1	10/9/19	0840	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
004	100919-04-SW-B-A-1	10/9/19	0755	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
005	100919-05-SW-B-A-1	10/9/19	0855	A	W		✓	1	TSS
006	100919-TB01 Lot#VOA-F4641 JM. 10/9/19			A	TB			1	trip blank
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 10/9/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 10/9/19 4:45 pm

TEMPERATURE Ambient or (Chilled) Notes: 3.1°C

AES Bottles Y ☒ N ☐

PROPERLY PRESERVED (Y) N Notes:_____

RECEIVED WITHIN HOLDING TIMES (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

191009069

Adirondack Environmental Services, Inc

191009069

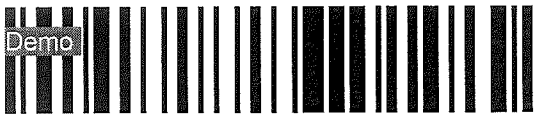
REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/11/2019

10/9/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191009069-001	100919-01-SW-U-A-1	Water	10/9/2019	10/11/2019	C	B	A				
191009069-002	100919-02-SW-A-B-1	Water	10/9/2019	10/11/2019	C	B	A				
191009069-003	100919-03-SW-D-A-1	Water	10/9/2019	10/11/2019	C	B	A				
191009069-004	100919-04-SW-B-A-1	Water	10/9/2019	10/11/2019	C	B	A				
191009069-005	100919-05-SW-B-A-1	Water	10/9/2019	10/11/2019			A				
191009069-006	100919-TB01	Trip Blank	10/9/2019	10/11/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 12, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191010104
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/10/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *12-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191010104	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT: AECOM Environment
Work Order: **191010104**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101019-01-SW-U-A-1
Collection Date: 10/10/2019
Lab Sample ID: 191010104-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Acetone	**ND**	5.0		µg/L	1	10/11/2019 12:19:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/11/2019 12:19:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,2-Dichloroethane	**0.3**	1.0	J	µg/L	1	10/11/2019 12:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/11/2019 12:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Benzene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/11/2019 12:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Toluene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Chlorobenzene	**0.8**	1.0	J	µg/L	1	10/11/2019 12:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/11/2019 12:19:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/11/2019 12:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/11/2019 12:19:00 PM
Surr: 1,2-Dichloroethane-d4	**98.8**	80.9-122		%REC	1	10/11/2019 12:19:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	10/11/2019 12:19:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	10/11/2019 12:19:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**11.3**	1.1		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT: AECOM Environment
Work Order: **191010104**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101019-02-SW-A-B-1
Collection Date: 10/10/2019
Lab Sample ID: 191010104-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Acetone	**ND**	5.0		µg/L	1	10/11/2019 12:41:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/11/2019 12:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/11/2019 12:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/11/2019 12:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Benzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/11/2019 12:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Toluene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/11/2019 12:41:00 PM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	10/11/2019 12:41:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/11/2019 12:41:00 PM
Surr: Toluene-d8	**95.4**	80.4-121		%REC	1	10/11/2019 12:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.9**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101019-03-SW-D-A-1
Work Order:	**191010104**	**Collection Date:**	10/10/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191010104-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Acetone	**ND**	5.0		µg/L	1	10/11/2019 1:02:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/11/2019 1:02:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/11/2019 1:02:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Benzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/11/2019 1:02:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Toluene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/11/2019 1:02:00 PM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	10/11/2019 1:02:00 PM
Surr: 4-Bromofluorobenzene	**99.1**	76.5-125		%REC	1	10/11/2019 1:02:00 PM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	10/11/2019 1:02:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.7**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT: AECOM Environment
Work Order: **191010104**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101019-04-SW-B-A-1
Collection Date: 10/10/2019
Lab Sample ID: 191010104-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Acetone	**ND**	5.0		µg/L	1	10/11/2019 1:24:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/11/2019 1:24:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/11/2019 1:24:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/11/2019 1:24:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Benzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/11/2019 1:24:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Toluene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/11/2019 1:24:00 PM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	10/11/2019 1:24:00 PM
Surr: 4-Bromofluorobenzene	**96.7**	76.5-125		%REC	1	10/11/2019 1:24:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	10/11/2019 1:24:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.5**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101019-05-SW-B-B-1
Work Order:	**191010104**	**Collection Date:**	10/10/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191010104-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/11/2019)						
TSS (Residue, Non-Filterable)	**8.6**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *12-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101019-TB01
Work Order:	**191010104**	**Collection Date:**	10/10/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191010104-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Acetone	**2.6**	5.0	J	µg/L	1	10/11/2019 1:45:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/11/2019 1:45:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/11/2019 1:45:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/11/2019 1:45:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Benzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/11/2019 1:45:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Toluene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/11/2019 1:45:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	10/11/2019 1:45:00 PM
Surr: 4-Bromofluorobenzene	**98.6**	76.5-125		%REC	1	10/11/2019 1:45:00 PM
Surr: Toluene-d8	**97.6**	80.4-121		%REC	1	10/11/2019 1:45:00 PM

CLIENT: AECOM Environment
Work Order: 191010104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76110

LCS

SeqNo: **2719199** **PrepDate:10/11/2019** TestNo: **SM2540D** RunNo: **176327**
Samp ID: **LCS-76110** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	496	0	98.4	86.5	114	0	0		

DUP

SeqNo: **2719204** **PrepDate:10/11/2019** TestNo: **SM2540D** RunNo: **176327**
Samp ID: **191010104-004** **PrepRef:** Units: **mg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	10.8	1.00	0	0	0	0	0	10.5	2.82	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191010104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176305

mblk

SeqNo: **2718952** TestNo: **SW8260C** RunNo: **176305**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.27	1.0									J
1,2-Dichloroethane	0.19	1.0									J
1,3-Dichlorobenzene	0.22	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.35	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.55	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.13	5.0	50	0	98.3	76.5	125	0	0		
Surr: Toluene-d8	48.03	5.0	50	0	96.1	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191010104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176305

lcs

SeqNo: **2718950** TestNo: **SW8260C** RunNo: **176305**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.84	1.0	10	0	78.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.77	1.0	10	0	87.7	72.3	118	0	0		
1,1,2-Trichloroethane	8.14	1.0	10	0	81.4	73.1	123	0	0		
1,1-Dichloroethane	8.48	1.0	10	0	84.8	73.2	127	0	0		
1,1-Dichloroethene	8.21	1.0	10	0	82.1	70.3	128	0	0		
1,2,3-Trichloropropane	3.58	1.0	5	0	71.6	68.4	115	0	0		
1,2-Dichlorobenzene	7.76	1.0	10	0	77.6	71	124	0	0		
1,2-Dichloroethane	8.01	1.0	10	0	80.1	72.5	127	0	0		
1,3-Dichlorobenzene	7.55	1.0	10	0	75.5	72.2	121	0	0		
1,3-Dichloropropane	4.05	1.0	5	0	81	76	122	0	0		
1,4-Dichlorobenzene	7.57	1.0	10	0	75.7	71.7	127	0	0		
2-Butanone	8.37	5.0	10	0	83.7	65.1	132	0	0		
4-Methyl-2-pentanone	6.96	5.0	10	0	69.6	68.7	118	0	0		
Acetone	11.47	5.0	10	0	115	69.2	133	0	0		
Benzene	7.79	1.0	10	0	77.9	71.2	122	0	0		
Carbon disulfide	3.37	1.0	5	0	67.4	67.8	134	0	0		S
Carbon tetrachloride	8.08	1.0	10	0	80.8	74.5	122	0	0		
Chlorobenzene	7.85	1.0	10	0	78.5	72.7	124	0	0		
Chloroethane	9.86	1.0	10	0	98.6	72.3	136	0	0		
Chloroform	8.14	1.0	10	0	81.4	71.6	133	0	0		
Dibromochloromethane	8.83	1.0	10	0	88.3	70.6	124	0	0		
Ethylbenzene	8.05	1.0	10	0	80.5	70.9	126	0	0		
Methylene chloride	9.65	1.0	10	0	96.5	66.3	130	0	0		
Tetrachloroethene	8.82	1.0	10	0	88.2	72.4	119	0	0		
Toluene	7.76	1.0	10	0	77.6	71.8	116	0	0		
trans-1,2-Dichloroethene	8.33	1.0	10	0	83.3	70.3	120	0	0		
Trichloroethene	7.47	1.0	10	0	74.7	73	127	0	0		
Vinyl chloride	10.13	1.0	10	0	101	65.2	134	0	0		
Xylenes, Total	22.99	1.0	30	0	76.6	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.15	5.0	50	0	98.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.3	5.0	50	0	94.6	76.5	125	0	0		
Surr: Toluene-d8	47.43	5.0	50	0	94.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191010104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176305

ms	SeqNo: **2718958**	TestNo: **SW8260C**	RunNo: **176305**
	Samp ID: **191010104-004b (101019-04-SW-B-**	Units: **µg/L**	Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.28	1.0	10	0	82.8	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.29	1.0	10	0	82.9	70.1	123	0	0		
1,1,2-Trichloroethane	8.09	1.0	10	0	80.9	72.1	119	0	0		
1,1-Dichloroethane	8.62	1.0	10	0	86.2	70.4	126	0	0		
1,1-Dichloroethene	8.35	1.0	10	0	83.5	70.2	125	0	0		
1,2,3-Trichloropropane	3.42	1.0	5	0	68.4	53.7	101	0	0		
1,2-Dichlorobenzene	7.87	1.0	10	0	78.7	70.2	123	0	0		
1,2-Dichloroethane	8.03	1.0	10	0.13	79	73.5	126	0	0		
1,3-Dichlorobenzene	7.51	1.0	10	0	75.1	70.4	124	0	0		
1,3-Dichloropropane	4.2	1.0	5	0	84	64	125	0	0		
1,4-Dichlorobenzene	7.42	1.0	10	0	74.2	70.8	127	0	0		
2-Butanone	8.04	5.0	10	0	80.4	60.5	123	0	0		
4-Methyl-2-pentanone	6.44	5.0	10	0	64.4	52.8	133	0	0		
Acetone	10.19	5.0	10	0	102	56.3	135	0	0		
Benzene	7.77	1.0	10	0	77.7	70.2	127	0	0		
Carbon disulfide	3.44	1.0	5	0	68.8	62.2	130	0	0		
Carbon tetrachloride	8.36	1.0	10	0	83.6	56.4	137	0	0		
Chlorobenzene	7.63	1.0	10	0	76.3	72.7	128	0	0		
Chloroethane	10.05	1.0	10	0	100	71.3	135	0	0		
Chloroform	8	1.0	10	0	80	70.2	125	0	0		
Dibromochloromethane	8.24	1.0	10	0	82.4	69.5	123	0	0		
Ethylbenzene	7.83	1.0	10	0	78.3	71.9	129	0	0		
Methylene chloride	8.33	1.0	10	0	83.3	65.3	123	0	0		
Tetrachloroethene	8.94	1.0	10	0	89.4	74.5	121	0	0		
Toluene	8.12	1.0	10	0	81.2	73	122	0	0		
trans-1,2-Dichloroethene	8.78	1.0	10	0	87.8	69.1	133	0	0		
Trichloroethene	7.59	1.0	10	0	75.9	71.1	126	0	0		
Vinyl chloride	10.65	1.0	10	0	106	65	137	0	0		
Xylenes, Total	21.75	1.0	30	0	72.5	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.63	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.56	5.0	50	0	91.1	76.5	125	0	0		
Surr: Toluene-d8	47.49	5.0	50	0	95	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191010104
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176305

msd

SeqNo: **2718959** TestNo: **SW8260C** RunNo: **176305**
Samp ID: **191010104-004b (101019-04-SW-B-** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.46	1.0	10	0	84.6	71.6	126	8.28	2.15	20.4	
1,1,2,2-Tetrachloroethane	9.68	1.0	10	0	96.8	70.1	123	8.29	15.5	18.6	
1,1,2-Trichloroethane	8.64	1.0	10	0	86.4	72.1	119	8.09	6.58	20	
1,1-Dichloroethane	8.8	1.0	10	0	88	70.4	126	8.62	2.07	19.2	
1,1-Dichloroethene	8.32	1.0	10	0	83.2	70.2	125	8.35	0.360	16.1	
1,2,3-Trichloropropane	3.82	1.0	5	0	76.4	53.7	101	3.42	11.0	20	
1,2-Dichlorobenzene	8.34	1.0	10	0	83.4	70.2	123	7.87	5.80	17.9	
1,2-Dichloroethane	8.12	1.0	10	0.13	79.9	73.5	126	8.03	1.11	15.6	
1,3-Dichlorobenzene	8.63	1.0	10	0	86.3	70.4	124	7.51	13.9	14.3	
1,3-Dichloropropane	4.47	1.0	5	0	89.4	64	125	4.2	6.23	0	
1,4-Dichlorobenzene	8.01	1.0	10	0	80.1	70.8	127	7.42	7.65	14.4	
2-Butanone	8.97	5.0	10	0	89.7	60.5	123	8.04	10.9	15	
4-Methyl-2-pentanone	7.46	5.0	10	0	74.6	52.8	133	6.44	14.7	11.9	Z
Acetone	11.05	5.0	10	0	110	56.3	135	10.19	8.10	10.6	
Benzene	8.4	1.0	10	0	84	70.2	127	7.77	7.79	18.4	
Carbon disulfide	3.51	1.0	5	0	70.2	62.2	130	3.44	2.01	13.1	
Carbon tetrachloride	8.72	1.0	10	0	87.2	56.4	137	8.36	4.22	20.3	
Chlorobenzene	8.91	1.0	10	0	89.1	72.7	128	7.63	15.5	19.6	
Chloroethane	10.26	1.0	10	0	103	71.3	135	10.05	2.07	27.8	
Chloroform	8.3	1.0	10	0	83	70.2	125	8	3.68	20.3	
Dibromochloromethane	8.89	1.0	10	0	88.9	69.5	123	8.24	7.59	18.8	
Ethylbenzene	9.49	1.0	10	0	94.9	71.9	129	7.83	19.2	16.3	Z
Methylene chloride	8.05	1.0	10	0	80.5	65.3	123	8.33	3.42	21.4	
Tetrachloroethene	9.72	1.0	10	0	97.2	74.5	121	8.94	8.36	20.9	
Toluene	8.59	1.0	10	0	85.9	73	122	8.12	5.63	19.4	
trans-1,2-Dichloroethene	8.76	1.0	10	0	87.6	69.1	133	8.78	0.228	16.1	
Trichloroethene	8.27	1.0	10	0	82.7	71.1	126	7.59	8.58	16.6	
Vinyl chloride	10.71	1.0	10	0	107	65	137	10.65	0.562	20.5	
Xylenes, Total	26.07	1.0	30	0	86.9	72	130	21.75	18.1	16.1	Z
Surr: 1,2-Dichloroethane-d4	49.27	5.0	50	0	98.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	50.09	5.0	50	0	100	76.5	125	0	0	0	
Surr: Toluene-d8	48.5	5.0	50	0	97	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191010104

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.blasko@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101019-01-SW-U-A-1	10/10/19	1020	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	101019-02-SW-A-B-1	10/10/19	1050	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	101019-03-SW-D-A-1	10/10/19	1105	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	101019-04-SW-B-A-1	10/10/19	1000	A	W		✓	6	VOCs
	↓	↓	↓	P	↓		↓	3	TSS
005	101019-05-SW-B-B-1	10/10/19	1120	A	W		✓	1	TSS
006	101019-TB01 Lot# VOA-F452 J.M. 10/10/19			A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	EOH	10/10/19 16:21
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature) EOH	Received for Laboratory by: J.M.	Date/Time 10/10/19 5:00pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	Y N	Y N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

Demo
191010104

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 15, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191011063
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/11/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *15-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191011063	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT: AECOM Environment
Work Order: **191011063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101119-04-SW-B-A-1
Collection Date: 10/11/2019
Lab Sample ID: 191011063-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
PCB, Total	**ND**	0.065		µg/L	1	10/11/2019 6:14:37 PM
Surr: Decachlorobiphenyl	**66.2**	57.1-135		%REC	1	10/11/2019 6:14:37 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Acetone	**5.9**	5.0	B	µg/L	1	10/15/2019 2:35:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 2:35:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 2:35:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 2:35:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 2:35:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-04-SW-B-A-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 2:35:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/15/2019 2:35:00 PM
Surr: 4-Bromofluorobenzene	**90.5**	76.5-125		%REC	1	10/15/2019 2:35:00 PM
Surr: Toluene-d8	**94.2**	80.4-121		%REC	1	10/15/2019 2:35:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/11/2019)						
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-01-SW-U-A-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
PCB, Total	**ND**	0.065		µg/L	1	10/11/2019 6:27:54 PM
Surr: Decachlorobiphenyl	**85.8**	57.1-135		%REC	1	10/11/2019 6:27:54 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Acetone	**4.4**	5.0	BS+J	µg/L	1	10/15/2019 2:56:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 2:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 2:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 2:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 2:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-01-SW-U-A-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 2:56:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	10/15/2019 2:56:00 PM
Surr: 4-Bromofluorobenzene	**94.7**	76.5-125		%REC	1	10/15/2019 2:56:00 PM
Surr: Toluene-d8	**94.3**	80.4-121		%REC	1	10/15/2019 2:56:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/11/2019)						
TSS (Residue, Non-Filterable)	**5.6**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-02-SW-A-B-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
PCB, Total	**ND**	0.065		µg/L	1	10/11/2019 6:41:14 PM
Surr: Decachlorobiphenyl	**82.2**	57.1-135		%REC	1	10/11/2019 6:41:14 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Acetone	**4.0**	5.0	BS+J	µg/L	1	10/15/2019 3:18:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 3:18:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 3:18:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 3:18:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 3:18:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-02-SW-A-B-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 3:18:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	10/15/2019 3:18:00 PM
Surr: 4-Bromofluorobenzene	**92.0**	76.5-125		%REC	1	10/15/2019 3:18:00 PM
Surr: Toluene-d8	**96.0**	80.4-121		%REC	1	10/15/2019 3:18:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**5.3**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-03-SW-D-B-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/11/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
PCB, Total	**ND**	0.065		µg/L	1	10/11/2019 6:54:32 PM
Surr: Decachlorobiphenyl	**84.6**	57.1-135		%REC	1	10/11/2019 6:54:32 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Acetone	**5.1**	5.0	B	µg/L	1	10/15/2019 3:39:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 3:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 3:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 3:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 3:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-03-SW-D-B-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 3:39:00 PM
Surr: 1,2-Dichloroethane-d4	**97.8**	80.9-122		%REC	1	10/15/2019 3:39:00 PM
Surr: 4-Bromofluorobenzene	**91.3**	76.5-125		%REC	1	10/15/2019 3:39:00 PM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	10/15/2019 3:39:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.6**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101119-05-SW-B-B-1
Work Order:	**191011063**	**Collection Date:**	10/11/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191011063-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/11/2019)						
TSS (Residue, Non-Filterable)	**7.9**	1.0		mg/L	1	10/11/2019

Adirondack Environmental Services, Inc

Date: *15-Oct-19*

CLIENT: AECOM Environment
Work Order: **191011063**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101119-TB01
Collection Date: 10/11/2019
Lab Sample ID: 191011063-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Methylene chloride	**1.2**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Acetone	**9.0**	5.0	B	µg/L	1	10/15/2019 4:01:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 4:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 4:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 4:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 4:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 4:01:00 PM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	10/15/2019 4:01:00 PM
Surr: 4-Bromofluorobenzene	**90.7**	76.5-125		%REC	1	10/15/2019 4:01:00 PM
Surr: Toluene-d8	**95.0**	80.4-121		%REC	1	10/15/2019 4:01:00 PM

CLIENT: AECOM Environment
Work Order: 191011063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76110

LCS

SeqNo: **2719199** **PrepDate:10/11/2019** TestNo: **SM2540D** RunNo: **176327**
Samp ID: **LCS-76110** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	496	0	98.4	86.5	114	0	0		

DUP

SeqNo: **2719204** **PrepDate:10/11/2019** TestNo: **SM2540D** RunNo: **176327**
Samp ID: **191010104-004** **PrepRef:** Units: **mg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	10.8	1.00	0	0	0	0	0	10.5	2.82	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191011063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76112

MBLK

SeqNo: **2719198** PrepDate:**10/11/2019** TestNo: **SW8082A** RunNo: **176326**
Samp ID: **MB-76112** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.066	0.0100	0.1	0	66	57.1	135	0	0		

LCS

SeqNo: **2719189** PrepDate:**10/11/2019** TestNo: **SW8082A** RunNo: **176326**
Samp ID: **LCS-76112** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5544	0.0650	0.5	0	111	60	140	0	0		
PCB, Total	0.5544	0.0650	0.5	0	111	60	140	0	0		
Surr: Decachlorobiphenyl	0.1004	0.0100	0.1	0	100	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191011063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

mblk

SeqNo: **2720005** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.14	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	5.51	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.24	5.0	50	0	96.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.48	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	48.29	5.0	50	0	96.6	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191011063
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

lcs

SeqNo: **2719998** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.18	1.0	10	0	81.8	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.58	1.0	10	0	85.8	72.3	118	0	0		
1,1,2-Trichloroethane	8.63	1.0	10	0	86.3	73.1	123	0	0		
1,1-Dichloroethane	8.37	1.0	10	0	83.7	73.2	127	0	0		
1,1-Dichloroethene	7.97	1.0	10	0	79.7	70.3	128	0	0		
1,2,3-Trichloropropane	3.49	1.0	5	0	69.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.77	1.0	10	0	77.7	71	124	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.07	1.0	10	0	80.7	72.2	121	0	0		
1,3-Dichloropropane	4.33	1.0	5	0	86.6	76	122	0	0		
1,4-Dichlorobenzene	7.6	1.0	10	0	76	71.7	127	0	0		
2-Butanone	7.05	5.0	10	0	70.5	65.1	132	0	0		
4-Methyl-2-pentanone	7.72	5.0	10	0	77.2	68.7	118	0	0		
Acetone	18.6	5.0	10	0	186	69.2	133	0	0		BS
Benzene	8.11	1.0	10	0	81.1	71.2	122	0	0		
Carbon disulfide	3.17	1.0	5	0	63.4	67.8	134	0	0		S
Carbon tetrachloride	8.3	1.0	10	0	83	74.5	122	0	0		
Chlorobenzene	7.98	1.0	10	0	79.8	72.7	124	0	0		
Chloroethane	9.29	1.0	10	0	92.9	72.3	136	0	0		
Chloroform	8.26	1.0	10	0	82.6	71.6	133	0	0		
Dibromochloromethane	9.31	1.0	10	0	93.1	70.6	124	0	0		
Ethylbenzene	8.58	1.0	10	0	85.8	70.9	126	0	0		
Methylene chloride	9.85	1.0	10	0	98.5	66.3	130	0	0		
Tetrachloroethene	9.72	1.0	10	0	97.2	72.4	119	0	0		
Toluene	8.17	1.0	10	0	81.7	71.8	116	0	0		
trans-1,2-Dichloroethene	8.43	1.0	10	0	84.3	70.3	120	0	0		
Trichloroethene	8	1.0	10	0	80	73	127	0	0		
Vinyl chloride	8.87	1.0	10	0	88.7	65.2	134	0	0		
Xylenes, Total	23.75	1.0	30	0	79.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.15	5.0	50	0	96.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.79	5.0	50	0	91.6	76.5	125	0	0		
Surr: Toluene-d8	47.5	5.0	50	0	95	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

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Albany, New York 12207
518-434-4546/434-0891 FAX

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191011063

Client Name: AECOM	Address: 36 Riverside Ave. Rensselaer, NY 12144		
Send Report To: Lab Post to Portal	Project Name (Location) BASF Rensselaer	Samplers: (Names) John Angelone	
Client Phone No: (978) 905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608	Samplers: (Signature) John Angelone

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101119-04-SW-B-A-1	10/11/19	840	A/P	W		X	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P				1	TSS
002	101119-01-SW-U-A-1	10/11/19	925	A/P				2	PCBs
	↓	↓	↓	A/P				2	VOCs
	↓	↓	↓	A/P				1	TSS
003	101119-02-SW-A-B-1	10/11/19	955	A/P				2	PCBs
	↓	↓	↓	A/P				2	VOCs
	↓	↓	↓	A/P				1	TSS
004	101119-03-SW-D-B-1	10/11/19	1015	A/P				2	PCBs
	↓	↓	↓	A/P				2	VOCs
	↓	↓	↓	A/P				1	TSS
005	101119-05-SW-B-B-1	10/11/19	1040	A/P	↓		↓	1	TSS
006	101119-TB01 Lot # 0A-F416.3 Exp. 5/2021			A/P	TB			1	Trip Blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☒ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature) John Angelone	Received by: (Signature)	Date/Time 10/11/19 4:45p
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 10/11/19 4:28pm

Temperature
Ambient or (Chilled)
Notes: 4°C

AES Bottles
Y ☒ N ☐

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
191011063

Adirondack Environmental Services, Inc

191011063

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191011063

TAT: **2**

DateDue: 10/15/2019

10/11/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191011063-001	101119-04-SW-B-A-1	Water	10/11/2019	10/15/2019	C	B	A				
191011063-002	101119-01-SW-U-A-1	Water	10/11/2019	10/15/2019	C	B	A				
191011063-003	101119-02-SW-A-B-1	Water	10/11/2019	10/15/2019	C	B	A				
191011063-004	101119-03-SW-D-B-1	Water	10/11/2019	10/15/2019	C	B	A				
191011063-005	101119-05-SW-B-B-1	Water	10/11/2019	10/15/2019			A				
191011063-006	101119-TB01	Trip Blank	10/11/2019	10/15/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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October 17, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191015002
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 10/15/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *17-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191015002	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-01-SW-U-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/15/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
PCB, Total	**ND**	0.065		µg/L	1	10/15/2019 2:35:38 PM
Surr: Decachlorobiphenyl	**74.2**	57.1-135		%REC	1	10/15/2019 2:35:38 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Acetone	**4.5**	5.0	JS+	µg/L	1	10/16/2019 7:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 7:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 7:13:00 PM
Tetrachloroethene	**0.2**	1.0	J	µg/L	1	10/16/2019 7:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-01-SW-U-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 7:13:00 PM
Surr: 1,2-Dichloroethane-d4	**95.0**	80.9-122		%REC	1	10/16/2019 7:13:00 PM
Surr: 4-Bromofluorobenzene	**87.8**	76.5-125		%REC	1	10/16/2019 7:13:00 PM
Surr: Toluene-d8	**91.5**	80.4-121		%REC	1	10/16/2019 7:13:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/15/2019)						
TSS (Residue, Non-Filterable)	**8.0**	1.0		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-02-SW-A-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/15/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
PCB, Total	**ND**	0.065		µg/L	1	10/15/2019 2:49:00 PM
Surr: Decachlorobiphenyl	**86.8**	57.1-135		%REC	1	10/15/2019 2:49:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Acetone	**2.7**	5.0	JS+	µg/L	1	10/16/2019 7:35:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/16/2019 7:35:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 7:35:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 7:35:00 PM
Tetrachloroethene	**0.2**	1.0	J	µg/L	1	10/16/2019 7:35:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-02-SW-A-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 7:35:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	10/16/2019 7:35:00 PM
Surr: 4-Bromofluorobenzene	**91.7**	76.5-125		%REC	1	10/16/2019 7:35:00 PM
Surr: Toluene-d8	**92.0**	80.4-121		%REC	1	10/16/2019 7:35:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/15/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.9**	1.1		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015002**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101419-03-SW-D-A-1
Collection Date: 10/14/2019
Lab Sample ID: 191015002-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/15/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1242	**0.179**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/15/2019 3:02:20 PM
PCB, Total	**0.179**	0.065		µg/L	1	10/15/2019 3:02:20 PM
Surr: Decachlorobiphenyl	**88.4**	57.1-135		%REC	1	10/15/2019 3:02:20 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Acetone	**3.5**	5.0	JBS+	µg/L	1	10/15/2019 6:10:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 6:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/15/2019 6:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 6:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Benzene	**0.8**	1.0	J	µg/L	1	10/15/2019 6:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 6:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Chlorobenzene	**6.0**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-03-SW-D-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	10/15/2019 6:10:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/15/2019 6:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 6:10:00 PM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	10/15/2019 6:10:00 PM
Surr: 4-Bromofluorobenzene	**93.7**	76.5-125		%REC	1	10/15/2019 6:10:00 PM
Surr: Toluene-d8	**94.6**	80.4-121		%REC	1	10/15/2019 6:10:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/15/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.1**	1.0		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015002**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101419-04-SW-B-A-1
Collection Date: 10/14/2019
Lab Sample ID: 191015002-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/15/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
PCB, Total	**ND**	0.065		µg/L	1	10/15/2019 3:15:41 PM
Surr: Decachlorobiphenyl	**84.6**	57.1-135		%REC	1	10/15/2019 3:15:41 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Acetone	**4.6**	5.0	JBS+	µg/L	1	10/15/2019 6:31:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 6:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 6:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 6:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 6:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-04-SW-B-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 6:31:00 PM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	10/15/2019 6:31:00 PM
Surr: 4-Bromofluorobenzene	**92.1**	76.5-125		%REC	1	10/15/2019 6:31:00 PM
Surr: Toluene-d8	**93.6**	80.4-121		%REC	1	10/15/2019 6:31:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/15/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.3**	1.1		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-05-SW-B-A-1
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/15/2019)						
TSS (Residue, Non-Filterable)	**9.2**	1.0		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-01-SW-U-A-3
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/15/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
PCB, Total	**ND**	0.065		µg/L	1	10/15/2019 3:28:59 PM
Surr: Decachlorobiphenyl	**44.0**	57.1-135	S	%REC	1	10/15/2019 3:28:59 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Acetone	**3.9**	5.0	JBS+	µg/L	1	10/15/2019 6:53:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 6:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 6:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 6:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 6:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101419-01-SW-U-A-3
Work Order:	**191015002**	**Collection Date:**	10/14/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015002-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 6:53:00 PM
Surr: 1,2-Dichloroethane-d4	**96.6**	80.9-122		%REC	1	10/15/2019 6:53:00 PM
Surr: 4-Bromofluorobenzene	**90.0**	76.5-125		%REC	1	10/15/2019 6:53:00 PM
Surr: Toluene-d8	**94.6**	80.4-121		%REC	1	10/15/2019 6:53:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/15/2019)						
TSS (Residue, Non-Filterable)	**2.1**	1.0		mg/L	1	10/15/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015002**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101419-TB01
Collection Date: 10/14/2019
Lab Sample ID: 191015002-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Methylene chloride	**1.2**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Acetone	**8.1**	5.0	BS+	µg/L	1	10/15/2019 7:14:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 7:14:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 7:14:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 7:14:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 7:14:00 PM
Surr: 1,2-Dichloroethane-d4	**97.1**	80.9-122		%REC	1	10/15/2019 7:14:00 PM
Surr: 4-Bromofluorobenzene	**97.1**	76.5-125		%REC	1	10/15/2019 7:14:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	10/15/2019 7:14:00 PM

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015002**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101419-TB02
Collection Date: 10/14/2019
Lab Sample ID: 191015002-008
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	10/15/2019 7:36:00 PM
Acetone	**6.3**	5.0	BS+	µg/L	1	10/15/2019 7:36:00 PM
Carbon disulfide	**ND**	1.0	S	µg/L	1	10/15/2019 7:36:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/15/2019 7:36:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/15/2019 7:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Benzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/15/2019 7:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Toluene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/15/2019 7:36:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	10/15/2019 7:36:00 PM
Surr: 4-Bromofluorobenzene	**93.3**	76.5-125		%REC	1	10/15/2019 7:36:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	10/15/2019 7:36:00 PM

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76130

MBLK

SeqNo: **2719978** PrepDate:**10/15/2019** TestNo: **SW8082A** RunNo: **176376**
Samp ID: **MB-76130** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0946	0.0100	0.1	0	94.6	57.1	135	0	0		

LCS

SeqNo: **2719979** PrepDate:**10/15/2019** TestNo: **SW8082A** RunNo: **176376**
Samp ID: **LCS-76130** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4608	0.0650	0.5	0	92.2	60	140	0	0		
PCB, Total	0.4608	0.0650	0.5	0	92.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0782	0.0100	0.1	0	78.2	57.1	135	0	0		

LCSD

SeqNo: **2719980** PrepDate:**10/15/2019** TestNo: **SW8082A** RunNo: **176376**
Samp ID: **LCSD-76130** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.481	0.0650	0.5	0	96.2	60	140	0.4608	4.29	30	
PCB, Total	0.481	0.0650	0.5	0	96.2	60	140	0.4608	4.29	30	
Surr: Decachlorobiphenyl	0.0644	0.0100	0.1	0	64.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76139

LCS

SeqNo: **2720740** **PrepDate:10/15/2019** TestNo: **SM2540D** RunNo: **176413**
Samp ID: **LCS-76139** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	524	40.0	496	0	106	86.5	114	0	0		

DUP

SeqNo: **2720742** **PrepDate:10/15/2019** TestNo: **SM2540D** RunNo: **176413**
Samp ID: **191010049-002** **PrepRef:** Units: **mg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	164	20.0	0	0	0	0	0	176	7.06	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

mblk

SeqNo: **2720005** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.14	1.0									J
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	5.51	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.24	5.0	50	0	96.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.48	5.0	50	0	95	76.5	125	0	0		
Surr: Toluene-d8	48.29	5.0	50	0	96.6	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

lcs

SeqNo: **2719998** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.18	1.0	10	0	81.8	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.58	1.0	10	0	85.8	72.3	118	0	0		
1,1,2-Trichloroethane	8.63	1.0	10	0	86.3	73.1	123	0	0		
1,1-Dichloroethane	8.37	1.0	10	0	83.7	73.2	127	0	0		
1,1-Dichloroethene	7.97	1.0	10	0	79.7	70.3	128	0	0		
1,2,3-Trichloropropane	3.49	1.0	5	0	69.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.77	1.0	10	0	77.7	71	124	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	72.5	127	0	0		
1,3-Dichlorobenzene	8.07	1.0	10	0	80.7	72.2	121	0	0		
1,3-Dichloropropane	4.33	1.0	5	0	86.6	76	122	0	0		
1,4-Dichlorobenzene	7.6	1.0	10	0	76	71.7	127	0	0		
2-Butanone	7.05	5.0	10	0	70.5	65.1	132	0	0		
4-Methyl-2-pentanone	7.72	5.0	10	0	77.2	68.7	118	0	0		
Acetone	18.6	5.0	10	0	186	69.2	133	0	0		BS
Benzene	8.11	1.0	10	0	81.1	71.2	122	0	0		
Carbon disulfide	3.17	1.0	5	0	63.4	67.8	134	0	0		S
Carbon tetrachloride	8.3	1.0	10	0	83	74.5	122	0	0		
Chlorobenzene	7.98	1.0	10	0	79.8	72.7	124	0	0		
Chloroethane	9.29	1.0	10	0	92.9	72.3	136	0	0		
Chloroform	8.26	1.0	10	0	82.6	71.6	133	0	0		
Dibromochloromethane	9.31	1.0	10	0	93.1	70.6	124	0	0		
Ethylbenzene	8.58	1.0	10	0	85.8	70.9	126	0	0		
Methylene chloride	9.85	1.0	10	0	98.5	66.3	130	0	0		
Tetrachloroethene	9.72	1.0	10	0	97.2	72.4	119	0	0		
Toluene	8.17	1.0	10	0	81.7	71.8	116	0	0		
trans-1,2-Dichloroethene	8.43	1.0	10	0	84.3	70.3	120	0	0		
Trichloroethene	8	1.0	10	0	80	73	127	0	0		
Vinyl chloride	8.87	1.0	10	0	88.7	65.2	134	0	0		
Xylenes, Total	23.75	1.0	30	0	79.2	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.15	5.0	50	0	96.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.79	5.0	50	0	91.6	76.5	125	0	0		
Surr: Toluene-d8	47.5	5.0	50	0	95	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

lcsd

SeqNo: **2720029** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.68	1.0	10	0	76.8	72.3	121	8.18	6.31	25	
1,1,2,2-Tetrachloroethane	8.68	1.0	10	0	86.8	72.3	118	8.58	1.16	25	
1,1,2-Trichloroethane	8.41	1.0	10	0	84.1	73.1	123	8.63	2.58	25	
1,1-Dichloroethane	8.16	1.0	10	0	81.6	73.2	127	8.37	2.54	25	
1,1-Dichloroethene	7.88	1.0	10	0	78.8	70.3	128	7.97	1.14	25	
1,2,3-Trichloropropane	3.6	1.0	5	0	72	68.4	115	3.49	3.10	25	
1,2-Dichlorobenzene	7.39	1.0	10	0	73.9	71	124	7.77	5.01	25	
1,2-Dichloroethane	7.87	1.0	10	0	78.7	72.5	127	8.32	5.56	25	
1,3-Dichlorobenzene	7.49	1.0	10	0	74.9	72.2	121	8.07	7.46	25	
1,3-Dichloropropane	4.21	1.0	5	0	84.2	76	122	4.33	2.81	0	
1,4-Dichlorobenzene	7.21	1.0	10	0	72.1	71.7	127	7.6	5.27	25	
2-Butanone	10.44	5.0	10	0	104	65.1	132	7.05	38.8	25	Z
4-Methyl-2-pentanone	7.87	5.0	10	0	78.7	68.7	118	7.72	1.92	25	
Acetone	19.19	5.0	10	0	192	69.2	133	18.6	3.12	25	BS
Benzene	7.74	1.0	10	0	77.4	71.2	122	8.11	4.67	25	
Carbon disulfide	3.15	1.0	5	0	63	67.8	134	3.17	0.633	25	S
Carbon tetrachloride	7.77	1.0	10	0	77.7	74.5	122	8.3	6.60	25	
Chlorobenzene	7.42	1.0	10	0	74.2	72.7	124	7.98	7.27	25	
Chloroethane	10.11	1.0	10	0	101	72.3	136	9.29	8.45	25	
Chloroform	7.99	1.0	10	0	79.9	71.6	133	8.26	3.32	25	
Dibromochloromethane	8.6	1.0	10	0	86	70.6	124	9.31	7.93	25	
Ethylbenzene	7.96	1.0	10	0	79.6	70.9	126	8.58	7.50	25	
Methylene chloride	9.79	1.0	10	0	97.9	66.3	130	9.85	0.611	25	
Tetrachloroethene	8.69	1.0	10	0	86.9	72.4	119	9.72	11.2	25	
Toluene	7.8	1.0	10	0	78	71.8	116	8.17	4.63	25	
trans-1,2-Dichloroethene	8.32	1.0	10	0	83.2	70.3	120	8.43	1.31	25	
Trichloroethene	7.35	1.0	10	0	73.5	73	127	8	8.47	25	
Vinyl chloride	9.76	1.0	10	0	97.6	65.2	134	8.87	9.55	25	
Xylenes, Total	21.74	1.0	30	0	72.5	72.1	124	23.75	8.84	25	
Surr: 1,2-Dichloroethane-d4	48.92	5.0	50	0	97.8	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	45.64	5.0	50	0	91.3	76.5	125	0	0	25	
Surr: Toluene-d8	47.74	5.0	50	0	95.5	80.4	121	0	0	25	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

ms

SeqNo: **2720387** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **191011063-001b** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.55	1.0	10	0	75.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.63	1.0	10	0	76.3	70.1	123	0	0		
1,1,2-Trichloroethane	7.8	1.0	10	0	78	72.1	119	0	0		
1,1-Dichloroethane	7.72	1.0	10	0	77.2	70.4	126	0	0		
1,1-Dichloroethene	7.28	1.0	10	0	72.8	70.2	125	0	0		
1,2,3-Trichloropropane	3.15	1.0	5	0	63	53.7	101	0	0		
1,2-Dichlorobenzene	6.5	1.0	10	0	65	70.2	123	0	0		S
1,2-Dichloroethane	7.57	1.0	10	0.14	74.3	73.5	126	0	0		
1,3-Dichlorobenzene	6.6	1.0	10	0	66	70.4	124	0	0		S
1,3-Dichloropropane	3.98	1.0	5	0	79.6	64	125	0	0		
1,4-Dichlorobenzene	6.36	1.0	10	0	63.6	70.8	127	0	0		S
2-Butanone	5.47	5.0	10	0	54.7	60.5	123	0	0		S
4-Methyl-2-pentanone	7.26	5.0	10	0	72.6	52.8	133	0	0		
Acetone	12	5.0	10	5.91	60.9	56.3	135	0	0		B
Benzene	7.46	1.0	10	0	74.6	70.2	127	0	0		
Carbon disulfide	2.81	1.0	5	0	56.2	62.2	130	0	0		S
Carbon tetrachloride	7.65	1.0	10	0	76.5	56.4	137	0	0		
Chlorobenzene	7.21	1.0	10	0	72.1	72.7	128	0	0		S
Chloroethane	9.19	1.0	10	0	91.9	71.3	135	0	0		
Chloroform	7.58	1.0	10	0	75.8	70.2	125	0	0		
Dibromochloromethane	7.8	1.0	10	0	78	69.5	123	0	0		
Ethylbenzene	7.43	1.0	10	0	74.3	71.9	129	0	0		
Methylene chloride	7.23	1.0	10	0	72.3	65.3	123	0	0		
Tetrachloroethene	7.98	1.0	10	0	79.8	74.5	121	0	0		
Toluene	7.53	1.0	10	0	75.3	73	122	0	0		
trans-1,2-Dichloroethene	7.48	1.0	10	0	74.8	69.1	133	0	0		
Trichloroethene	7.1	1.0	10	0	71	71.1	126	0	0		S
Vinyl chloride	8.98	1.0	10	0	89.8	65	137	0	0		
Xylenes, Total	20.29	1.0	30	0	67.6	72	130	0	0		S
Surr: 1,2-Dichloroethane-d4	48.38	5.0	50	0	96.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.94	5.0	50	0	91.9	76.5	125	0	0		
Surr: Toluene-d8	47.65	5.0	50	0	95.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176378

msd

SeqNo: **2720388** TestNo: **SW8260C** RunNo: **176378**
Samp ID: **191011063-001b** Units: **µg/L** Analysis Date: **10/15/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.67	1.0	10	0	76.7	71.6	126	7.55	1.58	20.4	
1,1,2,2-Tetrachloroethane	7.87	1.0	10	0	78.7	70.1	123	7.63	3.10	18.6	
1,1,2-Trichloroethane	7.95	1.0	10	0	79.5	72.1	119	7.8	1.90	20	
1,1-Dichloroethane	8.12	1.0	10	0	81.2	70.4	126	7.72	5.05	19.2	
1,1-Dichloroethene	7.56	1.0	10	0	75.6	70.2	125	7.28	3.77	16.1	
1,2,3-Trichloropropane	3.43	1.0	5	0	68.6	53.7	101	3.15	8.51	20	
1,2-Dichlorobenzene	7.59	1.0	10	0	75.9	70.2	123	6.5	15.5	17.9	
1,2-Dichloroethane	7.7	1.0	10	0.14	75.6	73.5	126	7.57	1.70	15.6	
1,3-Dichlorobenzene	7.13	1.0	10	0	71.3	70.4	124	6.6	7.72	14.3	
1,3-Dichloropropane	4.04	1.0	5	0	80.8	64	125	3.98	1.50	0	
1,4-Dichlorobenzene	7.15	1.0	10	0	71.5	70.8	127	6.36	11.7	14.4	
2-Butanone	6.77	5.0	10	0	67.7	60.5	123	5.47	21.2	15	Z
4-Methyl-2-pentanone	7.74	5.0	10	0	77.4	52.8	133	7.26	6.40	11.9	
Acetone	12.82	5.0	10	5.91	69.1	56.3	135	12	6.61	10.6	B
Benzene	7.52	1.0	10	0	75.2	70.2	127	7.46	0.801	18.4	
Carbon disulfide	2.93	1.0	5	0	58.6	62.2	130	2.81	4.18	13.1	S
Carbon tetrachloride	7.66	1.0	10	0	76.6	56.4	137	7.65	0.131	20.3	
Chlorobenzene	6.87	1.0	10	0	68.7	72.7	128	7.21	4.83	19.6	S
Chloroethane	9.18	1.0	10	0	91.8	71.3	135	9.19	0.109	27.8	
Chloroform	7.92	1.0	10	0	79.2	70.2	125	7.58	4.39	20.3	
Dibromochloromethane	7.97	1.0	10	0	79.7	69.5	123	7.8	2.16	18.8	
Ethylbenzene	7.14	1.0	10	0	71.4	71.9	129	7.43	3.98	16.3	S
Methylene chloride	7.53	1.0	10	0	75.3	65.3	123	7.23	4.07	21.4	
Tetrachloroethene	8.12	1.0	10	0	81.2	74.5	121	7.98	1.74	20.9	
Toluene	7.6	1.0	10	0	76	73	122	7.53	0.925	19.4	
trans-1,2-Dichloroethene	7.94	1.0	10	0	79.4	69.1	133	7.48	5.97	16.1	
Trichloroethene	7.25	1.0	10	0	72.5	71.1	126	7.1	2.09	16.6	
Vinyl chloride	9.38	1.0	10	0	93.8	65	137	8.98	4.36	20.5	
Xylenes, Total	19.42	1.0	30	0	64.7	72	130	20.29	4.38	16.1	S
Surr: 1,2-Dichloroethane-d4	48.21	5.0	50	0	96.4	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	43.57	5.0	50	0	87.1	76.5	125	0	0	0	
Surr: Toluene-d8	47.75	5.0	50	0	95.5	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

MBLK

SeqNo: **2721465** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	1.0	0	0	0	0	0	0	0		
1,3-Dichloropropane	ND	1.0	0	0	0	0	0	0	0		
Vinyl chloride	ND	1.0	0	0	0	0	0	0	0		
Chloroethane	ND	1.0	0	0	0	0	0	0	0		
Methylene chloride	ND	1.0	0	0	0	0	0	0	0		
Acetone	ND	5.0	0	0	0	0	0	0	0		
Carbon disulfide	ND	1.0	0	0	0	0	0	0	0		
1,1-Dichloroethene	ND	1.0	0	0	0	0	0	0	0		
1,1-Dichloroethane	ND	1.0	0	0	0	0	0	0	0		
trans-1,2-Dichloroethene	ND	1.0	0	0	0	0	0	0	0		
Chloroform	ND	1.0	0	0	0	0	0	0	0		
1,2-Dichloroethane	0.14	1.0	0	0	0	0	0	0	0		J
2-Butanone	ND	5.0	0	0	0	0	0	0	0		
1,1,1-Trichloroethane	ND	1.0	0	0	0	0	0	0	0		
Carbon tetrachloride	ND	1.0	0	0	0	0	0	0	0		
Trichloroethene	ND	1.0	0	0	0	0	0	0	0		
Dibromochloromethane	ND	1.0	0	0	0	0	0	0	0		
1,1,2-Trichloroethane	ND	1.0	0	0	0	0	0	0	0		
Benzene	ND	1.0	0	0	0	0	0	0	0		
4-Methyl-2-pentanone	ND	5.0	0	0	0	0	0	0	0		
Tetrachloroethene	0.28	1.0	0	0	0	0	0	0	0		J
1,1,2,2-Tetrachloroethane	ND	1.0	0	0	0	0	0	0	0		
Toluene	ND	1.0	0	0	0	0	0	0	0		
Chlorobenzene	ND	1.0	0	0	0	0	0	0	0		
Ethylbenzene	0.26	1.0	0	0	0	0	0	0	0		J
1,3-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
1,2-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
1,4-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
Xylenes, Total	0.36	1.0	0	0	0	0	0	0	0		J
Surr: 1,2-Dichloroethane-d4	47.78	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.9	5.0	50	0	95.8	76.5	125	0	0		
Surr: Toluene-d8	46.67	5.0	50	0	93.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

lcs

SeqNo: **2721463** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.19	1.0	10	0	91.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.25	1.0	10	0	103	72.3	118	0	0		
1,1,2-Trichloroethane	10.16	1.0	10	0	102	73.1	123	0	0		
1,1-Dichloroethane	10.71	1.0	10	0	107	73.2	127	0	0		
1,1-Dichloroethene	11.16	1.0	10	0	112	70.3	128	0	0		
1,2,3-Trichloropropane	5.23	1.0	5	0	105	68.4	115	0	0		
1,2-Dichlorobenzene	9.25	1.0	10	0	92.5	71	124	0	0		
1,2-Dichloroethane	10.17	1.0	10	0	102	72.5	127	0	0		
1,3-Dichlorobenzene	9	1.0	10	0	90	72.2	121	0	0		
1,3-Dichloropropane	5.2	1.0	5	0	104	76	122	0	0		
1,4-Dichlorobenzene	9.08	1.0	10	0	90.8	71.7	127	0	0		
2-Butanone	10.02	5.0	10	0	100	65.1	132	0	0		
4-Methyl-2-pentanone	10.32	5.0	10	0	103	68.7	118	0	0		
Acetone	15.79	5.0	10	0	158	69.2	133	0	0		S
Benzene	9.4	1.0	10	0	94	71.2	122	0	0		
Carbon disulfide	4.9	1.0	5	0	98	67.8	134	0	0		
Carbon tetrachloride	8.87	1.0	10	0	88.7	74.5	122	0	0		
Chlorobenzene	8.53	1.0	10	0	85.3	72.7	124	0	0		
Chloroethane	8.68	1.0	10	0	86.8	72.3	136	0	0		
Chloroform	10.23	1.0	10	0	102	71.6	133	0	0		
Dibromochloromethane	10.42	1.0	10	0	104	70.6	124	0	0		
Ethylbenzene	8.72	1.0	10	0	87.2	70.9	126	0	0		
Methylene chloride	11.39	1.0	10	0	114	66.3	130	0	0		
Tetrachloroethene	11.19	1.0	10	0	112	72.4	119	0	0		
Toluene	9.43	1.0	10	0	94.3	71.8	116	0	0		
trans-1,2-Dichloroethene	11.1	1.0	10	0	111	70.3	120	0	0		
Trichloroethene	9.08	1.0	10	0	90.8	73	127	0	0		
Vinyl chloride	8.16	1.0	10	0	81.6	65.2	134	0	0		
Xylenes, Total	23.78	1.0	30	0	79.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.73	5.0	50	0	95.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.29	5.0	50	0	86.6	76.5	125	0	0		
Surr: Toluene-d8	45.81	5.0	50	0	91.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

lcsd

SeqNo: **2721464** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.73	1.0	10	0	97.3	72.3	121	9.19	5.71	25	
1,1,2,2-Tetrachloroethane	10.3	1.0	10	0	103	72.3	118	10.25	0.487	25	
1,1,2-Trichloroethane	9.94	1.0	10	0	99.4	73.1	123	10.16	2.19	25	
1,1-Dichloroethane	10.89	1.0	10	0	109	73.2	127	10.71	1.67	25	
1,1-Dichloroethene	12.22	1.0	10	0	122	70.3	128	11.16	9.07	25	
1,2,3-Trichloropropane	5.35	1.0	5	0	107	68.4	115	5.23	2.27	25	
1,2-Dichlorobenzene	9.65	1.0	10	0	96.5	71	124	9.25	4.23	25	
1,2-Dichloroethane	10.27	1.0	10	0	103	72.5	127	10.17	0.978	25	
1,3-Dichlorobenzene	9.77	1.0	10	0	97.7	72.2	121	9	8.20	25	
1,3-Dichloropropane	4.84	1.0	5	0	96.8	76	122	5.2	7.17	0	
1,4-Dichlorobenzene	9.84	1.0	10	0	98.4	71.7	127	9.08	8.03	25	
2-Butanone	9.78	5.0	10	0	97.8	65.1	132	10.02	2.42	25	
4-Methyl-2-pentanone	9.9	5.0	10	0	99	68.7	118	10.32	4.15	25	
Acetone	14.78	5.0	10	0	148	69.2	133	15.79	6.61	25	S
Benzene	9.73	1.0	10	0	97.3	71.2	122	9.4	3.45	25	
Carbon disulfide	5.15	1.0	5	0	103	67.8	134	4.9	4.98	25	
Carbon tetrachloride	9.66	1.0	10	0	96.6	74.5	122	8.87	8.53	25	
Chlorobenzene	9.26	1.0	10	0	92.6	72.7	124	8.53	8.21	25	
Chloroethane	8.93	1.0	10	0	89.3	72.3	136	8.68	2.84	25	
Chloroform	10.21	1.0	10	0	102	71.6	133	10.23	0.196	25	
Dibromochloromethane	10.31	1.0	10	0	103	70.6	124	10.42	1.06	25	
Ethylbenzene	9.72	1.0	10	0	97.2	70.9	126	8.72	10.8	25	
Methylene chloride	11.49	1.0	10	0	115	66.3	130	11.39	0.874	25	
Tetrachloroethene	11.95	1.0	10	0	120	72.4	119	11.19	6.57	25	S
Toluene	9.93	1.0	10	0	99.3	71.8	116	9.43	5.17	25	
trans-1,2-Dichloroethene	11.59	1.0	10	0	116	70.3	120	11.1	4.32	25	
Trichloroethene	9.7	1.0	10	0	97	73	127	9.08	6.60	25	
Vinyl chloride	8.5	1.0	10	0	85	65.2	134	8.16	4.08	25	
Surr: 1,2-Dichloroethane-d4	48.66	5.0	50	0	97.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	45.2	5.0	50	0	90.4	76.5	125	0	0	25	
Surr: Toluene-d8	45.59	5.0	50	0	91.2	80.4	121	0	0	25	

Qualifiers:
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

ms	SeqNo: **2721493**	TestNo: **SW8260C**	RunNo: **176443**
	Samp ID: **191015078-001b**	Units: **µg/L**	Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.82	1.0	10	0	88.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.6	1.0	10	0	96	70.1	123	0	0		
1,1,2-Trichloroethane	9.57	1.0	10	0	95.7	72.1	119	0	0		
1,1-Dichloroethane	10.03	1.0	10	0	100	70.4	126	0	0		
1,1-Dichloroethene	11.14	1.0	10	0	111	70.2	125	0	0		
1,2,3-Trichloropropane	5.02	1.0	5	0	100	53.7	101	0	0		
1,2-Dichlorobenzene	8.63	1.0	10	0	86.3	70.2	123	0	0		
1,2-Dichloroethane	9.46	1.0	10	0	94.6	73.5	126	0	0		
1,3-Dichlorobenzene	8.34	1.0	10	0	83.4	70.4	124	0	0		
1,3-Dichloropropane	4.65	1.0	5	0	93	64	125	0	0		
1,4-Dichlorobenzene	8.09	1.0	10	0	80.9	70.8	127	0	0		
2-Butanone	8.67	5.0	10	0	86.7	60.5	123	0	0		
4-Methyl-2-pentanone	9.29	5.0	10	0	92.9	52.8	133	0	0		
Acetone	13.74	5.0	10	2.81	109	56.3	135	0	0		
Benzene	8.82	1.0	10	0	88.2	70.2	127	0	0		
Carbon disulfide	4.72	1.0	5	0	94.4	62.2	130	0	0		
Carbon tetrachloride	8.81	1.0	10	0	88.1	56.4	137	0	0		
Chlorobenzene	8.44	1.0	10	0	84.4	72.7	128	0	0		
Chloroethane	8.41	1.0	10	0	84.1	71.3	135	0	0		
Chloroform	9.4	1.0	10	0	94	70.2	125	0	0		
Dibromochloromethane	9.41	1.0	10	0	94.1	69.5	123	0	0		
Ethylbenzene	8.63	1.0	10	0	86.3	71.9	129	0	0		
Methylene chloride	10.5	1.0	10	0	105	65.3	123	0	0		
Tetrachloroethene	10.27	1.0	10	0.22	101	74.5	121	0	0		
Toluene	8.75	1.0	10	0	87.5	73	122	0	0		
trans-1,2-Dichloroethene	10.79	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	8.42	1.0	10	0	84.2	71.1	126	0	0		
Vinyl chloride	8.12	1.0	10	0	81.2	65	137	0	0		
Xylenes, Total	22.9	1.0	30	0	76.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.59	5.0	50	0	97.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.61	5.0	50	0	89.2	76.5	125	0	0		
Surr: Toluene-d8	45.86	5.0	50	0	91.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015002
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

msd

SeqNo: **2721494** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **191015078-001b** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.57	1.0	10	0	85.7	71.6	126	8.82	2.88	20.4	
1,1,2,2-Tetrachloroethane	9.84	1.0	10	0	98.4	70.1	123	9.6	2.47	18.6	
1,1,2-Trichloroethane	9.49	1.0	10	0	94.9	72.1	119	9.57	0.839	20	
1,1-Dichloroethane	9.9	1.0	10	0	99	70.4	126	10.03	1.30	19.2	
1,1-Dichloroethene	10.81	1.0	10	0	108	70.2	125	11.14	3.01	16.1	
1,2,3-Trichloropropane	5.09	1.0	5	0	102	53.7	101	5.02	1.38	20	S
1,2-Dichlorobenzene	9.12	1.0	10	0	91.2	70.2	123	8.63	5.52	17.9	
1,2-Dichloroethane	9.08	1.0	10	0	90.8	73.5	126	9.46	4.10	15.6	
1,3-Dichlorobenzene	8.72	1.0	10	0	87.2	70.4	124	8.34	4.45	14.3	
1,3-Dichloropropane	4.55	1.0	5	0	91	64	125	4.65	2.17	0	
1,4-Dichlorobenzene	8.64	1.0	10	0	86.4	70.8	127	8.09	6.58	14.4	
2-Butanone	8.86	5.0	10	0	88.6	60.5	123	8.67	2.17	15	
4-Methyl-2-pentanone	9.6	5.0	10	0	96	52.8	133	9.29	3.28	11.9	
Acetone	14.19	5.0	10	2.81	114	56.3	135	13.74	3.22	10.6	
Benzene	8.56	1.0	10	0	85.6	70.2	127	8.82	2.99	18.4	
Carbon disulfide	4.58	1.0	5	0	91.6	62.2	130	4.72	3.01	13.1	
Carbon tetrachloride	8.58	1.0	10	0	85.8	56.4	137	8.81	2.65	20.3	
Chlorobenzene	8.19	1.0	10	0	81.9	72.7	128	8.44	3.01	19.6	
Chloroethane	8.15	1.0	10	0	81.5	71.3	135	8.41	3.14	27.8	
Chloroform	9.32	1.0	10	0	93.2	70.2	125	9.4	0.855	20.3	
Dibromochloromethane	9.49	1.0	10	0	94.9	69.5	123	9.41	0.847	18.8	
Ethylbenzene	8.43	1.0	10	0	84.3	71.9	129	8.63	2.34	16.3	
Methylene chloride	10.52	1.0	10	0	105	65.3	123	10.5	0.190	21.4	
Tetrachloroethene	10.17	1.0	10	0.22	99.5	74.5	121	10.27	0.978	20.9	
Toluene	8.64	1.0	10	0	86.4	73	122	8.75	1.27	19.4	
trans-1,2-Dichloroethene	10.67	1.0	10	0	107	69.1	133	10.79	1.12	16.1	
Trichloroethene	8.44	1.0	10	0	84.4	71.1	126	8.42	0.237	16.6	
Vinyl chloride	7.75	1.0	10	0	77.5	65	137	8.12	4.66	20.5	
Xylenes, Total	22.75	1.0	30	0	75.8	72	130	22.9	0.657	16.1	
Surr: 1,2-Dichloroethane-d4	48.76	5.0	50	0	97.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	44.76	5.0	50	0	89.5	76.5	125	0	0	0	
Surr: Toluene-d8	45.68	5.0	50	0	91.4	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
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B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191015002

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Cochan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101419-01-SW-U-A-1	10/14/19	1030 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
002	101419-02-SW-A-A-1	10/14/19	1045 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
003	101419-03-SW-D-A-1	10/14/19	1105 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
004	101419-04-SW-B-A-1	10/14/19	1015 A	W		✓	2	PCBs
			A				2	VOCs
			A				1	TSS
005	101419-05-SW-B-A-1	10/14/19	1120 A	W		✓	1	TSS
006	101419-01-SW-U-A-3	10/14/19	1430 A	W		✓	2	PCBs

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/14/19 16:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/15/19 7:45 AM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled 4°C	Y ☒ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

Demo
191015002

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 19101500 2

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.hutler@aecom.com	229608

Samplers: (Signature) Patrick Gehan

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
006	101419-01-SW-U-A-3	10/14/19	1430	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	101419-TB01 Lot# VOA-F46.3			A P	TB			1	trip blank
008	101419-TB02 Lot# VOA-F46.3			A P	TB			1	trip blank
	J.M. 10/15/19			A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature) Patrick Gehan	**Received by: (Signature)** EOH	**Date/Time** 10/14/19 16:05
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature) EOH	**Received for Laboratory by:** J. M.	**Date/Time** 10/15/19 7:46 AM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc

191015002

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy



191015002

TAT: **2**

DateDue: 10/17/2019

10/15/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191015002-001	101419-01-SW-U-A-1	Water	10/14/2019	10/17/2019	C	B	A				
191015002-002	101419-02-SW-A-A-1	Water	10/14/2019	10/17/2019	C	B	A				
191015002-003	101419-03-SW-D-A-1	Water	10/14/2019	10/17/2019	C	B	A				
191015002-004	101419-04-SW-B-A-1	Water	10/14/2019	10/17/2019	C	B	A				
191015002-005	101419-05-SW-B-A-1	Water	10/14/2019	10/17/2019			A				
191015002-006	101419-01-SW-U-A-3	Water	10/14/2019	10/17/2019	C	B	A				
191015002-007	101419-TB01	Trip Blank	10/14/2019	10/17/2019		A					
191015002-008	101419-TB02	Trip Blank	10/14/2019	10/17/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/15/19 – 10/21/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 10/15/19 through 10/21/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were two exceedances of the water quality criteria (chlorobenzene). The chlorobenzene exceedances (18 µg/l [average of duplicate samples, 13 and 23 µg/l] and 11 µg/l vs threshold of 5 µg/l) on 10/15/19 and 10/17/19. Both exceedances was at the downstream background (Buoy 3) location. Both samples were collected approximately 1.25 hours before low tide. Additionally there was a dichlorobenzene sample (second of a duplicate pair on 10/15/19) that had a result greater than the guidance value (5.7 µg/l vs threshold of 5 µg/l). However, when the two results are averaged (4.0 µg/l + 5.7 µg/l = 9.7 µg/l / 2 = 4.85 µg/l), the result is below the guidance value.

Typically, field turbidity readings from the YSI EXO2 sonde were observed to be less than 10 NTU, however with the high river flows this week, there were turbidity values observed >200 NTU (maximum observed value of 220 NTU). The associated buoy turbidity mirrored the field readings with similar few spikes, but relatively low overall (typically less than 10 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically less than 20 mg/L, however due to the high flows, there were several TSS readings >100 mg/L (with a maximum observed value of 269 mg/L). When the flows subsided on 10/21/19, the TSS values returned to normal. Dredging activities were not conducted on 10/18/19 while equipment repairs were being made.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE ?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
101519-03-SW-D-B-1	12:05	BENZENE	N	ug/l	10	3.8			D	17.5	5.53	-1.04	Low Tide	9.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-03-SW-D-B-1	12:05	CHLOROBENZENE	N	ug/l	5	13		x	D	17.5	5.53	-1.04	Low Tide	9.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-03-SW-D-B-1	12:05	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	4			D	17.5	5.53	-1.04	Low Tide	9.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-03-SW-D-B-2	12:15	BENZENE	N	ug/l	10	4.6			D	17.5	5.14	-0.79	Low Tide	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-03-SW-D-B-2	12:15	CHLOROBENZENE	N	ug/l	5	23		x	D	17.5	5.14	-0.79	Low Tide	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-03-SW-D-B-2	12:15	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	5.7		x[1]	D	17.5	5.14	-0.79	Low Tide	10.9	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101519-04-SW-B-A-1	11:15	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.3			B	13	3.41	-0.93	Low Tide	6.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101619-01-SW-U-C-1	10:55	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.3			U	3	2.79	0.1	Outgoing Tide (Ebb)	4.2	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
101619-03-SW-D-A-1	11:25	AROCLOR-1242	N	ug/l	0.2	0.033	J		D	32	3.55	-0.26	Outgoing Tide (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
101619-03-SW-D-A-1	11:25	BENZENE	N	ug/l	10	0.2	J		D	32	3.55	-0.26	Outgoing Tide (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
101619-03-SW-D-A-1	11:25	CHLOROBENZENE	N	ug/l	5	1.6			D	32	3.55	-0.26	Outgoing Tide (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
101619-03-SW-D-A-1	11:25	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.4			D	32	3.55	-0.26	Outgoing Tide (Ebb)	6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
101719-03-SW-D-B-1	13:25	BENZENE	N	ug/l	10	0.7	J		D	17.5	54.11	1.73	Outgoing Tide (Ebb)	62.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101719-03-SW-D-B-1	13:25	CHLOROBENZENE	N	ug/l	5	11		x	D	17.5	54.11	1.73	Outgoing Tide (Ebb)	62.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101719-03-SW-D-B-1	13:25	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	3.8			D	17.5	54.11	1.73	Outgoing Tide (Ebb)	62.6	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101719-04-SW-B-A-1	12:40	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			B	9	50.30	1.44	Outgoing Tide (Ebb)	94.8	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
101819-02-SW-A-A-1	13:10	BENZENE	N	ug/l	10	0.2	J		A	17	143.26	1.31	Outgoing Tide (Ebb)	220	Moon Pool, Double Silt Curtain, Bubble Curtain	N/A
101819-02-SW-A-A-1	13:10	CHLOROBENZENE	N	ug/l	5	1.6			A	17	143.26	1.31	Outgoing Tide (Ebb)	220	Moon Pool, Double Silt Curtain, Bubble Curtain	N/A
101819-02-SW-A-A-1	13:10	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.4			A	17	143.26	1.31	Outgoing Tide (Ebb)	220	Moon Pool, Double Silt Curtain, Bubble Curtain	N/A
101819-03-SW-D-A-1	13:35	CHLOROBENZENE	N	ug/l	5	0.7	J		D	29	121.85	1.23	Outgoing Tide (Ebb)	161	Moon Pool, Double Silt Curtain, Bubble Curtain	N/A
101819-03-SW-D-A-1	13:35	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.3			D	29	121.85	1.23	Outgoing Tide (Ebb)	161	Moon Pool, Double Silt Curtain, Bubble Curtain	N/A

1 - Not an exceedance, when averaged with its duplicate sample. For presentation only.
J - Analyte detected below quantitation limit

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 17, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191015078
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/15/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *17-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191015078	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-01-SW-U-A-1
Collection Date: 10/15/2019
Lab Sample ID: 191015078-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Acetone	**2.8**	5.0	JS+	µg/L	1	10/16/2019 7:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 7:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 7:56:00 PM
Tetrachloroethene	**0.2**	1.0	J	µg/L	1	10/16/2019 7:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 7:56:00 PM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	10/16/2019 7:56:00 PM
Surr: 4-Bromofluorobenzene	**89.7**	76.5-125		%REC	1	10/16/2019 7:56:00 PM
Surr: Toluene-d8	**91.8**	80.4-121		%REC	1	10/16/2019 7:56:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.3**	1.0		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-02-SW-A-A-1
Collection Date: 10/15/2019
Lab Sample ID: 191015078-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Acetone	**3.0**	5.0	JS+	µg/L	1	10/16/2019 8:18:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 8:18:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 8:18:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 8:18:00 PM
Surr: 1,2-Dichloroethane-d4	**92.9**	80.9-122		%REC	1	10/16/2019 8:18:00 PM
Surr: 4-Bromofluorobenzene	**87.3**	76.5-125		%REC	1	10/16/2019 8:18:00 PM
Surr: Toluene-d8	**93.6**	80.4-121		%REC	1	10/16/2019 8:18:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**7.2**	1.1		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-03-SW-D-B-1
Collection Date: 10/15/2019
Lab Sample ID: 191015078-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Acetone	**4.2**	5.0	JS+	µg/L	1	10/16/2019 8:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,2-Dichloroethane	**2.9**	1.0		µg/L	1	10/16/2019 8:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 8:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Benzene	**3.8**	1.0		µg/L	1	10/16/2019 8:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 8:39:00 PM
Tetrachloroethene	**0.2**	1.0	J	µg/L	1	10/16/2019 8:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Toluene	**0.3**	1.0	J	µg/L	1	10/16/2019 8:39:00 PM
Chlorobenzene	**13**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/16/2019 8:39:00 PM
1,2-Dichlorobenzene	**3.2**	1.0		µg/L	1	10/16/2019 8:39:00 PM
1,4-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	10/16/2019 8:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 8:39:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	10/16/2019 8:39:00 PM
Surr: 4-Bromofluorobenzene	**89.4**	76.5-125		%REC	1	10/16/2019 8:39:00 PM
Surr: Toluene-d8	**90.0**	80.4-121		%REC	1	10/16/2019 8:39:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.1**	1.0		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-04-SW-B-A-1
Collection Date: 10/15/2019
Lab Sample ID: 191015078-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Acetone	**ND**	5.0		µg/L	1	10/16/2019 9:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 9:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 9:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/16/2019 9:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 9:01:00 PM
Surr: 1,2-Dichloroethane-d4	**94.9**	80.9-122		%REC	1	10/16/2019 9:01:00 PM
Surr: 4-Bromofluorobenzene	**91.1**	76.5-125		%REC	1	10/16/2019 9:01:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	10/16/2019 9:01:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.5**	1.1		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101519-05-SW-B-A-1
Work Order:	**191015078**	**Collection Date:**	10/15/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191015078-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/16/2019)						
TSS (Residue, Non-Filterable)	**8.3**	1.0		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-03-SW-D-B-2
Collection Date: 10/15/2019
Lab Sample ID: 191015078-006
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Acetone	**ND**	5.0		µg/L	1	10/16/2019 9:22:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,2-Dichloroethane	**3.1**	1.0		µg/L	1	10/16/2019 9:22:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 9:22:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Benzene	**4.6**	1.0		µg/L	1	10/16/2019 9:22:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 9:22:00 PM
Tetrachloroethene	**0.2**	1.0	J	µg/L	1	10/16/2019 9:22:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Toluene	**0.3**	1.0	J	µg/L	1	10/16/2019 9:22:00 PM
Chlorobenzene	**23**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,3-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	10/16/2019 9:22:00 PM
1,2-Dichlorobenzene	**4.6**	1.0		µg/L	1	10/16/2019 9:22:00 PM
1,4-Dichlorobenzene	**0.7**	1.0	J	µg/L	1	10/16/2019 9:22:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 9:22:00 PM
Surr: 1,2-Dichloroethane-d4	**96.1**	80.9-122		%REC	1	10/16/2019 9:22:00 PM
Surr: 4-Bromofluorobenzene	**90.5**	76.5-125		%REC	1	10/16/2019 9:22:00 PM
Surr: Toluene-d8	**91.2**	80.4-121		%REC	1	10/16/2019 9:22:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/16/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**10.9**	1.1		mg/L	1	10/16/2019

Adirondack Environmental Services, Inc

Date: *17-Oct-19*

CLIENT: AECOM Environment
Work Order: **191015078**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101519-TB01
Collection Date: 10/15/2019
Lab Sample ID: 191015078-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Methylene chloride	**0.7**	1.0	J	µg/L	1	10/16/2019 9:44:00 PM
Acetone	**4.9**	5.0	JS+	µg/L	1	10/16/2019 9:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/16/2019 9:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/16/2019 9:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Benzene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/16/2019 9:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Toluene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	10/16/2019 9:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/16/2019 9:44:00 PM
Surr: 1,2-Dichloroethane-d4	**93.8**	80.9-122		%REC	1	10/16/2019 9:44:00 PM
Surr: 4-Bromofluorobenzene	**86.6**	76.5-125		%REC	1	10/16/2019 9:44:00 PM
Surr: Toluene-d8	**90.4**	80.4-121		%REC	1	10/16/2019 9:44:00 PM

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76167

LCS

SeqNo: **2721818** **PrepDate:10/16/2019** TestNo: **SM2540D** RunNo: **176461**
Samp ID: **LCS-76167** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	512	40.0	496	0	103	86.5	114	0	0		

DUP

SeqNo: **2721828** **PrepDate:10/16/2019** TestNo: **SM2540D** RunNo: **176461**
Samp ID: **191016037-001A** **PrepRef:** Units: **mg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	368	40.0	0	0	0	0	0	392	6.32	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

MBLK

SeqNo: **2721465** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	1.0	0	0	0	0	0	0	0		
1,3-Dichloropropane	ND	1.0	0	0	0	0	0	0	0		
Vinyl chloride	ND	1.0	0	0	0	0	0	0	0		
Chloroethane	ND	1.0	0	0	0	0	0	0	0		
Methylene chloride	ND	1.0	0	0	0	0	0	0	0		
Acetone	ND	5.0	0	0	0	0	0	0	0		
Carbon disulfide	ND	1.0	0	0	0	0	0	0	0		
1,1-Dichloroethene	ND	1.0	0	0	0	0	0	0	0		
1,1-Dichloroethane	ND	1.0	0	0	0	0	0	0	0		
trans-1,2-Dichloroethene	ND	1.0	0	0	0	0	0	0	0		
Chloroform	ND	1.0	0	0	0	0	0	0	0		
1,2-Dichloroethane	0.14	1.0	0	0	0	0	0	0	0		J
2-Butanone	ND	5.0	0	0	0	0	0	0	0		
1,1,1-Trichloroethane	ND	1.0	0	0	0	0	0	0	0		
Carbon tetrachloride	ND	1.0	0	0	0	0	0	0	0		
Trichloroethene	ND	1.0	0	0	0	0	0	0	0		
Dibromochloromethane	ND	1.0	0	0	0	0	0	0	0		
1,1,2-Trichloroethane	ND	1.0	0	0	0	0	0	0	0		
Benzene	ND	1.0	0	0	0	0	0	0	0		
4-Methyl-2-pentanone	ND	5.0	0	0	0	0	0	0	0		
Tetrachloroethene	0.28	1.0	0	0	0	0	0	0	0		J
1,1,2,2-Tetrachloroethane	ND	1.0	0	0	0	0	0	0	0		
Toluene	ND	1.0	0	0	0	0	0	0	0		
Chlorobenzene	ND	1.0	0	0	0	0	0	0	0		
Ethylbenzene	0.26	1.0	0	0	0	0	0	0	0		J
1,3-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
1,2-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
1,4-Dichlorobenzene	ND	1.0	0	0	0	0	0	0	0		
Xylenes, Total	0.36	1.0	0	0	0	0	0	0	0		J
Surr: 1,2-Dichloroethane-d4	47.78	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.9	5.0	50	0	95.8	76.5	125	0	0		
Surr: Toluene-d8	46.67	5.0	50	0	93.3	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

lcs

SeqNo: **2721463** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.19	1.0	10	0	91.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.25	1.0	10	0	103	72.3	118	0	0		
1,1,2-Trichloroethane	10.16	1.0	10	0	102	73.1	123	0	0		
1,1-Dichloroethane	10.71	1.0	10	0	107	73.2	127	0	0		
1,1-Dichloroethene	11.16	1.0	10	0	112	70.3	128	0	0		
1,2,3-Trichloropropane	5.23	1.0	5	0	105	68.4	115	0	0		
1,2-Dichlorobenzene	9.25	1.0	10	0	92.5	71	124	0	0		
1,2-Dichloroethane	10.17	1.0	10	0	102	72.5	127	0	0		
1,3-Dichlorobenzene	9	1.0	10	0	90	72.2	121	0	0		
1,3-Dichloropropane	5.2	1.0	5	0	104	76	122	0	0		
1,4-Dichlorobenzene	9.08	1.0	10	0	90.8	71.7	127	0	0		
2-Butanone	10.02	5.0	10	0	100	65.1	132	0	0		
4-Methyl-2-pentanone	10.32	5.0	10	0	103	68.7	118	0	0		
Acetone	15.79	5.0	10	0	158	69.2	133	0	0		S
Benzene	9.4	1.0	10	0	94	71.2	122	0	0		
Carbon disulfide	4.9	1.0	5	0	98	67.8	134	0	0		
Carbon tetrachloride	8.87	1.0	10	0	88.7	74.5	122	0	0		
Chlorobenzene	8.53	1.0	10	0	85.3	72.7	124	0	0		
Chloroethane	8.68	1.0	10	0	86.8	72.3	136	0	0		
Chloroform	10.23	1.0	10	0	102	71.6	133	0	0		
Dibromochloromethane	10.42	1.0	10	0	104	70.6	124	0	0		
Ethylbenzene	8.72	1.0	10	0	87.2	70.9	126	0	0		
Methylene chloride	11.39	1.0	10	0	114	66.3	130	0	0		
Tetrachloroethene	11.19	1.0	10	0	112	72.4	119	0	0		
Toluene	9.43	1.0	10	0	94.3	71.8	116	0	0		
trans-1,2-Dichloroethene	11.1	1.0	10	0	111	70.3	120	0	0		
Trichloroethene	9.08	1.0	10	0	90.8	73	127	0	0		
Vinyl chloride	8.16	1.0	10	0	81.6	65.2	134	0	0		
Xylenes, Total	23.78	1.0	30	0	79.3	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.73	5.0	50	0	95.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.29	5.0	50	0	86.6	76.5	125	0	0		
Surr: Toluene-d8	45.81	5.0	50	0	91.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

lcsd

SeqNo: **2721464** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.73	1.0	10	0	97.3	72.3	121	9.19	5.71	25	
1,1,2,2-Tetrachloroethane	10.3	1.0	10	0	103	72.3	118	10.25	0.487	25	
1,1,2-Trichloroethane	9.94	1.0	10	0	99.4	73.1	123	10.16	2.19	25	
1,1-Dichloroethane	10.89	1.0	10	0	109	73.2	127	10.71	1.67	25	
1,1-Dichloroethene	12.22	1.0	10	0	122	70.3	128	11.16	9.07	25	
1,2,3-Trichloropropane	5.35	1.0	5	0	107	68.4	115	5.23	2.27	25	
1,2-Dichlorobenzene	9.65	1.0	10	0	96.5	71	124	9.25	4.23	25	
1,2-Dichloroethane	10.27	1.0	10	0	103	72.5	127	10.17	0.978	25	
1,3-Dichlorobenzene	9.77	1.0	10	0	97.7	72.2	121	9	8.20	25	
1,3-Dichloropropane	4.84	1.0	5	0	96.8	76	122	5.2	7.17	0	
1,4-Dichlorobenzene	9.84	1.0	10	0	98.4	71.7	127	9.08	8.03	25	
2-Butanone	9.78	5.0	10	0	97.8	65.1	132	10.02	2.42	25	
4-Methyl-2-pentanone	9.9	5.0	10	0	99	68.7	118	10.32	4.15	25	
Acetone	14.78	5.0	10	0	148	69.2	133	15.79	6.61	25	S
Benzene	9.73	1.0	10	0	97.3	71.2	122	9.4	3.45	25	
Carbon disulfide	5.15	1.0	5	0	103	67.8	134	4.9	4.98	25	
Carbon tetrachloride	9.66	1.0	10	0	96.6	74.5	122	8.87	8.53	25	
Chlorobenzene	9.26	1.0	10	0	92.6	72.7	124	8.53	8.21	25	
Chloroethane	8.93	1.0	10	0	89.3	72.3	136	8.68	2.84	25	
Chloroform	10.21	1.0	10	0	102	71.6	133	10.23	0.196	25	
Dibromochloromethane	10.31	1.0	10	0	103	70.6	124	10.42	1.06	25	
Ethylbenzene	9.72	1.0	10	0	97.2	70.9	126	8.72	10.8	25	
Methylene chloride	11.49	1.0	10	0	115	66.3	130	11.39	0.874	25	
Tetrachloroethene	11.95	1.0	10	0	120	72.4	119	11.19	6.57	25	S
Toluene	9.93	1.0	10	0	99.3	71.8	116	9.43	5.17	25	
trans-1,2-Dichloroethene	11.59	1.0	10	0	116	70.3	120	11.1	4.32	25	
Trichloroethene	9.7	1.0	10	0	97	73	127	9.08	6.60	25	
Vinyl chloride	8.5	1.0	10	0	85	65.2	134	8.16	4.08	25	
Surr: 1,2-Dichloroethane-d4	48.66	5.0	50	0	97.3	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	45.2	5.0	50	0	90.4	76.5	125	0	0	25	
Surr: Toluene-d8	45.59	5.0	50	0	91.2	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

ms	SeqNo: **2721493**	TestNo: **SW8260C**	RunNo: **176443**
	Samp ID: **191015078-001b (101519-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.82	1.0	10	0	88.2	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.6	1.0	10	0	96	70.1	123	0	0		
1,1,2-Trichloroethane	9.57	1.0	10	0	95.7	72.1	119	0	0		
1,1-Dichloroethane	10.03	1.0	10	0	100	70.4	126	0	0		
1,1-Dichloroethene	11.14	1.0	10	0	111	70.2	125	0	0		
1,2,3-Trichloropropane	5.02	1.0	5	0	100	53.7	101	0	0		
1,2-Dichlorobenzene	8.63	1.0	10	0	86.3	70.2	123	0	0		
1,2-Dichloroethane	9.46	1.0	10	0	94.6	73.5	126	0	0		
1,3-Dichlorobenzene	8.34	1.0	10	0	83.4	70.4	124	0	0		
1,3-Dichloropropane	4.65	1.0	5	0	93	64	125	0	0		
1,4-Dichlorobenzene	8.09	1.0	10	0	80.9	70.8	127	0	0		
2-Butanone	8.67	5.0	10	0	86.7	60.5	123	0	0		
4-Methyl-2-pentanone	9.29	5.0	10	0	92.9	52.8	133	0	0		
Acetone	13.74	5.0	10	2.81	109	56.3	135	0	0		
Benzene	8.82	1.0	10	0	88.2	70.2	127	0	0		
Carbon disulfide	4.72	1.0	5	0	94.4	62.2	130	0	0		
Carbon tetrachloride	8.81	1.0	10	0	88.1	56.4	137	0	0		
Chlorobenzene	8.44	1.0	10	0	84.4	72.7	128	0	0		
Chloroethane	8.41	1.0	10	0	84.1	71.3	135	0	0		
Chloroform	9.4	1.0	10	0	94	70.2	125	0	0		
Dibromochloromethane	9.41	1.0	10	0	94.1	69.5	123	0	0		
Ethylbenzene	8.63	1.0	10	0	86.3	71.9	129	0	0		
Methylene chloride	10.5	1.0	10	0	105	65.3	123	0	0		
Tetrachloroethene	10.27	1.0	10	0.22	101	74.5	121	0	0		
Toluene	8.75	1.0	10	0	87.5	73	122	0	0		
trans-1,2-Dichloroethene	10.79	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	8.42	1.0	10	0	84.2	71.1	126	0	0		
Vinyl chloride	8.12	1.0	10	0	81.2	65	137	0	0		
Xylenes, Total	22.9	1.0	30	0	76.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.59	5.0	50	0	97.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.61	5.0	50	0	89.2	76.5	125	0	0		
Surr: Toluene-d8	45.86	5.0	50	0	91.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191015078
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176443

msd

SeqNo: **2721494** TestNo: **SW8260C** RunNo: **176443**
Samp ID: **191015078-001b (101519-01-SW-U-** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.57	1.0	10	0	85.7	71.6	126	8.82	2.88	20.4	
1,1,2,2-Tetrachloroethane	9.84	1.0	10	0	98.4	70.1	123	9.6	2.47	18.6	
1,1,2-Trichloroethane	9.49	1.0	10	0	94.9	72.1	119	9.57	0.839	20	
1,1-Dichloroethane	9.9	1.0	10	0	99	70.4	126	10.03	1.30	19.2	
1,1-Dichloroethene	10.81	1.0	10	0	108	70.2	125	11.14	3.01	16.1	
1,2,3-Trichloropropane	5.09	1.0	5	0	102	53.7	101	5.02	1.38	20	S
1,2-Dichlorobenzene	9.12	1.0	10	0	91.2	70.2	123	8.63	5.52	17.9	
1,2-Dichloroethane	9.08	1.0	10	0	90.8	73.5	126	9.46	4.10	15.6	
1,3-Dichlorobenzene	8.72	1.0	10	0	87.2	70.4	124	8.34	4.45	14.3	
1,3-Dichloropropane	4.55	1.0	5	0	91	64	125	4.65	2.17	0	
1,4-Dichlorobenzene	8.64	1.0	10	0	86.4	70.8	127	8.09	6.58	14.4	
2-Butanone	8.86	5.0	10	0	88.6	60.5	123	8.67	2.17	15	
4-Methyl-2-pentanone	9.6	5.0	10	0	96	52.8	133	9.29	3.28	11.9	
Acetone	14.19	5.0	10	2.81	114	56.3	135	13.74	3.22	10.6	
Benzene	8.56	1.0	10	0	85.6	70.2	127	8.82	2.99	18.4	
Carbon disulfide	4.58	1.0	5	0	91.6	62.2	130	4.72	3.01	13.1	
Carbon tetrachloride	8.58	1.0	10	0	85.8	56.4	137	8.81	2.65	20.3	
Chlorobenzene	8.19	1.0	10	0	81.9	72.7	128	8.44	3.01	19.6	
Chloroethane	8.15	1.0	10	0	81.5	71.3	135	8.41	3.14	27.8	
Chloroform	9.32	1.0	10	0	93.2	70.2	125	9.4	0.855	20.3	
Dibromochloromethane	9.49	1.0	10	0	94.9	69.5	123	9.41	0.847	18.8	
Ethylbenzene	8.43	1.0	10	0	84.3	71.9	129	8.63	2.34	16.3	
Methylene chloride	10.52	1.0	10	0	105	65.3	123	10.5	0.190	21.4	
Tetrachloroethene	10.17	1.0	10	0.22	99.5	74.5	121	10.27	0.978	20.9	
Toluene	8.64	1.0	10	0	86.4	73	122	8.75	1.27	19.4	
trans-1,2-Dichloroethene	10.67	1.0	10	0	107	69.1	133	10.79	1.12	16.1	
Trichloroethene	8.44	1.0	10	0	84.4	71.1	126	8.42	0.237	16.6	
Vinyl chloride	7.75	1.0	10	0	77.5	65	137	8.12	4.66	20.5	
Xylenes, Total	22.75	1.0	30	0	75.8	72	130	22.9	0.657	16.1	
Surr: 1,2-Dichloroethane-d4	48.76	5.0	50	0	97.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	44.76	5.0	50	0	89.5	76.5	125	0	0	0	
Surr: Toluene-d8	45.68	5.0	50	0	91.4	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191015078

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gelon	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101519-01-SW-U-A-1	10/15/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	101519-02-SW-A-A-1	10/15/19	1145	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	101519-03-SW-D-B-1	10/15/19	1205	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	101519-04-SW-B-A-1	10/15/19	1115	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	101519-05-SW-B-A-1	10/15/19	1220	A	W		✓	1	TSS
006	101519-03-SW-D-B-2	10/15/19	1215	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	101519-TB01 Lot# VOA-F463			A	TB		#	1	trip blank
	J.M. 10/15/19			P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	EOH	10/15/19 16:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
EOH	J. M.	10/15/19 4:37pm

Temperature: Ambient or (Chilled) Notes: 6 °C

AES Bottles: (Y) ☒ (N) ☐

Properly Preserved: (Y) N Notes:_____

Received Within Holding Times: (Y) N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

Demo
191015078

Adirondack Environmental Services, Inc

191015078

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Demo

191015078

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project#
ClientReferenceNo: 60323713

DateDue: 10/17/2019

QClevel: STD+

☐ Hard Copy

10/15/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191015078-001	101519-01-SW-U-A-1	Water	10/15/2019	10/17/2019	B	A					
191015078-002	101519-02-SW-A-A-1	Water	10/15/2019	10/17/2019	B	A					
191015078-003	101519-03-SW-D-B-1	Water	10/15/2019	10/17/2019	B	A					
191015078-004	101519-04-SW-B-A-1	Water	10/15/2019	10/17/2019	B	A					
191015078-005	101519-05-SW-B-A-1	Water	10/15/2019	10/17/2019		A					
191015078-006	101519-03-SW-D-B-2	Water	10/15/2019	10/17/2019	B	A					
191015078-007	101519-TB01	Trip Blank	10/15/2019	10/17/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 18, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191016069
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/16/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*18-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	191016069		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-01-SW-U-C-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
PCB, Total	**ND**	0.065		µg/L	1	10/16/2019 6:40:46 PM
Surr: Decachlorobiphenyl	**70.4**	57.1-135		%REC	1	10/16/2019 6:40:46 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Acetone	**ND**	5.0		µg/L	1	10/17/2019 2:33:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,2-Dichloroethane	**0.2**	1.0	J	µg/L	1	10/17/2019 2:33:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/17/2019 2:33:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Benzene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/17/2019 2:33:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Toluene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-01-SW-U-C-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/17/2019 2:33:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/17/2019 2:33:00 PM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/17/2019 2:33:00 PM
Surr: 4-Bromofluorobenzene	**85.6**	76.5-125		%REC	1	10/17/2019 2:33:00 PM
Surr: Toluene-d8	**97.7**	80.4-121		%REC	1	10/17/2019 2:33:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**4.2**	1.1		mg/L	1	10/17/2019

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-02-SW-A-C-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
PCB, Total	**ND**	0.065		µg/L	1	10/16/2019 6:54:07 PM
Surr: Decachlorobiphenyl	**77.8**	57.1-135		%REC	1	10/16/2019 6:54:07 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Acetone	**ND**	5.0		µg/L	1	10/17/2019 4:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/17/2019 4:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/17/2019 4:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Benzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/17/2019 4:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Toluene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-02-SW-A-C-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/17/2019 4:00:00 PM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	10/17/2019 4:00:00 PM
Surr: 4-Bromofluorobenzene	**88.8**	76.5-125		%REC	1	10/17/2019 4:00:00 PM
Surr: Toluene-d8	**97.6**	80.4-121		%REC	1	10/17/2019 4:00:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/17/2019)						
TSS (Residue, Non-Filterable)	**6.7**	1.1		mg/L	1	10/17/2019

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-03-SW-D-A-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1242	**0.033**	0.065	J	µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/16/2019 7:07:28 PM
PCB, Total	**0.033**	0.065	J	µg/L	1	10/16/2019 7:07:28 PM
Surr: Decachlorobiphenyl	**64.8**	57.1-135		%REC	1	10/16/2019 7:07:28 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Acetone	**ND**	5.0		µg/L	1	10/17/2019 4:21:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/17/2019 4:21:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	10/17/2019 4:21:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/17/2019 4:21:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Toluene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Chlorobenzene	**1.6**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Ethylbenzene	**0.3**	1.0	J	µg/L	1	10/17/2019 4:21:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-03-SW-D-A-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	10/17/2019 4:21:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/17/2019 4:21:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/17/2019 4:21:00 PM
Surr: 4-Bromofluorobenzene	**87.7**	76.5-125		%REC	1	10/17/2019 4:21:00 PM
Surr: Toluene-d8	**96.1**	80.4-121		%REC	1	10/17/2019 4:21:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.1**	1.0		mg/L	1	10/17/2019

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT: AECOM Environment
Work Order: **191016069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101619-04-SW-B-A-1
Collection Date: 10/16/2019
Lab Sample ID: 191016069-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/16/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
PCB, Total	**ND**	0.065		µg/L	1	10/16/2019 7:20:51 PM
Surr: Decachlorobiphenyl	**75.6**	57.1-135		%REC	1	10/16/2019 7:20:51 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Acetone	**ND**	5.0		µg/L	1	10/17/2019 4:43:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/17/2019 4:43:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Benzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/17/2019 4:43:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Toluene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-04-SW-B-A-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/17/2019 4:43:00 PM
Surr: 1,2-Dichloroethane-d4	**98.5**	80.9-122		%REC	1	10/17/2019 4:43:00 PM
Surr: 4-Bromofluorobenzene	**83.8**	76.5-125		%REC	1	10/17/2019 4:43:00 PM
Surr: Toluene-d8	**96.4**	80.4-121		%REC	1	10/17/2019 4:43:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/17/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**6.0**	1.1		mg/L	1	10/17/2019

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101619-05-SW-B-A-1
Work Order:	**191016069**	**Collection Date:**	10/16/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191016069-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/17/2019)						
TSS (Residue, Non-Filterable)	**6.9**	1.1		mg/L	1	10/17/2019

Adirondack Environmental Services, Inc

Date: *18-Oct-19*

CLIENT: AECOM Environment
Work Order: **191016069**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101619-TB01
Collection Date: 10/16/2019
Lab Sample ID: 191016069-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**1.3**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Methylene chloride	**1.2**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Acetone	**5.2**	5.0		µg/L	1	10/17/2019 5:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/17/2019 5:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Benzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/17/2019 5:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Toluene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/17/2019 5:05:00 PM
Surr: 1,2-Dichloroethane-d4	**96.1**	80.9-122		%REC	1	10/17/2019 5:05:00 PM
Surr: 4-Bromofluorobenzene	**89.4**	76.5-125		%REC	1	10/17/2019 5:05:00 PM
Surr: Toluene-d8	**98.0**	80.4-121		%REC	1	10/17/2019 5:05:00 PM

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76162

MBLK

SeqNo: **2721323** PrepDate:**10/16/2019** TestNo: **SW8082A** RunNo: **176436**
Samp ID: **MB-76162** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0948	0.0100	0.1	0	94.8	57.1	135	0	0		

LCS

SeqNo: **2721324** PrepDate:**10/16/2019** TestNo: **SW8082A** RunNo: **176436**
Samp ID: **LCS-76162** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5472	0.0650	0.5	0	109	60	140	0	0		
PCB, Total	0.5472	0.0650	0.5	0	109	60	140	0	0		
Surr: Decachlorobiphenyl	0.0776	0.0100	0.1	0	77.6	57.1	135	0	0		

DUP

SeqNo: **2721325** PrepDate:**10/16/2019** TestNo: **SW8082A** RunNo: **176436**
Samp ID: **191015002-003** PrepRef: Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1221	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1232	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1242	0.1502	0.0650	0	0	0	0	0	0.1788	17.4	25	
Aroclor 1248	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1254	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1260	ND	0.0650	0	0	0	0	0	0	0	25	
Aroclor 1262	ND	0.0650	0	0	0	0	0	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76162

DUP

SeqNo: **2721325** **PrepDate:10/16/2019** TestNo: **SW8082A** RunNo: **176436**
Samp ID: **191015002-003** **PrepRef:** Units: **µg/L** Analysis Date: **10/16/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1268	ND	0.0650	0	0	0	0	0	0	0	25	
PCB, Total	0.1502	0.0650	0	0	0	0	0	0.1788	17.4	25	
Surr: Decachlorobiphenyl	0.0802	0.0100	0.1	0	80.2	0	0	0	0	0	S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76196

LCS				
SeqNo: **2722371**	**PrepDate:10/17/2019**	TestNo: **SM2540D**	RunNo: **176502**
Samp ID: **LCS-76196**	**PrepRef:(Gen Prep)**	Units: **mg/L**	Analysis Date: **10/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	516	40.0	496	0	104	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176460

mblk

SeqNo: **2721791** TestNo: **SW8260C** RunNo: **176460**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	0.58	5.0									J
Surr: 1,2-Dichloroethane-d4	48.53	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.03	5.0	50	0	92.1	76.5	125	0	0		
Surr: Toluene-d8	48.83	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176460

lcs

SeqNo: **2721774** TestNo: **SW8260C** RunNo: **176460**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.1	5.0	10	0	101	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	12.04	5.0	10	0	120	72.3	118	0	0		S
1,1,2-Trichloroethane	11.33	5.0	10	0	113	73.1	123	0	0		
1,1-Dichloroethane	10.58	5.0	10	0	106	73.2	127	0	0		
1,1-Dichloroethene	11.8	5.0	10	0	118	70.3	128	0	0		
1,2,3-Trichloropropane	6.13	5.0	5	0	123	68.4	115	0	0		S
1,2-Dichloroethane	10.02	5.0	10	0	100	72.5	127	0	0		
1,3-Dichlorobenzene	10.22	5.0	10	0	102	72.2	121	0	0		
1,3-Dichloropropane	5.55	5.0	5	0	111	76	122	0	0		
1,4-Dichlorobenzene	10.15	5.0	10	0	102	71.7	127	0	0		
2-Butanone	10.53	10	10	0	105	65.1	132	0	0		
4-Methyl-2-pentanone	11.65	10	10	0	116	68.7	118	0	0		
Acetone	14.53	10	10	0	145	69.2	133	0	0		S
Benzene	10.1	5.0	10	0	101	71.2	122	0	0		
Carbon disulfide	4.84	5.0	5	0	96.8	67.8	134	0	0		J
Carbon tetrachloride	9.98	5.0	10	0	99.8	74.5	122	0	0		
Chlorobenzene	9.92	5.0	10	0	99.2	72.7	124	0	0		
Chloroethane	7.71	10	10	0	77.1	72.3	136	0	0		J
Chloroform	10.73	5.0	10	0	107	71.6	133	0	0		
Dibromochloromethane	11.59	5.0	10	0	116	70.6	124	0	0		
Ethylbenzene	10.22	5.0	10	0	102	70.9	126	0	0		
Methylene chloride	10.73	5.0	10	0	107	66.3	130	0	0		
Tetrachloroethene	12.1	5.0	10	0	121	72.4	119	0	0		S
Toluene	10.32	5.0	10	0	103	71.8	116	0	0		
trans-1,2-Dichloroethene	11.36	5.0	10	0	114	70.3	120	0	0		
Trichloroethene	10.02	5.0	10	0	100	73	127	0	0		
Vinyl chloride	7.3	10	10	0	73	65.2	134	0	0		J
Xylenes, Total	28.77	5.0	30	0	95.9	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.62	5.0	50	0	99.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.44	5.0	50	0	86.9	76.5	125	0	0		
Surr: Toluene-d8	48.63	5.0	50	0	97.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176460

ms

SeqNo: **2722174** TestNo: **SW8260C** RunNo: **176460**
Samp ID: **191016070-002a** Units: **µg/L** Analysis Date: **10/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.05	5.0	10	0	90.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.82	5.0	10	0	98.2	70.1	123	0	0		
1,1,2-Trichloroethane	9.57	5.0	10	0	95.7	72.1	119	0	0		
1,1-Dichloroethane	9.56	5.0	10	0	95.6	70.4	126	0	0		
1,1-Dichloroethene	10.78	5.0	10	0	108	70.2	125	0	0		
1,2,3-Trichloropropane	5.22	5.0	5	0	104	53.7	101	0	0		S
1,2-Dichloroethane	36.62	5.0	10	26.99	96.3	73.5	126	0	0		
1,3-Dichlorobenzene	9.8	5.0	10	0	98	70.4	124	0	0		
1,3-Dichloropropane	4.49	5.0	5	0	89.8	64	125	0	0		J
1,4-Dichlorobenzene	9.75	5.0	10	0	97.5	70.8	127	0	0		
2-Butanone	11.24	10	10	0	112	60.5	123	0	0		
4-Methyl-2-pentanone	10.18	10	10	0	102	52.8	133	0	0		
Acetone	56.19	10	10	48.82	73.7	56.3	135	0	0		
Benzene	21.36	5.0	10	12.03	93.3	70.2	127	0	0		
Carbon disulfide	4.82	5.0	5	0	96.4	62.2	130	0	0		J
Carbon tetrachloride	9.32	5.0	10	0	93.2	56.4	137	0	0		
Chlorobenzene	50.15	5.0	10	43.09	70.6	72.7	128	0	0		S
Chloroethane	7.85	10	10	0	78.5	71.3	135	0	0		J
Chloroform	10.39	5.0	10	0	104	70.2	125	0	0		
Dibromochloromethane	9.88	5.0	10	0	98.8	69.5	123	0	0		
Ethylbenzene	9.39	5.0	10	0	93.9	71.9	129	0	0		
Methylene chloride	9.57	5.0	10	0	95.7	65.3	123	0	0		
Tetrachloroethene	11.01	5.0	10	0	110	74.5	121	0	0		
Toluene	9.77	5.0	10	0	97.7	73	122	0	0		
trans-1,2-Dichloroethene	10.39	5.0	10	0	104	69.1	133	0	0		
Trichloroethene	9.54	5.0	10	0	95.4	71.1	126	0	0		
Vinyl chloride	7.49	10	10	0	74.9	65	137	0	0		J
Xylenes, Total	25.88	5.0	30	1.32	81.9	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	46.96	5.0	50	0	93.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.54	5.0	50	0	87.1	76.5	125	0	0		
Surr: Toluene-d8	48.58	5.0	50	0	97.2	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191016069
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176460

msd

SeqNo: **2722175** TestNo: **SW8260C** RunNo: **176460**
Samp ID: **191016070-002a** Units: **µg/L** Analysis Date: **10/17/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9	5.0	10	0	90	71.6	126	9.05	0.554	20.4	
1,1,2,2-Tetrachloroethane	9.47	5.0	10	0	94.7	70.1	123	9.82	3.63	18.6	
1,1,2-Trichloroethane	9.2	5.0	10	0	92	72.1	119	9.57	3.94	20	
1,1-Dichloroethane	9.27	5.0	10	0	92.7	70.4	126	9.56	3.08	19.2	
1,1-Dichloroethene	10.59	5.0	10	0	106	70.2	125	10.78	1.78	16.1	
1,2,3-Trichloropropane	5.05	5.0	5	0	101	53.7	101	5.22	3.31	20	
1,2-Dichloroethane	35.7	5.0	10	26.99	87.1	73.5	126	36.62	2.54	15.6	
1,3-Dichlorobenzene	9.85	5.0	10	0	98.5	70.4	124	9.8	0.509	14.3	
1,3-Dichloropropane	4.55	5.0	5	0	91	64	125	4.49	0	0	J
1,4-Dichlorobenzene	10.01	5.0	10	0	100	70.8	127	9.75	2.63	14.4	
2-Butanone	10.15	10	10	0	102	60.5	123	11.24	10.2	15	
4-Methyl-2-pentanone	9.96	10	10	0	99.6	52.8	133	10.18	0	11.9	J
Acetone	59.79	10	10	48.82	110	56.3	135	56.19	6.21	10.6	
Benzene	20.96	5.0	10	12.03	89.3	70.2	127	21.36	1.89	18.4	
Carbon disulfide	4.74	5.0	5	0	94.8	62.2	130	4.82	0	13.1	J
Carbon tetrachloride	9.29	5.0	10	0	92.9	56.4	137	9.32	0.322	20.3	
Chlorobenzene	46.19	5.0	10	43.09	31	72.7	128	50.15	8.22	19.6	S
Chloroethane	8.16	10	10	0	81.6	71.3	135	7.85	0	27.8	J
Chloroform	10.04	5.0	10	0	100	70.2	125	10.39	3.43	20.3	
Dibromochloromethane	9.46	5.0	10	0	94.6	69.5	123	9.88	4.34	18.8	
Ethylbenzene	8.68	5.0	10	0	86.8	71.9	129	9.39	7.86	16.3	
Methylene chloride	9.74	5.0	10	0	97.4	65.3	123	9.57	1.76	21.4	
Tetrachloroethene	10.72	5.0	10	0	107	74.5	121	11.01	2.67	20.9	
Toluene	9.45	5.0	10	0	94.5	73	122	9.77	3.33	19.4	
trans-1,2-Dichloroethene	10.27	5.0	10	0	103	69.1	133	10.39	1.16	16.1	
Trichloroethene	9.11	5.0	10	0	91.1	71.1	126	9.54	4.61	16.6	
Vinyl chloride	7.53	10	10	0	75.3	65	137	7.49	0	20.5	J
Xylenes, Total	23.82	5.0	30	1.32	75	72	130	25.88	8.29	16.1	
Surr: 1,2-Dichloroethane-d4	47.74	5.0	50	0	95.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	40.78	5.0	50	0	81.6	76.5	125	0	0	0	
Surr: Toluene-d8	49.02	5.0	50	0	98	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191016069

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer, NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101619-01-SW-U-C-1	10/16/19	1055	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
002	101619-02-SW-A-C-1	10/16/19	1110	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	101619-03-SW-D-A-1	10/16/19	1125	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	101619-04-SW-B-A-1	10/16/19	1000	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	101619-05-SW-B-A-1	10/16/19	1145	A	W		✓	1	TSS
006	101619-TB01 Lot # WA746	3 J. m	10/16/19	A	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	EDH	10/16/19 16:07
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature) EDH	Received for Laboratory by:	Date/Time
		10/16/19 4:24pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
191016069

Adirondack Environmental Services, Inc

191016069

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

10/16/2019

Demo
191016069

TAT: **2**

DateDue: 10/18/2019

☑ RPT MS/MSD/DUP Report Completed by_____

☑ EDD EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ EDD Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191016069-001	101619-01-SW-U-C-1	Water	10/16/2019	10/18/2019	C	B	A				
191016069-002	101619-02-SW-A-C-1	Water	10/16/2019	10/18/2019	C	B	A				
191016069-003	101619-03-SW-D-A-1	Water	10/16/2019	10/18/2019	C	B	A				
191016069-004	101619-04-SW-B-A-1	Water	10/16/2019	10/18/2019	C	B	A				
191016069-005	101619-05-SW-B-A-1	Water	10/16/2019	10/18/2019			A				
191016069-006	101619-TB01	Trip Blank	10/16/2019	10/18/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 21, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191017085
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/17/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *21-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191017085	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-01-SW-U-A-1
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Acetone	**ND**	5.0		µg/L	1	10/18/2019 5:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/18/2019 5:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 5:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Benzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 5:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 5:09:00 PM
Surr: 1,2-Dichloroethane-d4	**97.7**	80.9-122		%REC	1	10/18/2019 5:09:00 PM
Surr: 4-Bromofluorobenzene	**90.9**	76.5-125		%REC	1	10/18/2019 5:09:00 PM
Surr: Toluene-d8	**97.5**	80.4-121		%REC	1	10/18/2019 5:09:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**97.2**	4.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-02-SW-A-A-1
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Acetone	**ND**	5.0		µg/L	1	10/18/2019 5:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 5:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Benzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 5:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 5:30:00 PM
Surr: 1,2-Dichloroethane-d4	**96.7**	80.9-122		%REC	1	10/18/2019 5:30:00 PM
Surr: 4-Bromofluorobenzene	**86.6**	76.5-125		%REC	1	10/18/2019 5:30:00 PM
Surr: Toluene-d8	**98.1**	80.4-121		%REC	1	10/18/2019 5:30:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**94.0**	4.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-03-SW-D-B-1
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Acetone	**3.1**	5.0	J	µg/L	1	10/18/2019 5:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,2-Dichloroethane	**0.5**	1.0	J	µg/L	1	10/18/2019 5:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 5:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Benzene	**0.7**	1.0	J	µg/L	1	10/18/2019 5:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 5:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Chlorobenzene	**11**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/18/2019 5:52:00 PM
1,2-Dichlorobenzene	**3.1**	1.0		µg/L	1	10/18/2019 5:52:00 PM
1,4-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	10/18/2019 5:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 5:52:00 PM
Surr: 1,2-Dichloroethane-d4	**96.8**	80.9-122		%REC	1	10/18/2019 5:52:00 PM
Surr: 4-Bromofluorobenzene	**85.9**	76.5-125		%REC	1	10/18/2019 5:52:00 PM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	10/18/2019 5:52:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**62.6**	2.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-04-SW-B-A-1
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Acetone	**ND**	5.0		µg/L	1	10/18/2019 6:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/18/2019 6:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 6:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Benzene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 6:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/18/2019 6:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 6:13:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	10/18/2019 6:13:00 PM
Surr: 4-Bromofluorobenzene	**90.7**	76.5-125		%REC	1	10/18/2019 6:13:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/18/2019 6:13:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**94.8**	4.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-05-SW-B-B-1
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/18/2019)						
TSS (Residue, Non-Filterable)	**80.4**	4.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101719-01-SW-U-A-3
Work Order:	**191017085**	**Collection Date:**	10/17/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191017085-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Acetone	**ND**	5.0		µg/L	1	10/18/2019 6:35:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Chloroform	**7.2**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 6:35:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Benzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 6:35:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 6:35:00 PM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	10/18/2019 6:35:00 PM
Surr: 4-Bromofluorobenzene	**84.8**	76.5-125		%REC	1	10/18/2019 6:35:00 PM
Surr: Toluene-d8	**96.9**	80.4-121		%REC	1	10/18/2019 6:35:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/18/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	10/18/2019

Adirondack Environmental Services, Inc

Date: *21-Oct-19*

CLIENT: AECOM Environment
Work Order: **191017085**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101719-TB01
Collection Date: 10/17/2019
Lab Sample ID: 191017085-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Methylene chloride	**0.9**	1.0	J	µg/L	1	10/18/2019 6:56:00 PM
Acetone	**3.4**	5.0	J	µg/L	1	10/18/2019 6:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/18/2019 6:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Benzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/18/2019 6:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Toluene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/18/2019 6:56:00 PM
Surr: 1,2-Dichloroethane-d4	**99.1**	80.9-122		%REC	1	10/18/2019 6:56:00 PM
Surr: 4-Bromofluorobenzene	**83.5**	76.5-125		%REC	1	10/18/2019 6:56:00 PM
Surr: Toluene-d8	**96.2**	80.4-121		%REC	1	10/18/2019 6:56:00 PM

CLIENT: AECOM Environment
Work Order: 191017085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76221

LCS

SeqNo: **2722806** **PrepDate:10/18/2019** TestNo: **SM2540D** RunNo: **176524**
Samp ID: **LCS-76221** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	552	40.0	496	0	111	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191017085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176526

mblk

SeqNo: **2722857** TestNo: **SW8260C** RunNo: **176526**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,2-Dichlorobenzene	0.27	0.50									J
1,2-Dichloroethane	0.15	0.50									J
1,3-Dichlorobenzene	0.25	0.50									J
1,4-Dichlorobenzene	0.33	0.50									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	0.50									
Carbon disulfide	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	0.28	0.50									J
Dibromochloromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Methylene chloride	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Surr: 1,2-Dichloroethane-d4	48.06	5.0	50	0	96.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.36	5.0	50	0	88.7	76.5	125	0	0		
Surr: Toluene-d8	49.36	5.0	50	0	98.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191017085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176526

lcs

SeqNo: **2722856** TestNo: **SW8260C** RunNo: **176526**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.76	0.50	10	0	97.6	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.18	0.50	10	0	102	72.3	118	0	0		
1,1,2-Trichloroethane	9.85	0.50	10	0	98.5	73.1	123	0	0		
1,1-Dichloroethane	10.04	0.50	10	0	100	73.2	127	0	0		
1,1-Dichloroethene	11.56	0.50	10	0	116	70.3	128	0	0		
1,2-Dichlorobenzene	9.68	0.50	10	0	96.8	71	124	0	0		
1,2-Dichloroethane	9.31	0.50	10	0	93.1	72.5	127	0	0		
1,3-Dichlorobenzene	9.95	0.50	10	0	99.5	72.2	121	0	0		
1,4-Dichlorobenzene	10.09	0.50	10	0	101	71.7	127	0	0		
2-Butanone	8.67	5.0	10	0	86.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.61	5.0	10	0	96.1	68.7	118	0	0		
Acetone	9.41	5.0	10	0	94.1	69.2	133	0	0		
Benzene	9.52	0.50	10	0	95.2	71.2	122	0	0		
Carbon disulfide	4.89	0.50	5	0	97.8	67.8	134	0	0		
Carbon tetrachloride	9.72	0.50	10	0	97.2	74.5	122	0	0		
Chlorobenzene	9.69	0.50	10	0	96.9	72.7	124	0	0		
Chloroethane	8.42	0.50	10	0	84.2	72.3	136	0	0		
Chloroform	9.87	0.50	10	0	98.7	71.6	133	0	0		
Dibromochloromethane	10.05	0.50	10	0	100	70.6	124	0	0		
Ethylbenzene	10.13	0.50	10	0	101	70.9	126	0	0		
Methylene chloride	10.36	0.50	10	0	104	66.3	130	0	0		
Tetrachloroethene	12.07	0.50	10	0	121	72.4	119	0	0		S
Toluene	9.82	0.50	10	0	98.2	71.8	116	0	0		
trans-1,2-Dichloroethene	10.88	0.50	10	0	109	70.3	120	0	0		
Trichloroethene	10.02	0.50	10	0	100	73	127	0	0		
Vinyl chloride	7.66	0.50	10	0	76.6	65.2	134	0	0		
Surr: 1,2-Dichloroethane-d4	48.73	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.4	5.0	50	0	88.8	76.5	125	0	0		
Surr: Toluene-d8	48.47	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191017085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176526

ms	SeqNo: **2722871**	TestNo: **SW8260C**	RunNo: **176526**
	Samp ID: **191016059-003a**	Units: **µg/L**	Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.44	0.50	10	0	104	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	10.27	0.50	10	0	103	70.1	123	0	0		
1,1,2-Trichloroethane	10.6	0.50	10	0	106	72.1	119	0	0		
1,1-Dichloroethane	10.99	0.50	10	0.2	108	70.4	126	0	0		
1,1-Dichloroethene	12.63	0.50	10	0.17	125	70.2	125	0	0		
1,2-Dichlorobenzene	10.16	0.50	10	0	102	70.2	123	0	0		
1,2-Dichloroethane	9.22	0.50	10	0	92.2	73.5	126	0	0		
1,3-Dichlorobenzene	10.06	0.50	10	0	101	70.4	124	0	0		
1,4-Dichlorobenzene	10.01	0.50	10	0	100	70.8	127	0	0		
2-Butanone	7.47	5.0	10	0	74.7	60.5	123	0	0		
4-Methyl-2-pentanone	9.76	5.0	10	0	97.6	52.8	133	0	0		
Acetone	11.13	5.0	10	0	111	56.3	135	0	0		
Benzene	10.11	0.50	10	0	101	70.2	127	0	0		
Carbon disulfide	6.17	0.50	5	0	123	62.2	130	0	0		
Carbon tetrachloride	10.26	0.50	10	0	103	56.4	137	0	0		
Chlorobenzene	9.42	0.50	10	0	94.2	72.7	128	0	0		
Chloroethane	7.97	0.50	10	0	79.7	71.3	135	0	0		
Chloroform	10.13	0.50	10	0	101	70.2	125	0	0		
Dibromochloromethane	10.42	0.50	10	0	104	69.5	123	0	0		
Ethylbenzene	9.5	0.50	10	0	95	71.9	129	0	0		
Methylene chloride	11.21	0.50	10	0	112	65.3	123	0	0		
Tetrachloroethene	16.05	0.50	10	3.5	126	74.5	121	0	0		S
Toluene	10.16	0.50	10	0	102	73	122	0	0		
trans-1,2-Dichloroethene	12.73	0.50	10	0.62	121	69.1	133	0	0		
Trichloroethene	47.46	0.50	10	36.98	105	71.1	126	0	0		
Vinyl chloride	7.33	0.50	10	0.61	67.2	65	137	0	0		
Surr: 1,2-Dichloroethane-d4	48.31	5.0	50	0	96.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	42.26	5.0	50	0	84.5	76.5	125	0	0		
Surr: Toluene-d8	47.72	5.0	50	0	95.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191017085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176526

msd

SeqNo: **2722872** TestNo: **SW8260C** RunNo: **176526**
Samp ID: **191016059-003a** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.07	0.50	10	0	101	71.6	126	10.44	3.61	20.4	
1,1,2,2-Tetrachloroethane	10.44	0.50	10	0	104	70.1	123	10.27	1.64	18.6	
1,1,2-Trichloroethane	10.03	0.50	10	0	100	72.1	119	10.6	5.53	20	
1,1-Dichloroethane	10.55	0.50	10	0.2	104	70.4	126	10.99	4.09	19.2	
1,1-Dichloroethene	12.11	0.50	10	0.17	119	70.2	125	12.63	4.20	16.1	
1,2-Dichlorobenzene	10.26	0.50	10	0	103	70.2	123	10.16	0.979	17.9	
1,2-Dichloroethane	9.37	0.50	10	0	93.7	73.5	126	9.22	1.61	15.6	
1,3-Dichlorobenzene	10.26	0.50	10	0	103	70.4	124	10.06	1.97	14.3	
1,4-Dichlorobenzene	10.47	0.50	10	0	105	70.8	127	10.01	4.49	14.4	
2-Butanone	7.7	5.0	10	0	77	60.5	123	7.47	3.03	15	
4-Methyl-2-pentanone	9.78	5.0	10	0	97.8	52.8	133	9.76	0.205	11.9	
Acetone	9.31	5.0	10	0	93.1	56.3	135	11.13	17.8	10.6	Z
Benzene	9.81	0.50	10	0	98.1	70.2	127	10.11	3.01	18.4	
Carbon disulfide	5.96	0.50	5	0	119	62.2	130	6.17	3.46	13.1	
Carbon tetrachloride	9.86	0.50	10	0	98.6	56.4	137	10.26	3.98	20.3	
Chlorobenzene	9.29	0.50	10	0	92.9	72.7	128	9.42	1.39	19.6	
Chloroethane	8.11	0.50	10	0	81.1	71.3	135	7.97	1.74	27.8	
Chloroform	9.72	0.50	10	0	97.2	70.2	125	10.13	4.13	20.3	
Dibromochloromethane	10.63	0.50	10	0	106	69.5	123	10.42	2.00	18.8	
Ethylbenzene	9.98	0.50	10	0	99.8	71.9	129	9.5	4.93	16.3	
Methylene chloride	10.55	0.50	10	0	106	65.3	123	11.21	6.07	21.4	
Tetrachloroethene	15.61	0.50	10	3.5	121	74.5	121	16.05	2.78	20.9	S
Toluene	9.89	0.50	10	0	98.9	73	122	10.16	2.69	19.4	
trans-1,2-Dichloroethene	12.26	0.50	10	0.62	116	69.1	133	12.73	3.76	16.1	
Trichloroethene	46.07	0.50	10	36.98	90.9	71.1	126	47.46	2.97	16.6	
Vinyl chloride	6.79	0.50	10	0.61	61.8	65	137	7.33	7.65	20.5	S
Surr: 1,2-Dichloroethane-d4	49.24	5.0	50	0	98.5	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	42.2	5.0	50	0	84.4	76.5	125	0	0	0	
Surr: Toluene-d8	49.07	5.0	50	0	98.1	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order #: 191017085

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101719-01-SW-U-A-1	10/17/19	1215	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	101719-02-SW-A-A-1	10/17/19	1300	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	101719-03-SW-D-B-1	10/17/19	1325	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	101719-04-SW-B-A-1	10/17/19	1240	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
~~005~~ (cancel 10/17 CDS)	101719-05-SW-B-B-1	10/17/19	1340	A	W		✓	1	TSS
006	101719-01-SW-U-A-3	10/17/19	1100	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	101719-TB01			A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/17/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: K. Miller	Date/Time 10.17.19 4:26

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

Demo
191017085

Adirondack Environmental Services, Inc

191017085

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy



TAT: **2**

DateDue: 10/21/2019

10/17/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191017085-001	101719-01-SW-U-A-1	Water	10/17/2019	10/21/2019	B	A					
191017085-002	101719-02-SW-A-A-1	Water	10/17/2019	10/21/2019	B	A					
191017085-003	101719-03-SW-D-B-1	Water	10/17/2019	10/21/2019	B	A					
191017085-004	101719-04-SW-B-A-1	Water	10/17/2019	10/21/2019	B	A					
191017085-005	101719-05-SW-B-B-1	Water	10/17/2019	10/21/2019		A					
191017085-006	101719-01-SW-U-A-3	Water	10/17/2019	10/21/2019	B	A					
191017085-007	101719-TB01	Trip Blank	10/17/2019	10/21/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 24, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191018067
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/18/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *24-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191018067	

Sample containers were supplied by Adirondack Environmental Services.

This is an updated report to include additional quality control volatiles analytes.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191018067**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101819-01-SW-U-B-1
Collection Date: 10/18/2019
Lab Sample ID: 191018067-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
PCB, Total	**ND**	0.065		µg/L	1	10/18/2019 5:48:23 PM
Surr: Decachlorobiphenyl	**55.6**	57.1-135	S	%REC	1	10/18/2019 5:48:23 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Acetone	**ND**	5.0		µg/L	1	10/21/2019 9:31:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 9:31:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 9:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 9:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Benzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 9:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-01-SW-U-B-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 9:31:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	10/21/2019 9:31:00 PM
Surr: 4-Bromofluorobenzene	**87.8**	76.5-125		%REC	1	10/21/2019 9:31:00 PM
Surr: Toluene-d8	**97.0**	80.4-121		%REC	1	10/21/2019 9:31:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/21/2019)						
TSS (Residue, Non-Filterable)	**269**	10.0		mg/L	1	10/21/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-02-SW-A-A-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
PCB, Total	**ND**	0.065		µg/L	1	10/18/2019 6:01:43 PM
Surr: Decachlorobiphenyl	**57.4**	57.1-135		%REC	1	10/18/2019 6:01:43 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Acetone	**ND**	5.0		µg/L	1	10/21/2019 9:53:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 9:53:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 9:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 9:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	10/21/2019 9:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 9:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Chlorobenzene	**1.6**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-02-SW-A-A-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	10/21/2019 9:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 9:53:00 PM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	10/21/2019 9:53:00 PM
Surr: 4-Bromofluorobenzene	**87.8**	76.5-125		%REC	1	10/21/2019 9:53:00 PM
Surr: Toluene-d8	**95.8**	80.4-121		%REC	1	10/21/2019 9:53:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/21/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**220**	10.0		mg/L	1	10/21/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191018067**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101819-03-SW-D-A-1
Collection Date: 10/18/2019
Lab Sample ID: 191018067-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
PCB, Total	**ND**	0.065		µg/L	1	10/18/2019 6:28:21 PM
Surr: Decachlorobiphenyl	**60.2**	57.1-135		%REC	1	10/18/2019 6:28:21 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Acetone	**ND**	5.0		µg/L	1	10/21/2019 10:14:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 10:14:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 10:14:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 10:14:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Benzene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 10:14:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Chlorobenzene	**0.7**	1.0	J	µg/L	1	10/21/2019 10:14:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-03-SW-D-A-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/21/2019 10:14:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 10:14:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	10/21/2019 10:14:00 PM
Surr: 4-Bromofluorobenzene	**87.0**	76.5-125		%REC	1	10/21/2019 10:14:00 PM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	10/21/2019 10:14:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/21/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**161**	6.7		mg/L	1	10/21/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191018067**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101819-04-SW-B-A-1
Collection Date: 10/18/2019
Lab Sample ID: 191018067-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/18/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
PCB, Total	**ND**	0.065		µg/L	1	10/18/2019 6:41:42 PM
Surr: Decachlorobiphenyl	**57.2**	57.1-135		%REC	1	10/18/2019 6:41:42 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Acetone	**ND**	5.0		µg/L	1	10/21/2019 10:36:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 10:36:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 10:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 10:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Benzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 10:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-04-SW-B-A-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 10:36:00 PM
Surr: 1,2-Dichloroethane-d4	**96.3**	80.9-122		%REC	1	10/21/2019 10:36:00 PM
Surr: 4-Bromofluorobenzene	**85.7**	76.5-125		%REC	1	10/21/2019 10:36:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/21/2019 10:36:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/21/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**256**	10.0		mg/L	1	10/21/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	101819-05-SW-B-B-1
Work Order:	**191018067**	**Collection Date:**	10/18/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191018067-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/21/2019)						
TSS (Residue, Non-Filterable)	**189**	10.0		mg/L	1	10/21/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191018067**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101819-TB01
Collection Date: 10/18/2019
Lab Sample ID: 191018067-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Acetone	**3.0**	5.0	JC+	µg/L	1	10/21/2019 10:57:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 10:57:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 10:57:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 10:57:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Benzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 10:57:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 10:57:00 PM
Surr: 1,2-Dichloroethane-d4	**94.7**	80.9-122		%REC	1	10/21/2019 10:57:00 PM
Surr: 4-Bromofluorobenzene	**86.2**	76.5-125		%REC	1	10/21/2019 10:57:00 PM
Surr: Toluene-d8	**96.5**	80.4-121		%REC	1	10/21/2019 10:57:00 PM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191018067**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 101819-TB02
Collection Date: 10/18/2019
Lab Sample ID: 191018067-007
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	10/21/2019 11:19:00 PM
Acetone	**2.9**	5.0	JC+	µg/L	1	10/21/2019 11:19:00 PM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/21/2019 11:19:00 PM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/21/2019 11:19:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/21/2019 11:19:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Benzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/21/2019 11:19:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Toluene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/21/2019 11:19:00 PM
Surr: 1,2-Dichloroethane-d4	**95.9**	80.9-122		%REC	1	10/21/2019 11:19:00 PM
Surr: 4-Bromofluorobenzene	**87.5**	76.5-125		%REC	1	10/21/2019 11:19:00 PM
Surr: Toluene-d8	**96.2**	80.4-121		%REC	1	10/21/2019 11:19:00 PM

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76218

mblk

SeqNo: **2722746** PrepDate:**10/18/2019** TestNo: **SW8082A** RunNo: **176512**
Samp ID: **MB-76218** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0938	0.0100	0.1	0	93.8	57.1	135	0	0		

lcs

SeqNo: **2722747** PrepDate:**10/18/2019** TestNo: **SW8082A** RunNo: **176512**
Samp ID: **lcs-76218** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5312	0.0650	0.5	0	106	60	140	0	0		
PCB, Total	0.5312	0.0650	0.5	0	106	60	140	0	0		
Surr: Decachlorobiphenyl	0.09	0.0100	0.1	0	90	57.1	135	0	0		

ms

SeqNo: **2722758** PrepDate:**10/18/2019** TestNo: **SW8082A** RunNo: **176512**
Samp ID: **191018067-002c (101819-02-SW-A-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.565	0.0650	0.5	0	113	46.7	130	0	0		
PCB, Total	0.565	0.0650	0.5	0	113	51	150	0	0		
Surr: Decachlorobiphenyl	0.065	0.0100	0.1	0	65	57.1	135	0	0		

msd

SeqNo: **2722759** PrepDate:**10/18/2019** TestNo: **SW8082A** RunNo: **176512**
Samp ID: **191018067-002c (101819-02-SW-A-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76218

msd					
SeqNo: **2722759**	**PrepDate:10/18/2019**	TestNo: **SW8082A**	RunNo: **176512**
Samp ID: **191018067-002c (101819-02-SW-A-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **10/18/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5622	0.0650	0.5	0	112	46.7	130	0.565	0.497	30	
PCB, Total	0.5622	0.0650	0.5	0	112	51	150	0.565	0.497	30	
Surr: Decachlorobiphenyl	0.0634	0.0100	0.1	0	63.4	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76230

LCS

SeqNo: **2723957** **PrepDate:10/21/2019** TestNo: **SM2540D** RunNo: **176573**
Samp ID: **LCS-76230** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	468	40.0	489	0	95.7	86.5	114	0	0		

DUP

SeqNo: **2723968** **PrepDate:10/21/2019** TestNo: **SM2540D** RunNo: **176573**
Samp ID: **191017053-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	473.3	67.0	0	0	0	0	0	413.3	13.5	10	Z

DUP

SeqNo: **2723976** **PrepDate:10/21/2019** TestNo: **SM2540D** RunNo: **176573**
Samp ID: **191018067-002** **PrepRef:** Units: **mg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	203	10.0	0	0	0	0	0	220	8.04	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

mblk

SeqNo: **2723603** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	5.0									
Surr: 1,2-Dichloroethane-d4	45.55	5.0	50	0	91.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.77	5.0	50	0	91.5	76.5	125	0	0		
Surr: Toluene-d8	49.14	5.0	50	0	98.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

lcs

SeqNo: **2723602** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.06	1.0	10	0	101	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	11.19	1.0	10	0	112	72.3	118	0	0		
1,1,2-Trichloroethane	10.61	1.0	10	0	106	73.1	123	0	0		
1,1-Dichloroethane	10.91	1.0	10	0	109	73.2	127	0	0		
1,1-Dichloroethene	11.71	1.0	10	0	117	70.3	128	0	0		
1,2,3-Trichloropropane	5.61	1.0	5	0	112	68.4	115	0	0		
1,2-Dichlorobenzene	11.23	1.0	10	0	112	71	124	0	0		
1,2-Dichloroethane	9.58	1.0	10	0	95.8	72.5	127	0	0		
1,3-Dichlorobenzene	10.88	1.0	10	0	109	72.2	121	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	76	122	0	0		
1,4-Dichlorobenzene	10.71	1.0	10	0	107	71.7	127	0	0		
2-Butanone	6.57	5.0	10	0	65.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.63	5.0	10	0	96.3	68.7	118	0	0		
Acetone	9.89	5.0	10	0	98.9	69.2	133	0	0		
Benzene	10.19	1.0	10	0	102	71.2	122	0	0		
Carbon disulfide	5.13	1.0	5	0	103	67.8	134	0	0		
Carbon tetrachloride	10.23	1.0	10	0	102	74.5	122	0	0		
Chlorobenzene	10.15	1.0	10	0	102	72.7	124	0	0		
Chloroethane	10.63	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.33	1.0	10	0	103	71.6	133	0	0		
Dibromochloromethane	11.26	1.0	10	0	113	70.6	124	0	0		
Ethylbenzene	10.34	1.0	10	0	103	70.9	126	0	0		
Methylene chloride	11.87	1.0	10	0	119	66.3	130	0	0		
Tetrachloroethene	12.31	1.0	10	0	123	72.4	119	0	0		S
Toluene	10.41	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	11.68	1.0	10	0	117	70.3	120	0	0		
Trichloroethene	10.43	1.0	10	0	104	73	127	0	0		
Vinyl chloride	11.92	1.0	10	0	119	65.2	134	0	0		
Xylenes, Total	27.21	1.0	30	0	90.7	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.79	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.27	5.0	50	0	86.5	76.5	125	0	0		
Surr: Toluene-d8	48.36	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

ms	SeqNo: **2723626**	TestNo: **SW8260C**	RunNo: **176561**
	Samp ID: **191018067-002b (101819-02-SW-A-**	Units: **µg/L**	Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.95	1.0	10	0	99.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	10.31	1.0	10	0	103	70.1	123	0	0		
1,1,2-Trichloroethane	10.05	1.0	10	0	100	72.1	119	0	0		
1,1-Dichloroethane	10.14	1.0	10	0	101	70.4	126	0	0		
1,1-Dichloroethene	11.47	1.0	10	0	115	70.2	125	0	0		
1,2,3-Trichloropropane	5.3	1.0	5	0	106	53.7	101	0	0		S
1,2-Dichlorobenzene	9.74	1.0	10	0.43	93.1	70.2	123	0	0		
1,2-Dichloroethane	9.29	1.0	10	0	92.9	73.5	126	0	0		
1,3-Dichlorobenzene	9.34	1.0	10	0	93.4	70.4	124	0	0		
1,3-Dichloropropane	4.71	1.0	5	0	94.2	64	125	0	0		
1,4-Dichlorobenzene	9.1	1.0	10	0	91	70.8	127	0	0		
2-Butanone	9.39	5.0	10	0	93.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.97	5.0	10	0	89.7	52.8	133	0	0		
Acetone	11.75	5.0	10	0	118	56.3	135	0	0		
Benzene	9.76	1.0	10	0.22	95.4	70.2	127	0	0		
Carbon disulfide	4.98	1.0	5	0	99.6	62.2	130	0	0		
Carbon tetrachloride	9.98	1.0	10	0	99.8	56.4	137	0	0		
Chlorobenzene	10.81	1.0	10	1.65	91.6	72.7	128	0	0		
Chloroethane	10.07	1.0	10	0	101	71.3	135	0	0		
Chloroform	9.76	1.0	10	0	97.6	70.2	125	0	0		
Dibromochloromethane	10.75	1.0	10	0	108	69.5	123	0	0		
Ethylbenzene	9.94	1.0	10	0	99.4	71.9	129	0	0		
Methylene chloride	9.94	1.0	10	0	99.4	65.3	123	0	0		
Tetrachloroethene	12.02	1.0	10	0	120	74.5	121	0	0		
Toluene	9.88	1.0	10	0	98.8	73	122	0	0		
trans-1,2-Dichloroethene	11.5	1.0	10	0	115	69.1	133	0	0		
Trichloroethene	9.76	1.0	10	0	97.6	71.1	126	0	0		
Vinyl chloride	10.97	1.0	10	0	110	65	137	0	0		
Xylenes, Total	26.18	1.0	30	0	87.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	47.27	5.0	50	0	94.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.53	5.0	50	0	87.1	76.5	125	0	0		
Surr: Toluene-d8	48.04	5.0	50	0	96.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191018067
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

msd

SeqNo: **2723627** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **191018067-002b (101819-02-SW-A-** Units: **µg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.75	1.0	10	0	97.5	71.6	126	9.95	2.03	20.4	
1,1,2,2-Tetrachloroethane	9.8	1.0	10	0	98	70.1	123	10.31	5.07	18.6	
1,1,2-Trichloroethane	9.92	1.0	10	0	99.2	72.1	119	10.05	1.30	20	
1,1-Dichloroethane	10.36	1.0	10	0	104	70.4	126	10.14	2.15	19.2	
1,1-Dichloroethene	12.14	1.0	10	0	121	70.2	125	11.47	5.68	16.1	
1,2,3-Trichloropropane	5.2	1.0	5	0	104	53.7	101	5.3	1.90	20	S
1,2-Dichlorobenzene	11.09	1.0	10	0.43	107	70.2	123	9.74	13.0	17.9	
1,2-Dichloroethane	9	1.0	10	0	90	73.5	126	9.29	3.17	15.6	
1,3-Dichlorobenzene	9.79	1.0	10	0	97.9	70.4	124	9.34	4.70	14.3	
1,3-Dichloropropane	4.73	1.0	5	0	94.6	64	125	4.71	0.424	0	
1,4-Dichlorobenzene	10.14	1.0	10	0	101	70.8	127	9.1	10.8	14.4	
2-Butanone	10.57	5.0	10	0	106	60.5	123	9.39	11.8	15	
4-Methyl-2-pentanone	9.12	5.0	10	0	91.2	52.8	133	8.97	1.66	11.9	
Acetone	15.22	5.0	10	0	152	56.3	135	11.75	25.7	10.6	SZ
Benzene	9.94	1.0	10	0.22	97.2	70.2	127	9.76	1.83	18.4	
Carbon disulfide	5.16	1.0	5	0	103	62.2	130	4.98	3.55	13.1	
Carbon tetrachloride	10.17	1.0	10	0	102	56.4	137	9.98	1.89	20.3	
Chlorobenzene	10.27	1.0	10	1.65	86.2	72.7	128	10.81	5.12	19.6	
Chloroethane	11.41	1.0	10	0	114	71.3	135	10.07	12.5	27.8	
Chloroform	9.71	1.0	10	0	97.1	70.2	125	9.76	0.514	20.3	
Dibromochloromethane	10.39	1.0	10	0	104	69.5	123	10.75	3.41	18.8	
Ethylbenzene	9.03	1.0	10	0	90.3	71.9	129	9.94	9.59	16.3	
Methylene chloride	10.47	1.0	10	0	105	65.3	123	9.94	5.19	21.4	
Tetrachloroethene	11.96	1.0	10	0	120	74.5	121	12.02	0.500	20.9	
Toluene	9.76	1.0	10	0	97.6	73	122	9.88	1.22	19.4	
trans-1,2-Dichloroethene	11.44	1.0	10	0	114	69.1	133	11.5	0.523	16.1	
Trichloroethene	10.1	1.0	10	0	101	71.1	126	9.76	3.42	16.6	
Vinyl chloride	12.54	1.0	10	0	125	65	137	10.97	13.4	20.5	
Xylenes, Total	23.5	1.0	30	0	78.3	72	130	26.18	10.8	16.1	
Surr: 1,2-Dichloroethane-d4	47.66	5.0	50	0	95.3	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	40.03	5.0	50	0	80.1	76.5	125	0	0	0	
Surr: Toluene-d8	48.38	5.0	50	0	96.8	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191018067

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2121	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	101819-01-SW-U-B-1	10/18/19	1200	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	101819-02-SW-A-A-1	10/18/19	1310	A/P	W		✓	6	PCBs
	↓	↓	↓	A/P	↓		↓	6	VOCs
	↓	↓	↓	A/P	↓		↓	3	TSS
003	101819-03-SW-D-A-1	10/18/19	1335	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	101819-04-SW-B-A-1	10/18/19	1215	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	101819-05-SW-B-B-1	10/18/19	1400	A/P	W		✓	1	TSS
006	101819-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/18/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/18/19 4:32pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

191018067

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191018062

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Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	101819-TB02		A/P	TB			1	trip blank Lot # VOA 546.5
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 10/18/19 4:02pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 10/18/19 4:32pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

191018067

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191018067

TAT: **2**

DateDue: 10/22/2019

10/18/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191018067-001	101819-01-SW-U-B-1	Water	10/18/2019	10/22/2019	C	B	A				
191018067-002	101819-02-SW-A-A-1	Water	10/18/2019	10/22/2019	C	B	A				
191018067-003	101819-03-SW-D-A-1	Water	10/18/2019	10/22/2019	C	B	A				
191018067-004	101819-04-SW-B-A-1	Water	10/18/2019	10/22/2019	C	B	A				
191018067-005	101819-05-SW-B-B-1	Water	10/18/2019	10/22/2019			A				
191018067-006	101819-TB01	Trip Blank	10/18/2019	10/22/2019		A					
191018067-007	101819-TB02	Trip Blank	10/18/2019	10/22/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 24, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191021039
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/21/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *24-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191021039	

Sample containers were supplied by Adirondack Environmental Services.

This is an updated report to include additional quality control volatiles analytes.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191021039**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102119-01-SW-U-A-1
Collection Date: 10/21/2019
Lab Sample ID: 191021039-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A **(Prep: SW3535A - 10/22/2019)**						Analyst: **KF**
Aroclor 1016	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
PCB, Total	**ND**	0.065		µg/L	1	10/22/2019 8:47:39 AM
Surr: Decachlorobiphenyl	**66.0**	57.1-135		%REC	1	10/22/2019 8:47:39 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**1.3**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Acetone	**ND**	5.0		µg/L	1	10/22/2019 1:50:00 AM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/22/2019 1:50:00 AM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/22/2019 1:50:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/22/2019 1:50:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Benzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/22/2019 1:50:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Toluene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-01-SW-U-A-1
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/22/2019 1:50:00 AM
Surr: 1,2-Dichloroethane-d4	**95.0**	80.9-122		%REC	1	10/22/2019 1:50:00 AM
Surr: 4-Bromofluorobenzene	**86.6**	76.5-125		%REC	1	10/22/2019 1:50:00 AM
Surr: Toluene-d8	**97.1**	80.4-121		%REC	1	10/22/2019 1:50:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/22/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**28.0**	2.0		mg/L	1	10/22/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191021039**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102119-02-SW-A-C-1
Collection Date: 10/21/2019
Lab Sample ID: 191021039-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/22/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
PCB, Total	**ND**	0.065		µg/L	1	10/22/2019 9:00:57 AM
Surr: Decachlorobiphenyl	**76.0**	57.1-135		%REC	1	10/22/2019 9:00:57 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Acetone	**ND**	5.0		µg/L	1	10/22/2019 2:11:00 AM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/22/2019 2:11:00 AM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/22/2019 2:11:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/22/2019 2:11:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Benzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/22/2019 2:11:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Toluene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-02-SW-A-C-1
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/22/2019 2:11:00 AM
Surr: 1,2-Dichloroethane-d4	**98.4**	80.9-122		%REC	1	10/22/2019 2:11:00 AM
Surr: 4-Bromofluorobenzene	**81.2**	76.5-125		%REC	1	10/22/2019 2:11:00 AM
Surr: Toluene-d8	**95.9**	80.4-121		%REC	1	10/22/2019 2:11:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/22/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**21.0**	2.0		mg/L	1	10/22/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191021039**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102119-03-SW-D-B-1
Collection Date: 10/21/2019
Lab Sample ID: 191021039-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/22/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
PCB, Total	**ND**	0.065		µg/L	1	10/22/2019 9:27:33 AM
Surr: Decachlorobiphenyl	**72.2**	57.1-135		%REC	1	10/22/2019 9:27:33 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Acetone	**ND**	5.0		µg/L	1	10/22/2019 2:33:00 AM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/22/2019 2:33:00 AM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/22/2019 2:33:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/22/2019 2:33:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Benzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/22/2019 2:33:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Toluene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-03-SW-D-B-1
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/22/2019 2:33:00 AM
Surr: 1,2-Dichloroethane-d4	**94.2**	80.9-122		%REC	1	10/22/2019 2:33:00 AM
Surr: 4-Bromofluorobenzene	**87.3**	76.5-125		%REC	1	10/22/2019 2:33:00 AM
Surr: Toluene-d8	**95.1**	80.4-121		%REC	1	10/22/2019 2:33:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/22/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**28.2**	2.0		mg/L	1	10/22/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191021039**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102119-04-SW-B-C-1
Collection Date: 10/21/2019
Lab Sample ID: 191021039-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/22/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
PCB, Total	**ND**	0.065		µg/L	1	10/22/2019 10:00:53 AM
Surr: Decachlorobiphenyl	**74.6**	57.1-135		%REC	1	10/22/2019 10:00:53 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Acetone	**ND**	5.0		µg/L	1	10/22/2019 2:55:00 AM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/22/2019 2:55:00 AM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/22/2019 2:55:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/22/2019 2:55:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Benzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/22/2019 2:55:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Toluene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-04-SW-B-C-1
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/22/2019 2:55:00 AM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	10/22/2019 2:55:00 AM
Surr: 4-Bromofluorobenzene	**88.5**	76.5-125		%REC	1	10/22/2019 2:55:00 AM
Surr: Toluene-d8	**96.8**	80.4-121		%REC	1	10/22/2019 2:55:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/22/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**21.0**	2.0		mg/L	1	10/22/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-05-SW-B-A-1
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/22/2019)						
TSS (Residue, Non-Filterable)	**22.2**	2.0		mg/L	1	10/22/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102119-TB01
Work Order:	**191021039**	**Collection Date:**	10/21/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191021039-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Acetone	**2.5**	5.0	JC+	µg/L	1	10/22/2019 3:16:00 AM
Carbon disulfide	**ND**	1.0	C	µg/L	1	10/22/2019 3:16:00 AM
1,1-Dichloroethene	**ND**	1.0	C	µg/L	1	10/22/2019 3:16:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/22/2019 3:16:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Benzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/22/2019 3:16:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Toluene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/22/2019 3:16:00 AM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	10/22/2019 3:16:00 AM
Surr: 4-Bromofluorobenzene	**85.6**	76.5-125		%REC	1	10/22/2019 3:16:00 AM
Surr: Toluene-d8	**95.5**	80.4-121		%REC	1	10/22/2019 3:16:00 AM

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76245

MBLK

SeqNo: **2723733** PrepDate:**10/22/2019** TestNo: **SW8082A** RunNo: **176564**
Samp ID: **MB-76245** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0882	0.0100	0.1	0	88.2	57.1	135	0	0		

LCS

SeqNo: **2723734** PrepDate:**10/22/2019** TestNo: **SW8082A** RunNo: **176564**
Samp ID: **LCS-76245** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4962	0.0650	0.5	0	99.2	60	140	0	0		
PCB, Total	0.4962	0.0650	0.5	0	99.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.0722	0.0100	0.1	0	72.2	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76255

LCS

SeqNo: **2724747** PrepDate:**10/22/2019** TestNo: **SM2540D** RunNo: **176613**
Samp ID: **LCS-76255** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	492	40.0	489	0	101	86.5	114	0	0		

DUP

SeqNo: **2724749** PrepDate:**10/22/2019** TestNo: **SM2540D** RunNo: **176613**
Samp ID: **191018011-001** PrepRef: Units: **mg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	12.33	3.30	0	0	0	0	0	11	11.4	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

mblk

SeqNo: **2723603** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	5.0									
Surr: 1,2-Dichloroethane-d4	45.55	5.0	50	0	91.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.77	5.0	50	0	91.5	76.5	125	0	0		
Surr: Toluene-d8	49.14	5.0	50	0	98.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

lcs

SeqNo: **2723602** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/21/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.06	1.0	10	0	101	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	11.19	1.0	10	0	112	72.3	118	0	0		
1,1,2-Trichloroethane	10.61	1.0	10	0	106	73.1	123	0	0		
1,1-Dichloroethane	10.91	1.0	10	0	109	73.2	127	0	0		
1,1-Dichloroethene	11.71	1.0	10	0	117	70.3	128	0	0		
1,2,3-Trichloropropane	5.61	1.0	5	0	112	68.4	115	0	0		
1,2-Dichlorobenzene	11.23	1.0	10	0	112	71	124	0	0		
1,2-Dichloroethane	9.58	1.0	10	0	95.8	72.5	127	0	0		
1,3-Dichlorobenzene	10.88	1.0	10	0	109	72.2	121	0	0		
1,3-Dichloropropane	5.09	1.0	5	0	102	76	122	0	0		
1,4-Dichlorobenzene	10.71	1.0	10	0	107	71.7	127	0	0		
2-Butanone	6.57	5.0	10	0	65.7	65.1	132	0	0		
4-Methyl-2-pentanone	9.63	5.0	10	0	96.3	68.7	118	0	0		
Acetone	9.89	5.0	10	0	98.9	69.2	133	0	0		
Benzene	10.19	1.0	10	0	102	71.2	122	0	0		
Carbon disulfide	5.13	1.0	5	0	103	67.8	134	0	0		
Carbon tetrachloride	10.23	1.0	10	0	102	74.5	122	0	0		
Chlorobenzene	10.15	1.0	10	0	102	72.7	124	0	0		
Chloroethane	10.63	1.0	10	0	106	72.3	136	0	0		
Chloroform	10.33	1.0	10	0	103	71.6	133	0	0		
Dibromochloromethane	11.26	1.0	10	0	113	70.6	124	0	0		
Ethylbenzene	10.34	1.0	10	0	103	70.9	126	0	0		
Methylene chloride	11.87	1.0	10	0	119	66.3	130	0	0		
Tetrachloroethene	12.31	1.0	10	0	123	72.4	119	0	0		S
Toluene	10.41	1.0	10	0	104	71.8	116	0	0		
trans-1,2-Dichloroethene	11.68	1.0	10	0	117	70.3	120	0	0		
Trichloroethene	10.43	1.0	10	0	104	73	127	0	0		
Vinyl chloride	11.92	1.0	10	0	119	65.2	134	0	0		
Xylenes, Total	27.21	1.0	30	0	90.7	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	47.79	5.0	50	0	95.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.27	5.0	50	0	86.5	76.5	125	0	0		
Surr: Toluene-d8	48.36	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

ms	SeqNo: **2723626**	TestNo: **SW8260C**	RunNo: **176561**
	Samp ID: **191018067-002b**	Units: **µg/L**	Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.95	1.0	10	0	99.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	10.31	1.0	10	0	103	70.1	123	0	0		
1,1,2-Trichloroethane	10.05	1.0	10	0	100	72.1	119	0	0		
1,1-Dichloroethane	10.14	1.0	10	0	101	70.4	126	0	0		
1,1-Dichloroethene	11.47	1.0	10	0	115	70.2	125	0	0		
1,2,3-Trichloropropane	5.3	1.0	5	0	106	53.7	101	0	0		S
1,2-Dichlorobenzene	9.74	1.0	10	0.43	93.1	70.2	123	0	0		
1,2-Dichloroethane	9.29	1.0	10	0	92.9	73.5	126	0	0		
1,3-Dichlorobenzene	9.34	1.0	10	0	93.4	70.4	124	0	0		
1,3-Dichloropropane	4.71	1.0	5	0	94.2	64	125	0	0		
1,4-Dichlorobenzene	9.1	1.0	10	0	91	70.8	127	0	0		
2-Butanone	9.39	5.0	10	0	93.9	60.5	123	0	0		
4-Methyl-2-pentanone	8.97	5.0	10	0	89.7	52.8	133	0	0		
Acetone	11.75	5.0	10	0	118	56.3	135	0	0		
Benzene	9.76	1.0	10	0.22	95.4	70.2	127	0	0		
Carbon disulfide	4.98	1.0	5	0	99.6	62.2	130	0	0		
Carbon tetrachloride	9.98	1.0	10	0	99.8	56.4	137	0	0		
Chlorobenzene	10.81	1.0	10	1.65	91.6	72.7	128	0	0		
Chloroethane	10.07	1.0	10	0	101	71.3	135	0	0		
Chloroform	9.76	1.0	10	0	97.6	70.2	125	0	0		
Dibromochloromethane	10.75	1.0	10	0	108	69.5	123	0	0		
Ethylbenzene	9.94	1.0	10	0	99.4	71.9	129	0	0		
Methylene chloride	9.94	1.0	10	0	99.4	65.3	123	0	0		
Tetrachloroethene	12.02	1.0	10	0	120	74.5	121	0	0		
Toluene	9.88	1.0	10	0	98.8	73	122	0	0		
trans-1,2-Dichloroethene	11.5	1.0	10	0	115	69.1	133	0	0		
Trichloroethene	9.76	1.0	10	0	97.6	71.1	126	0	0		
Vinyl chloride	10.97	1.0	10	0	110	65	137	0	0		
Xylenes, Total	26.18	1.0	30	0	87.3	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	47.27	5.0	50	0	94.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	43.53	5.0	50	0	87.1	76.5	125	0	0		
Surr: Toluene-d8	48.04	5.0	50	0	96.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191021039
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176561

msd

SeqNo: **2723627** TestNo: **SW8260C** RunNo: **176561**
Samp ID: **191018067-002b** Units: **µg/L** Analysis Date: **10/22/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.75	1.0	10	0	97.5	71.6	126	9.95	2.03	20.4	
1,1,2,2-Tetrachloroethane	9.8	1.0	10	0	98	70.1	123	10.31	5.07	18.6	
1,1,2-Trichloroethane	9.92	1.0	10	0	99.2	72.1	119	10.05	1.30	20	
1,1-Dichloroethane	10.36	1.0	10	0	104	70.4	126	10.14	2.15	19.2	
1,1-Dichloroethene	12.14	1.0	10	0	121	70.2	125	11.47	5.68	16.1	
1,2,3-Trichloropropane	5.2	1.0	5	0	104	53.7	101	5.3	1.90	20	S
1,2-Dichlorobenzene	11.09	1.0	10	0.43	107	70.2	123	9.74	13.0	17.9	
1,2-Dichloroethane	9	1.0	10	0	90	73.5	126	9.29	3.17	15.6	
1,3-Dichlorobenzene	9.79	1.0	10	0	97.9	70.4	124	9.34	4.70	14.3	
1,3-Dichloropropane	4.73	1.0	5	0	94.6	64	125	4.71	0.424	0	
1,4-Dichlorobenzene	10.14	1.0	10	0	101	70.8	127	9.1	10.8	14.4	
2-Butanone	10.57	5.0	10	0	106	60.5	123	9.39	11.8	15	
4-Methyl-2-pentanone	9.12	5.0	10	0	91.2	52.8	133	8.97	1.66	11.9	
Acetone	15.22	5.0	10	0	152	56.3	135	11.75	25.7	10.6	SZ
Benzene	9.94	1.0	10	0.22	97.2	70.2	127	9.76	1.83	18.4	
Carbon disulfide	5.16	1.0	5	0	103	62.2	130	4.98	3.55	13.1	
Carbon tetrachloride	10.17	1.0	10	0	102	56.4	137	9.98	1.89	20.3	
Chlorobenzene	10.27	1.0	10	1.65	86.2	72.7	128	10.81	5.12	19.6	
Chloroethane	11.41	1.0	10	0	114	71.3	135	10.07	12.5	27.8	
Chloroform	9.71	1.0	10	0	97.1	70.2	125	9.76	0.514	20.3	
Dibromochloromethane	10.39	1.0	10	0	104	69.5	123	10.75	3.41	18.8	
Ethylbenzene	9.03	1.0	10	0	90.3	71.9	129	9.94	9.59	16.3	
Methylene chloride	10.47	1.0	10	0	105	65.3	123	9.94	5.19	21.4	
Tetrachloroethene	11.96	1.0	10	0	120	74.5	121	12.02	0.500	20.9	
Toluene	9.76	1.0	10	0	97.6	73	122	9.88	1.22	19.4	
trans-1,2-Dichloroethene	11.44	1.0	10	0	114	69.1	133	11.5	0.523	16.1	
Trichloroethene	10.1	1.0	10	0	101	71.1	126	9.76	3.42	16.6	
Vinyl chloride	12.54	1.0	10	0	125	65	137	10.97	13.4	20.5	
Xylenes, Total	23.5	1.0	30	0	78.3	72	130	26.18	10.8	16.1	
Surr: 1,2-Dichloroethane-d4	47.66	5.0	50	0	95.3	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	40.03	5.0	50	0	80.1	76.5	125	0	0	0	
Surr: Toluene-d8	48.38	5.0	50	0	96.8	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191021039

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	30 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	johnbleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102119-01-SW-U-A-1	10/21/19	1340	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	102119-02-SW-A-C-1	10/21/19	1405	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	102119-03-SW-D-B-1	10/21/19	1415	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	102119-04-SW-B-C-1	10/21/19	1335	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	102119-05-SW-B-A-1	10/21/19	1425	A/P	W		✓	1	TSS
006	102119-~~FB~~01			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/21/19 4 pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	Kmcs	10/21/19 434pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y ☒ N ☐	(Y) N	(Y) N
Notes: 6°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

191021039

Adirondack Environmental Services, Inc

191021039

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/23/2019

10/21/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191021039-001	102119-01-SW-U-A-1	Water	10/21/2019	10/23/2019	C	B	A				
191021039-002	102119-02-SW-A-C-1	Water	10/21/2019	10/23/2019	C	B	A				
191021039-003	102119-03-SW-D-B-1	Water	10/21/2019	10/23/2019	C	B	A				
191021039-004	102119-04-SW-B-C-1	Water	10/21/2019	10/23/2019	C	B	A				
191021039-005	102119-05-SW-B-A-1	Water	10/21/2019	10/23/2019			A				
191021039-006	102119-TB01	Trip Blank	10/21/2019	10/23/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/22/19 – 10/28/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 10/22/19 through 10/28/19. In accordance with the July 2019 Surface Water Remedial Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there was one exceedance of the water quality criteria (chlorobenzene). The chlorobenzene exceedances (8.6 µg/l vs threshold of 5 µg/l) on 10/23/19. This exceedance was at the downstream background (Buoy 3) location. The sample was collected approximately 1.5 hours before high tide.

Typically, field turbidity readings from the YSI EXO2 sonde were observed to be less than 20 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 20 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the reporting period were typically less than 20 mg/L and never higher than 34 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
102219-01-SW-D-B-1	08:15	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			D	10	12.57	3.61	Rising Tide (Flood)	12.8	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102219-02-SW-A-A-1	08:25	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			A	23	14.90	3.96	Rising Tide (Flood)	22.8	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-03-SW-D-B-1	11:55	AROCLOR-1242	N	ug/l	0.2	0.057	J		D	18	8.92	4.69	Rising Tide (Flood)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-03-SW-D-B-1	11:55	BENZENE	N	ug/l	10	0.9	J		D	18	8.92	4.69	Rising Tide (Flood)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-03-SW-D-B-1	11:55	CHLOROBENZENE	N	ug/l	5	8.6		X	D	18	8.92	4.69	Rising Tide (Flood)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-03-SW-D-B-1	11:55	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	1.6			D	18	8.92	4.69	Rising Tide (Flood)	13	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-04-SW-B-A-1	10:50	CHLOROBENZENE	N	ug/l	5	0.8	J		B	13	9.07	4.92	Rising Tide (Flood)	8.6	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102319-04-SW-B-A-1	10:50	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			B	13	9.07	4.92	Rising Tide (Flood)	8.6	Moon Pool, Double Silt Curtain, Bubble Curtain	10:30
102519-01-SW-U-A-1	09:45	AROCLOR-1242	N	ug/l	0.2	0.049	J		U	15	9.93	0.19	Low Tide	18.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102519-01-SW-U-A-1	09:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			U	15	9.93	0.19	Low Tide	18.5	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102519-02-SW-A-A-1	10:10	AROCLOR-1242	N	ug/l	0.2	0.04	J		A	17	9.55	1.26	Low Tide	16.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102519-03-SW-D-A-1	10:30	BENZENE	N	ug/l	10	0.2	J		D	30	10.07	1.74	Low Tide	14	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102519-03-SW-D-A-1	10:30	CHLOROBENZENE	N	ug/l	5	4.3			D	30	10.07	1.74	Low Tide	14	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102519-03-SW-D-A-1	10:30	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	1.5			D	30	10.07	1.74	Low Tide	14	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
102819-01-SW-U-A-1	13:10	CHLOROBENZENE	N	ug/l	5	2.6			U	16	15.24	4.05	Low Tide	22.2	Moon Pool, Double Silt Curtain, Bubble Curtain	12:00
102819-01-SW-U-A-1	13:10	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.5			U	16	15.24	4.05	Low Tide	22.2	Moon Pool, Double Silt Curtain, Bubble Curtain	12:00
102819-02-SW-A-B-1	13:30	CHLOROBENZENE	N	ug/l	5	1.3			A	11.5	13.62	4.63	Rising Tide (Flood)	20.6	Moon Pool, Double Silt Curtain, Bubble Curtain	12:00
102819-02-SW-A-B-1	13:30	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			A	11.5	13.62	4.63	Rising Tide (Flood)	20.6	Moon Pool, Double Silt Curtain, Bubble Curtain	12:00

J - Analyte detected below quantitation limit

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 24, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191022059
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 10/22/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *24-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191022059	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-01-SW-D-B-1
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 12:38:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/24/2019 12:38:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 12:38:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 12:38:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/24/2019 12:38:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 12:38:00 AM
Surr: 1,2-Dichloroethane-d4	**98.5**	80.9-122		%REC	1	10/24/2019 12:38:00 AM
Surr: 4-Bromofluorobenzene	**111**	76.5-125		%REC	1	10/24/2019 12:38:00 AM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	10/24/2019 12:38:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.8**	1.3		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-02-SW-A-A-1
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 1:00:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 1:00:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 1:00:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/24/2019 1:00:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 1:00:00 AM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	10/24/2019 1:00:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/24/2019 1:00:00 AM
Surr: Toluene-d8	**99.3**	80.4-121		%REC	1	10/24/2019 1:00:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**22.8**	2.0		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT: AECOM Environment
Work Order: **191022059**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102219-03-SW-U-B-1
Collection Date: 10/22/2019
Lab Sample ID: 191022059-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 1:21:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 1:21:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 1:21:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 1:21:00 AM
Surr: 1,2-Dichloroethane-d4	**99.5**	80.9-122		%REC	1	10/24/2019 1:21:00 AM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	10/24/2019 1:21:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	10/24/2019 1:21:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**13.6**	1.3		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-04-SW-B-B-1
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 1:43:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 1:43:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 1:43:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 1:43:00 AM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	10/24/2019 1:43:00 AM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/24/2019 1:43:00 AM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	10/24/2019 1:43:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.5**	1.3		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-05-SW-B-C-1
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/23/2019)						
TSS (Residue, Non-Filterable)	**10.4**	1.3		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-04-SW-B-B-2
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 2:05:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 2:05:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 2:05:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 2:05:00 AM
Surr: 1,2-Dichloroethane-d4	**99.5**	80.9-122		%REC	1	10/24/2019 2:05:00 AM
Surr: 4-Bromofluorobenzene	**99.2**	76.5-125		%REC	1	10/24/2019 2:05:00 AM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/24/2019 2:05:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**15.8**	2.0		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-01-SW-D-B-3
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-007
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 2:26:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 2:26:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 2:26:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 2:26:00 AM
Surr: 1,2-Dichloroethane-d4	**99.7**	80.9-122		%REC	1	10/24/2019 2:26:00 AM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	10/24/2019 2:26:00 AM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/24/2019 2:26:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/23/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**2.0**	1.0		mg/L	1	10/23/2019

Adirondack Environmental Services, Inc

Date: *24-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102219-TB01
Work Order:	**191022059**	**Collection Date:**	10/22/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191022059-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 2:48:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 2:48:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 2:48:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 2:48:00 AM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	10/24/2019 2:48:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/24/2019 2:48:00 AM
Surr: Toluene-d8	**99.2**	80.4-121		%REC	1	10/24/2019 2:48:00 AM

CLIENT: AECOM Environment
Work Order: 191022059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76292

LCS

SeqNo: **2725542** **PrepDate:10/23/2019** TestNo: **SM2540D** RunNo: **176653**
Samp ID: **LCS-76292** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	444	40.0	489	0	90.8	86.5	114	0	0		

DUP

SeqNo: **2725555** **PrepDate:10/23/2019** TestNo: **SM2540D** RunNo: **176653**
Samp ID: **191023042-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	578	20.0	0	0	0	0	0	534	7.91	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191022059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176651

mblk

SeqNo: **2725529** TestNo: **SW8260C** RunNo: **176651**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	0.12	1.0									J
1,3-Dichlorobenzene	0.18	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.29	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.77	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.11	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	49.98	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191022059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176651

lcs

SeqNo: **2725527** TestNo: **SW8260C** RunNo: **176651**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.25	1.0	10	0	92.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.99	1.0	10	0	89.9	72.3	118	0	0		
1,1,2-Trichloroethane	9.85	1.0	10	0	98.5	73.1	123	0	0		
1,1-Dichloroethane	9.41	1.0	10	0	94.1	73.2	127	0	0		
1,1-Dichloroethene	8.72	1.0	10	0	87.2	70.3	128	0	0		
1,2,3-Trichloropropane	4.16	1.0	5	0	83.2	68.4	115	0	0		
1,2-Dichlorobenzene	8.98	1.0	10	0	89.8	71	124	0	0		
1,2-Dichloroethane	9	1.0	10	0	90	72.5	127	0	0		
1,3-Dichlorobenzene	8.7	1.0	10	0	87	72.2	121	0	0		
1,3-Dichloropropane	4.69	1.0	5	0	93.8	76	122	0	0		
1,4-Dichlorobenzene	8.69	1.0	10	0	86.9	71.7	127	0	0		
2-Butanone	7.75	5.0	10	0	77.5	65.1	132	0	0		
4-Methyl-2-pentanone	9.41	5.0	10	0	94.1	68.7	118	0	0		
Acetone	9.52	5.0	10	0	95.2	69.2	133	0	0		
Benzene	9.22	1.0	10	0	92.2	71.2	122	0	0		
Carbon disulfide	4.42	1.0	5	0	88.4	67.8	134	0	0		
Carbon tetrachloride	8.93	1.0	10	0	89.3	74.5	122	0	0		
Chlorobenzene	9.48	1.0	10	0	94.8	72.7	124	0	0		
Chloroethane	9.55	1.0	10	0	95.5	72.3	136	0	0		
Chloroform	8.34	1.0	10	0	83.4	71.6	133	0	0		
Dibromochloromethane	10.23	1.0	10	0	102	70.6	124	0	0		
Ethylbenzene	9.69	1.0	10	0	96.9	70.9	126	0	0		
Methylene chloride	9.36	1.0	10	0	93.6	66.3	130	0	0		
Tetrachloroethene	8.97	1.0	10	0	89.7	72.4	119	0	0		
Toluene	9.29	1.0	10	0	92.9	71.8	116	0	0		
trans-1,2-Dichloroethene	9.35	1.0	10	0	93.5	70.3	120	0	0		
Trichloroethene	8.95	1.0	10	0	89.5	73	127	0	0		
Vinyl chloride	10.42	1.0	10	0	104	65.2	134	0	0		
Xylenes, Total	28.76	1.0	30	0	95.9	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	50.02	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.81	5.0	50	0	102	76.5	125	0	0		
Surr: Toluene-d8	50.28	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191022059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176651

ms	SeqNo: **2725537**	TestNo: **SW8260C**	RunNo: **176651**
	Samp ID: **191022059-004b (102219-04-SW-B-**	Units: **µg/L**	Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.4	1.0	10	0	104	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.07	1.0	10	0	90.7	70.1	123	0	0		
1,1,2-Trichloroethane	9.82	1.0	10	0	98.2	72.1	119	0	0		
1,1-Dichloroethane	10.02	1.0	10	0	100	70.4	126	0	0		
1,1-Dichloroethene	10.63	1.0	10	0	106	70.2	125	0	0		
1,2,3-Trichloropropane	4.14	1.0	5	0	82.8	53.7	101	0	0		
1,2-Dichlorobenzene	9.14	1.0	10	0	91.4	70.2	123	0	0		
1,2-Dichloroethane	9.12	1.0	10	0	91.2	73.5	126	0	0		
1,3-Dichlorobenzene	9.24	1.0	10	0	92.4	70.4	124	0	0		
1,3-Dichloropropane	4.8	1.0	5	0	96	64	125	0	0		
1,4-Dichlorobenzene	8.93	1.0	10	0	89.3	70.8	127	0	0		
2-Butanone	6.86	5.0	10	0	68.6	60.5	123	0	0		
4-Methyl-2-pentanone	8.87	5.0	10	0	88.7	52.8	133	0	0		
Acetone	9.17	5.0	10	0	91.7	56.3	135	0	0		
Benzene	9.97	1.0	10	0	99.7	70.2	127	0	0		
Carbon disulfide	5.19	1.0	5	0	104	62.2	130	0	0		
Carbon tetrachloride	10.91	1.0	10	0	109	56.4	137	0	0		
Chlorobenzene	10.19	1.0	10	0	102	72.7	128	0	0		
Chloroethane	10.19	1.0	10	0	102	71.3	135	0	0		
Chloroform	9.27	1.0	10	0	92.7	70.2	125	0	0		
Dibromochloromethane	10.01	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	10.47	1.0	10	0	105	71.9	129	0	0		
Methylene chloride	8.63	1.0	10	0	86.3	65.3	123	0	0		
Tetrachloroethene	10.58	1.0	10	0	106	74.5	121	0	0		
Toluene	9.93	1.0	10	0	99.3	73	122	0	0		
trans-1,2-Dichloroethene	10.31	1.0	10	0	103	69.1	133	0	0		
Trichloroethene	9.76	1.0	10	0	97.6	71.1	126	0	0		
Vinyl chloride	11.65	1.0	10	0	116	65	137	0	0		
Xylenes, Total	30.72	1.0	30	0	102	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.88	5.0	50	0	99.8	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.44	5.0	50	0	103	76.5	125	0	0		
Surr: Toluene-d8	49.28	5.0	50	0	98.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191022059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176651

msd

SeqNo: **2725538** TestNo: **SW8260C** RunNo: **176651**
Samp ID: **191022059-004b (102219-04-SW-B-** Units: **µg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.52	1.0	10	0	95.2	71.6	126	10.4	8.84	20.4	
1,1,2,2-Tetrachloroethane	8.25	1.0	10	0	82.5	70.1	123	9.07	9.47	18.6	
1,1,2-Trichloroethane	9.08	1.0	10	0	90.8	72.1	119	9.82	7.83	20	
1,1-Dichloroethane	9.79	1.0	10	0	97.9	70.4	126	10.02	2.32	19.2	
1,1-Dichloroethene	9.79	1.0	10	0	97.9	70.2	125	10.63	8.23	16.1	
1,2,3-Trichloropropane	3.8	1.0	5	0	76	53.7	101	4.14	8.56	20	
1,2-Dichlorobenzene	9.65	1.0	10	0	96.5	70.2	123	9.14	5.43	17.9	
1,2-Dichloroethane	8.94	1.0	10	0	89.4	73.5	126	9.12	1.99	15.6	
1,3-Dichlorobenzene	8.74	1.0	10	0	87.4	70.4	124	9.24	5.56	14.3	
1,3-Dichloropropane	4.67	1.0	5	0	93.4	64	125	4.8	2.75	0	
1,4-Dichlorobenzene	8.93	1.0	10	0	89.3	70.8	127	8.93	0	14.4	
2-Butanone	7.63	5.0	10	0	76.3	60.5	123	6.86	10.6	15	
4-Methyl-2-pentanone	8.74	5.0	10	0	87.4	52.8	133	8.87	1.48	11.9	
Acetone	9.04	5.0	10	0	90.4	56.3	135	9.17	1.43	10.6	
Benzene	9.28	1.0	10	0	92.8	70.2	127	9.97	7.17	18.4	
Carbon disulfide	4.83	1.0	5	0	96.6	62.2	130	5.19	7.19	13.1	
Carbon tetrachloride	10.09	1.0	10	0	101	56.4	137	10.91	7.81	20.3	
Chlorobenzene	9.15	1.0	10	0	91.5	72.7	128	10.19	10.8	19.6	
Chloroethane	9.42	1.0	10	0	94.2	71.3	135	10.19	7.85	27.8	
Chloroform	8.61	1.0	10	0	86.1	70.2	125	9.27	7.38	20.3	
Dibromochloromethane	9.27	1.0	10	0	92.7	69.5	123	10.01	7.68	18.8	
Ethylbenzene	8.95	1.0	10	0	89.5	71.9	129	10.47	15.7	16.3	
Methylene chloride	8.39	1.0	10	0	83.9	65.3	123	8.63	2.82	21.4	
Tetrachloroethene	9.98	1.0	10	0	99.8	74.5	121	10.58	5.84	20.9	
Toluene	9.22	1.0	10	0	92.2	73	122	9.93	7.42	19.4	
trans-1,2-Dichloroethene	9.71	1.0	10	0	97.1	69.1	133	10.31	5.99	16.1	
Trichloroethene	9.39	1.0	10	0	93.9	71.1	126	9.76	3.86	16.6	
Vinyl chloride	11.01	1.0	10	0	110	65	137	11.65	5.65	20.5	
Xylenes, Total	26.92	1.0	30	0	89.7	72	130	30.72	13.2	16.1	
Surr: 1,2-Dichloroethane-d4	50.77	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.93	5.0	50	0	95.9	76.5	125	0	0	0	
Surr: Toluene-d8	49.52	5.0	50	0	99	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191022059

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehen
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.blaylock@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102219-01-SW-D-B-1	10/22/19	0815	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	102219-02-SW-A-A-1	10/22/19	0825	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	102219-03-SW-U-B-1	10/22/19	0845	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	102219-04-SW-B-B-1	10/22/19	0755	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	102219-05-SW-B-C-1	10/22/19	0905	A	W		✓	1	TSS
006	102219-04-SW-B-B-2	10/22/19	0805	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	102219-01-SW-D-B-3	10/22/19	1100	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
	102219-TB01			A	TB			1	trip blank
				P					

Shipment Arrived Via:
FedEx UPS Client AES Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/22/19 4:02p
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		10/22/19 5:01p.m.

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Serv

191022059

Adirondack Environmental Services, Inc

191022059

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo



191022059

TAT: **2**

DateDue: 10/24/2019

10/22/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191022059-001	102219-01-SW-D-B-1	Water	10/22/2019	10/24/2019	B	A					
191022059-002	102219-02-SW-A-A-1	Water	10/22/2019	10/24/2019	B	A					
191022059-003	102219-03-SW-U-B-1	Water	10/22/2019	10/24/2019	B	A					
191022059-004	102219-04-SW-B-B-1	Water	10/22/2019	10/24/2019	B	A					
191022059-005	102219-05-SW-B-C-1	Water	10/22/2019	10/24/2019		A					
191022059-006	102219-04-SW-B-B-2	Water	10/22/2019	10/24/2019	B	A					
191022059-007	102219-01-SW-D-B-3	Water	10/22/2019	10/24/2019	B	A					
191022059-008	102219-TB01	Trip Blank	10/22/2019	10/24/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by KAM_____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 25, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191023070
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/23/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*25-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	191023070		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT: AECOM Environment
Work Order: **191023070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102319-01-SW-U-B-1
Collection Date: 10/23/2019
Lab Sample ID: 191023070-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
PCB, Total	**ND**	0.065		µg/L	1	10/23/2019 6:51:31 PM
Surr: Decachlorobiphenyl	**61.0**	57.1-135		%REC	1	10/23/2019 6:51:31 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 2:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 2:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 2:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-01-SW-U-B-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 2:32:00 PM
Surr: 1,2-Dichloroethane-d4	**97.3**	80.9-122		%REC	1	10/24/2019 2:32:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	10/24/2019 2:32:00 PM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	10/24/2019 2:32:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/24/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**7.4**	1.1		mg/L	1	10/24/2019

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT: AECOM Environment
Work Order: **191023070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102319-02-SW-A-A-1
Collection Date: 10/23/2019
Lab Sample ID: 191023070-002
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
PCB, Total	**ND**	0.065		µg/L	1	10/23/2019 7:04:50 PM
Surr: Decachlorobiphenyl	**64.2**	57.1-135		%REC	1	10/23/2019 7:04:50 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 2:54:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 2:54:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 2:54:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-02-SW-A-A-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 2:54:00 PM
Surr: 1,2-Dichloroethane-d4	**99.0**	80.9-122		%REC	1	10/24/2019 2:54:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	10/24/2019 2:54:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	10/24/2019 2:54:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **NK**
(Prep: Gen Prep - 10/24/2019)						
TSS (Residue, Non-Filterable)	**7.6**	1.1		mg/L	1	10/24/2019

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT: AECOM Environment
Work Order: **191023070**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102319-03-SW-D-B-1
Collection Date: 10/23/2019
Lab Sample ID: 191023070-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1242	**0.057**	0.065	J	µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/23/2019 7:18:10 PM
PCB, Total	**0.057**	0.065	J	µg/L	1	10/23/2019 7:18:10 PM
Surr: Decachlorobiphenyl	**63.2**	57.1-135		%REC	1	10/23/2019 7:18:10 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 3:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/24/2019 3:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 3:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Benzene	**0.9**	1.0	J	µg/L	1	10/24/2019 3:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 3:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Chlorobenzene	**8.6**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/24/2019 3:15:00 PM

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-03-SW-D-B-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**1.2**	1.0		µg/L	1	10/24/2019 3:15:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/24/2019 3:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 3:15:00 PM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	10/24/2019 3:15:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/24/2019 3:15:00 PM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	10/24/2019 3:15:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **NK**
(Prep: Gen Prep - 10/24/2019)						
TSS (Residue, Non-Filterable)	**13.0**	1.0		mg/L	1	10/24/2019

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-04-SW-B-A-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/23/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
PCB, Total	**ND**	0.065		µg/L	1	10/23/2019 7:31:30 PM
Surr: Decachlorobiphenyl	**65.2**	57.1-135		%REC	1	10/23/2019 7:31:30 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 3:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 3:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 3:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Chlorobenzene	**0.8**	1.0	J	µg/L	1	10/24/2019 3:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-04-SW-B-A-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/24/2019 3:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 3:37:00 PM
Surr: 1,2-Dichloroethane-d4	**96.0**	80.9-122		%REC	1	10/24/2019 3:37:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	10/24/2019 3:37:00 PM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	10/24/2019 3:37:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/24/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**8.6**	1.1		mg/L	1	10/24/2019

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-05-SW-B-B-1
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **NK**
(Prep: Gen Prep - 10/24/2019)						
TSS (Residue, Non-Filterable)	**7.4**	2.0	Z	mg/L	1	10/24/2019

Adirondack Environmental Services, Inc

Date: *25-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102319-TB01
Work Order:	**191023070**	**Collection Date:**	10/23/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191023070-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Acetone	**ND**	5.0		µg/L	1	10/24/2019 3:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	10/24/2019 3:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/24/2019 3:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Benzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/24/2019 3:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Toluene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/24/2019 3:58:00 PM
Surr: 1,2-Dichloroethane-d4	**98.3**	80.9-122		%REC	1	10/24/2019 3:58:00 PM
Surr: 4-Bromofluorobenzene	**105**	76.5-125		%REC	1	10/24/2019 3:58:00 PM
Surr: Toluene-d8	**106**	80.4-121		%REC	1	10/24/2019 3:58:00 PM

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76293

MBLK

SeqNo: **2725331** PrepDate:**10/23/2019** TestNo: **SW8082A** RunNo: **176607**
Samp ID: **MB-76293** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0864	0.0100	0.1	0	86.4	57.1	135	0	0		

LCS

SeqNo: **2725326** PrepDate: TestNo: **SW8082A** RunNo: **176607**
Samp ID: **LCS-76293** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/23/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.1206	0.0650	0.1	0	121	60	140	0	0		
PCB, Total	0.1206	0.0650	0.1	0	121	60	140	0	0		
Surr: Decachlorobiphenyl	0.0852	0.0100	0.1	0	85.2	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76311

LCS

SeqNo: **2726391** **PrepDate:10/24/2019** TestNo: **SM2540D** RunNo: **176689**
Samp ID: **LCS-76311** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	483	0	101	86.5	114	0	0		

DUP

SeqNo: **2726397** **PrepDate:10/24/2019** TestNo: **SM2540D** RunNo: **176689**
Samp ID: **191023070-005a** **PrepRef:** Units: **mg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	8.6	2.00	0	0	0	0	0	7.4	15.0	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176688

mblk

SeqNo: **2726368** TestNo: **SW8260C** RunNo: **176688**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	0.2	5.0									J
1,2-Dichloroethane	0.11	5.0									J
1,3-Dichlorobenzene	0.18	5.0									J
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	0.25	5.0									J
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	0.16	5.0									J
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	5.0									
Surr: 1,2-Dichloroethane-d4	48.11	5.0	50	0	96.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.2	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	49.88	5.0	50	0	99.8	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176688

lcs

SeqNo: **2726366** TestNo: **SW8260C** RunNo: **176688**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.65	1.0	10	0	96.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.4	1.0	10	0	84	72.3	118	0	0		
1,1,2-Trichloroethane	8.71	1.0	10	0	87.1	73.1	123	0	0		
1,1-Dichloroethane	9.58	1.0	10	0	95.8	73.2	127	0	0		
1,1-Dichloroethene	10.05	1.0	10	0	100	70.3	128	0	0		
1,2,3-Trichloropropane	3.7	1.0	5	0	74	68.4	115	0	0		
1,2-Dichlorobenzene	8.2	1.0	10	0	82	71	124	0	0		
1,2-Dichloroethane	8.26	1.0	10	0	82.6	72.5	127	0	0		
1,3-Dichlorobenzene	7.9	1.0	10	0	79	72.2	121	0	0		
1,3-Dichloropropane	4.54	1.0	5	0	90.8	76	122	0	0		
1,4-Dichlorobenzene	7.64	1.0	10	0	76.4	71.7	127	0	0		
2-Butanone	7.26	5.0	10	0	72.6	65.1	132	0	0		
4-Methyl-2-pentanone	8.24	5.0	10	0	82.4	68.7	118	0	0		
Acetone	7.42	5.0	10	0	74.2	69.2	133	0	0		
Benzene	9.27	1.0	10	0	92.7	71.2	122	0	0		
Carbon disulfide	4.68	1.0	5	0	93.6	67.8	134	0	0		
Carbon tetrachloride	9.64	1.0	10	0	96.4	74.5	122	0	0		
Chlorobenzene	9.48	1.0	10	0	94.8	72.7	124	0	0		
Chloroethane	9.92	1.0	10	0	99.2	72.3	136	0	0		
Chloroform	8.52	1.0	10	0	85.2	71.6	133	0	0		
Dibromochloromethane	8.76	1.0	10	0	87.6	70.6	124	0	0		
Ethylbenzene	9.97	1.0	10	0	99.7	70.9	126	0	0		
Methylene chloride	8.5	1.0	10	0	85	66.3	130	0	0		
Tetrachloroethene	9.53	1.0	10	0	95.3	72.4	119	0	0		
Toluene	9.38	1.0	10	0	93.8	71.8	116	0	0		
trans-1,2-Dichloroethene	9.68	1.0	10	0	96.8	70.3	120	0	0		
Trichloroethene	8.88	1.0	10	0	88.8	73	127	0	0		
Vinyl chloride	11.64	1.0	10	0	116	65.2	134	0	0		
Xylenes, Total	30.09	1.0	30	0	100	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.86	5.0	50	0	97.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.91	5.0	50	0	106	76.5	125	0	0		
Surr: Toluene-d8	50.66	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176688

ms	SeqNo: **2726389**	TestNo: **SW8260C**	RunNo: **176688**
	Samp ID: **191023070-001b (102319-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.59	1.0	10	0	95.9	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.65	1.0	10	0	76.5	70.1	123	0	0		
1,1,2-Trichloroethane	8.81	1.0	10	0	88.1	72.1	119	0	0		
1,1-Dichloroethane	8.89	1.0	10	0	88.9	70.4	126	0	0		
1,1-Dichloroethene	9.33	1.0	10	0	93.3	70.2	125	0	0		
1,2,3-Trichloropropane	3.39	1.0	5	0	67.8	53.7	101	0	0		
1,2-Dichlorobenzene	7.92	1.0	10	0	79.2	70.2	123	0	0		
1,2-Dichloroethane	7.92	1.0	10	0	79.2	73.5	126	0	0		
1,3-Dichlorobenzene	7.49	1.0	10	0	74.9	70.4	124	0	0		
1,3-Dichloropropane	4.25	1.0	5	0	85	64	125	0	0		
1,4-Dichlorobenzene	7.36	1.0	10	0	73.6	70.8	127	0	0		
2-Butanone	9.57	5.0	10	0	95.7	60.5	123	0	0		
4-Methyl-2-pentanone	8.83	5.0	10	0	88.3	52.8	133	0	0		
Acetone	9.21	5.0	10	0	92.1	56.3	135	0	0		
Benzene	9.1	1.0	10	0	91	70.2	127	0	0		
Carbon disulfide	4.52	1.0	5	0	90.4	62.2	130	0	0		
Carbon tetrachloride	9.72	1.0	10	0	97.2	56.4	137	0	0		
Chlorobenzene	8.93	1.0	10	0	89.3	72.7	128	0	0		
Chloroethane	9.43	1.0	10	0	94.3	71.3	135	0	0		
Chloroform	8.1	1.0	10	0	81	70.2	125	0	0		
Dibromochloromethane	8.86	1.0	10	0	88.6	69.5	123	0	0		
Ethylbenzene	9.14	1.0	10	0	91.4	71.9	129	0	0		
Methylene chloride	7.25	1.0	10	0	72.5	65.3	123	0	0		
Tetrachloroethene	9.65	1.0	10	0	96.5	74.5	121	0	0		
Toluene	9.01	1.0	10	0	90.1	73	122	0	0		
trans-1,2-Dichloroethene	8.83	1.0	10	0	88.3	69.1	133	0	0		
Trichloroethene	9.07	1.0	10	0	90.7	71.1	126	0	0		
Vinyl chloride	11.22	1.0	10	0	112	65	137	0	0		
Xylenes, Total	26.75	1.0	30	0	89.2	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.97	5.0	50	0	99.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.65	5.0	50	0	97.3	76.5	125	0	0		
Surr: Toluene-d8	51.59	5.0	50	0	103	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191023070
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176688

msd

SeqNo: **2726390** TestNo: **SW8260C** RunNo: **176688**
Samp ID: **191023070-001b (102319-01-SW-U-** Units: **µg/L** Analysis Date: **10/24/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.57	1.0	10	0	85.7	71.6	126	9.59	11.2	20.4	
1,1,2,2-Tetrachloroethane	8.65	1.0	10	0	86.5	70.1	123	7.65	12.3	18.6	
1,1,2-Trichloroethane	8.76	1.0	10	0	87.6	72.1	119	8.81	0.569	20	
1,1-Dichloroethane	8.72	1.0	10	0	87.2	70.4	126	8.89	1.93	19.2	
1,1-Dichloroethene	8.93	1.0	10	0	89.3	70.2	125	9.33	4.38	16.1	
1,2,3-Trichloropropane	3.97	1.0	5	0	79.4	53.7	101	3.39	15.8	20	
1,2-Dichlorobenzene	8.73	1.0	10	0	87.3	70.2	123	7.92	9.73	17.9	
1,2-Dichloroethane	8.12	1.0	10	0	81.2	73.5	126	7.92	2.49	15.6	
1,3-Dichlorobenzene	8.23	1.0	10	0	82.3	70.4	124	7.49	9.41	14.3	
1,3-Dichloropropane	4.38	1.0	5	0	87.6	64	125	4.25	3.01	0	
1,4-Dichlorobenzene	8.3	1.0	10	0	83	70.8	127	7.36	12.0	14.4	
2-Butanone	6.86	5.0	10	0	68.6	60.5	123	9.57	33.0	15	Z
4-Methyl-2-pentanone	8.88	5.0	10	0	88.8	52.8	133	8.83	0.565	11.9	
Acetone	8.35	5.0	10	0	83.5	56.3	135	9.21	9.79	10.6	
Benzene	8.43	1.0	10	0	84.3	70.2	127	9.1	7.64	18.4	
Carbon disulfide	4.37	1.0	5	0	87.4	62.2	130	4.52	3.37	13.1	
Carbon tetrachloride	9.16	1.0	10	0	91.6	56.4	137	9.72	5.93	20.3	
Chlorobenzene	9.15	1.0	10	0	91.5	72.7	128	8.93	2.43	19.6	
Chloroethane	9.16	1.0	10	0	91.6	71.3	135	9.43	2.90	27.8	
Chloroform	7.92	1.0	10	0	79.2	70.2	125	8.1	2.25	20.3	
Dibromochloromethane	8.84	1.0	10	0	88.4	69.5	123	8.86	0.226	18.8	
Ethylbenzene	8.99	1.0	10	0	89.9	71.9	129	9.14	1.65	16.3	
Methylene chloride	7.17	1.0	10	0	71.7	65.3	123	7.25	1.11	21.4	
Tetrachloroethene	9	1.0	10	0	90	74.5	121	9.65	6.97	20.9	
Toluene	8.53	1.0	10	0	85.3	73	122	9.01	5.47	19.4	
trans-1,2-Dichloroethene	8.73	1.0	10	0	87.3	69.1	133	8.83	1.14	16.1	
Trichloroethene	8.42	1.0	10	0	84.2	71.1	126	9.07	7.43	16.6	
Vinyl chloride	10.67	1.0	10	0	107	65	137	11.22	5.03	20.5	
Xylenes, Total	26.97	1.0	30	0	89.9	72	130	26.75	0.819	16.1	
Surr: 1,2-Dichloroethane-d4	49.44	5.0	50	0	98.9	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	51.67	5.0	50	0	103	76.5	125	0	0	0	
Surr: Toluene-d8	49.4	5.0	50	0	98.8	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order #: 191023070

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102319-01-SW-U-B-1	10/23/19	1110	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	102319-02-SW-A-A-1	10/23/19	1125	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	102319-03-SW-D-B-1	10/23/19	1155	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	102319-04-SW-B-A-1	10/23/19	1050	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	102319-05-SW-B-B-1	10/23/19	1215	A/P	W		✓	1	TSS
006	102319-TB01 ~~COPY~~ m. 10/23/19			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	EOH	10/23/19 16:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
EOH	J. M	10/23/19 5:09pm

Temperature
Ambient or Chilled
Notes: 6°C

AES Bottles
Y ☑ N ☐

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy

YELLOW - Sampler Copy

Adirondack Environmental Servic

Demo
191023070

Adirondack Environmental Services, Inc

191023070

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191023070

TAT: **2**

DateDue: 10/25/2019

10/23/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191023070-001	102319-01-SW-U-B-1	Water	10/23/2019	10/25/2019	C	B	A				
191023070-002	102319-02-SW-A-A-1	Water	10/23/2019	10/25/2019	C	B	A				
191023070-003	102319-03-SW-D-B-1	Water	10/23/2019	10/25/2019	C	B	A				
191023070-004	102319-04-SW-B-A-1	Water	10/23/2019	10/25/2019	C	B	A				
191023070-005	102319-05-SW-B-B-1	Water	10/23/2019	10/25/2019			A				
191023070-006	102319-TB01	Trip Blank	10/23/2019	10/25/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

October 28, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191024060
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/24/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *28-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191024060	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT: AECOM Environment
Work Order: **191024060**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102419-01-SW-U-A-1
Collection Date: 10/24/2019
Lab Sample ID: 191024060-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Acetone	**ND**	5.0		µg/L	1	10/26/2019 1:21:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/26/2019 1:21:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Benzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/26/2019 1:21:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Toluene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/26/2019 1:21:00 AM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	10/26/2019 1:21:00 AM
Surr: 4-Bromofluorobenzene	**97.1**	76.5-125		%REC	1	10/26/2019 1:21:00 AM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	10/26/2019 1:21:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/25/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**11.3**	1.3		mg/L	1	10/25/2019

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102419-02-SW-A-A-1
Work Order:	**191024060**	**Collection Date:**	10/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191024060-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Acetone	**ND**	5.0		µg/L	1	10/26/2019 1:43:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/26/2019 1:43:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Benzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/26/2019 1:43:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Toluene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/26/2019 1:43:00 AM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	10/26/2019 1:43:00 AM
Surr: 4-Bromofluorobenzene	**94.2**	76.5-125		%REC	1	10/26/2019 1:43:00 AM
Surr: Toluene-d8	**95.5**	80.4-121		%REC	1	10/26/2019 1:43:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/25/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**14.7**	1.3		mg/L	1	10/25/2019

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102419-03-SW-D-A-1
Work Order:	**191024060**	**Collection Date:**	10/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191024060-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Acetone	**ND**	5.0		µg/L	1	10/26/2019 2:05:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/26/2019 2:05:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Benzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/26/2019 2:05:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Toluene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/26/2019 2:05:00 AM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	10/26/2019 2:05:00 AM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	10/26/2019 2:05:00 AM
Surr: Toluene-d8	**96.4**	80.4-121		%REC	1	10/26/2019 2:05:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/25/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**10.9**	1.3		mg/L	1	10/25/2019

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102419-04-SW-B-A-1
Work Order:	**191024060**	**Collection Date:**	10/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191024060-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Acetone	**ND**	5.0		µg/L	1	10/26/2019 2:26:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/26/2019 2:26:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Benzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/26/2019 2:26:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Toluene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/26/2019 2:26:00 AM
Surr: 1,2-Dichloroethane-d4	**94.8**	80.9-122		%REC	1	10/26/2019 2:26:00 AM
Surr: 4-Bromofluorobenzene	**112**	76.5-125		%REC	1	10/26/2019 2:26:00 AM
Surr: Toluene-d8	**99.0**	80.4-121		%REC	1	10/26/2019 2:26:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/25/2019)**						Analyst: **NK**
TSS (Residue, Non-Filterable)	**11.6**	1.3		mg/L	1	10/25/2019

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102419-05-SW-B-A-1
Work Order:	**191024060**	**Collection Date:**	10/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191024060-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **NK**
(Prep: Gen Prep - 10/25/2019)						
TSS (Residue, Non-Filterable)	**13.1**	1.3		mg/L	1	10/25/2019

Adirondack Environmental Services, Inc

Date: *28-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102419-TB01
Work Order:	**191024060**	**Collection Date:**	10/24/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191024060-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Chloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Acetone	**ND**	5.0		µg/L	1	10/26/2019 2:48:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Chloroform	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
2-Butanone	**ND**	5.0		µg/L	1	10/26/2019 2:48:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Benzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/26/2019 2:48:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Toluene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	10/26/2019 2:48:00 AM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	10/26/2019 2:48:00 AM
Surr: 4-Bromofluorobenzene	**95.0**	76.5-125		%REC	1	10/26/2019 2:48:00 AM
Surr: Toluene-d8	**89.1**	80.4-121		%REC	1	10/26/2019 2:48:00 AM

CLIENT: AECOM Environment
Work Order: 191024060
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76319

LCS

SeqNo: **2727322** **PrepDate:10/25/2019** TestNo: **SM2540D** RunNo: **176726**
Samp ID: **LCS-76319** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	460	40.0	483	0	95.2	86.5	114	0	0		

DUP

SeqNo: **2727326** **PrepDate:10/25/2019** TestNo: **SM2540D** RunNo: **176726**
Samp ID: **191024030-002a** **PrepRef:** Units: **mg/L** Analysis Date: **10/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	41.6	4.00	0	0	0	0	0	38.4	8.00	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191024060
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176732

mblk

SeqNo: **2727406** TestNo: **SW8260C** RunNo: **176732**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.25	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.31	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	49.54	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.77	5.0	50	0	106	76.5	125	0	0		
Surr: Toluene-d8	48.33	5.0	50	0	96.7	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191024060
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176732

lcs

SeqNo: **2727405** TestNo: **SW8260C** RunNo: **176732**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/25/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.75	1.0	10	0	97.5	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.1	1.0	10	0	101	72.3	118	0	0		
1,1,2-Trichloroethane	9.92	1.0	10	0	99.2	73.1	123	0	0		
1,1-Dichloroethane	9.92	1.0	10	0	99.2	73.2	127	0	0		
1,1-Dichloroethene	9.86	1.0	10	0	98.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.68	1.0	5	0	93.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.34	1.0	10	0	93.4	71	124	0	0		
1,2-Dichloroethane	9.3	1.0	10	0	93	72.5	127	0	0		
1,3-Dichlorobenzene	9.25	1.0	10	0	92.5	72.2	121	0	0		
1,3-Dichloropropane	4.76	1.0	5	0	95.2	76	122	0	0		
1,4-Dichlorobenzene	8.58	1.0	10	0	85.8	71.7	127	0	0		
2-Butanone	9.51	5.0	10	0	95.1	65.1	132	0	0		
4-Methyl-2-pentanone	9.72	5.0	10	0	97.2	68.7	118	0	0		
Acetone	10.35	5.0	10	0	104	69.2	133	0	0		
Benzene	9.6	1.0	10	0	96	71.2	122	0	0		
Carbon disulfide	4.92	1.0	5	0	98.4	67.8	134	0	0		
Carbon tetrachloride	9.82	1.0	10	0	98.2	74.5	122	0	0		
Chlorobenzene	10.43	1.0	10	0	104	72.7	124	0	0		
Chloroethane	8.91	1.0	10	0	89.1	72.3	136	0	0		
Chloroform	9.73	1.0	10	0	97.3	71.6	133	0	0		
Dibromochloromethane	10.46	1.0	10	0	105	70.6	124	0	0		
Ethylbenzene	10.59	1.0	10	0	106	70.9	126	0	0		
Methylene chloride	9.78	1.0	10	0	97.8	66.3	130	0	0		
Tetrachloroethene	9.93	1.0	10	0	99.3	72.4	119	0	0		
Toluene	9.71	1.0	10	0	97.1	71.8	116	0	0		
trans-1,2-Dichloroethene	10.01	1.0	10	0	100	70.3	120	0	0		
Trichloroethene	9.34	1.0	10	0	93.4	73	127	0	0		
Vinyl chloride	9.72	1.0	10	0	97.2	65.2	134	0	0		
Xylenes, Total	31.05	1.0	30	0	104	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.66	5.0	50	0	99.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.19	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	48.9	5.0	50	0	97.8	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191024060
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176732

ms	SeqNo: **2727412**	TestNo: **SW8260C**	RunNo: **176732**
	Samp ID: **191024060-004b (102419-04-SW-B-**	Units: **µg/L**	Analysis Date: **10/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.64	1.0	10	0	96.4	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	9.12	1.0	10	0	91.2	70.1	123	0	0		
1,1,2-Trichloroethane	9.31	1.0	10	0	93.1	72.1	119	0	0		
1,1-Dichloroethane	10.24	1.0	10	0	102	70.4	126	0	0		
1,1-Dichloroethene	10.69	1.0	10	0	107	70.2	125	0	0		
1,2,3-Trichloropropane	3.94	1.0	5	0	78.8	53.7	101	0	0		
1,2-Dichlorobenzene	9.56	1.0	10	0	95.6	70.2	123	0	0		
1,2-Dichloroethane	9.42	1.0	10	0	94.2	73.5	126	0	0		
1,3-Dichlorobenzene	9.36	1.0	10	0	93.6	70.4	124	0	0		
1,3-Dichloropropane	4.72	1.0	5	0	94.4	64	125	0	0		
1,4-Dichlorobenzene	9.51	1.0	10	0	95.1	70.8	127	0	0		
2-Butanone	7.51	5.0	10	0	75.1	60.5	123	0	0		
4-Methyl-2-pentanone	9.1	5.0	10	0	91	52.8	133	0	0		
Acetone	8.9	5.0	10	0	89	56.3	135	0	0		
Benzene	9.13	1.0	10	0	91.3	70.2	127	0	0		
Carbon disulfide	5.19	1.0	5	0	104	62.2	130	0	0		
Carbon tetrachloride	9.83	1.0	10	0	98.3	56.4	137	0	0		
Chlorobenzene	10.54	1.0	10	0	105	72.7	128	0	0		
Chloroethane	9.34	1.0	10	0	93.4	71.3	135	0	0		
Chloroform	9.29	1.0	10	0	92.9	70.2	125	0	0		
Dibromochloromethane	9.92	1.0	10	0	99.2	69.5	123	0	0		
Ethylbenzene	10.49	1.0	10	0	105	71.9	129	0	0		
Methylene chloride	8.9	1.0	10	0	89	65.3	123	0	0		
Tetrachloroethene	10.43	1.0	10	0	104	74.5	121	0	0		
Toluene	9.54	1.0	10	0	95.4	73	122	0	0		
trans-1,2-Dichloroethene	10.4	1.0	10	0	104	69.1	133	0	0		
Trichloroethene	9.54	1.0	10	0	95.4	71.1	126	0	0		
Vinyl chloride	10.83	1.0	10	0	108	65	137	0	0		
Xylenes, Total	30.37	1.0	30	0	101	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	50.5	5.0	50	0	101	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.05	5.0	50	0	100	76.5	125	0	0		
Surr: Toluene-d8	48.7	5.0	50	0	97.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191024060
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176732

msd

SeqNo: **2727413** TestNo: **SW8260C** RunNo: **176732**
Samp ID: **191024060-004b (102419-04-SW-B-** Units: **µg/L** Analysis Date: **10/26/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.74	1.0	10	0	97.4	71.6	126	9.64	1.03	20.4	
1,1,2,2-Tetrachloroethane	9.39	1.0	10	0	93.9	70.1	123	9.12	2.92	18.6	
1,1,2-Trichloroethane	10.13	1.0	10	0	101	72.1	119	9.31	8.44	20	
1,1-Dichloroethane	10.09	1.0	10	0	101	70.4	126	10.24	1.48	19.2	
1,1-Dichloroethene	10.38	1.0	10	0	104	70.2	125	10.69	2.94	16.1	
1,2,3-Trichloropropane	4.22	1.0	5	0	84.4	53.7	101	3.94	6.86	20	
1,2-Dichlorobenzene	10.41	1.0	10	0	104	70.2	123	9.56	8.51	17.9	
1,2-Dichloroethane	9.23	1.0	10	0	92.3	73.5	126	9.42	2.04	15.6	
1,3-Dichlorobenzene	9.86	1.0	10	0	98.6	70.4	124	9.36	5.20	14.3	
1,3-Dichloropropane	4.97	1.0	5	0	99.4	64	125	4.72	5.16	0	
1,4-Dichlorobenzene	9.95	1.0	10	0	99.5	70.8	127	9.51	4.52	14.4	
2-Butanone	7.04	5.0	10	0	70.4	60.5	123	7.51	6.46	15	
4-Methyl-2-pentanone	9.57	5.0	10	0	95.7	52.8	133	9.1	5.03	11.9	
Acetone	9.28	5.0	10	0	92.8	56.3	135	8.9	4.18	10.6	
Benzene	9.74	1.0	10	0	97.4	70.2	127	9.13	6.47	18.4	
Carbon disulfide	5.14	1.0	5	0	103	62.2	130	5.19	0.968	13.1	
Carbon tetrachloride	10.6	1.0	10	0	106	56.4	137	9.83	7.54	20.3	
Chlorobenzene	10.81	1.0	10	0	108	72.7	128	10.54	2.53	19.6	
Chloroethane	9.01	1.0	10	0	90.1	71.3	135	9.34	3.60	27.8	
Chloroform	9.41	1.0	10	0	94.1	70.2	125	9.29	1.28	20.3	
Dibromochloromethane	10.23	1.0	10	0	102	69.5	123	9.92	3.08	18.8	
Ethylbenzene	10.91	1.0	10	0	109	71.9	129	10.49	3.93	16.3	
Methylene chloride	8.67	1.0	10	0	86.7	65.3	123	8.9	2.62	21.4	
Tetrachloroethene	10.96	1.0	10	0	110	74.5	121	10.43	4.96	20.9	
Toluene	9.96	1.0	10	0	99.6	73	122	9.54	4.31	19.4	
trans-1,2-Dichloroethene	10.51	1.0	10	0	105	69.1	133	10.4	1.05	16.1	
Trichloroethene	9.71	1.0	10	0	97.1	71.1	126	9.54	1.77	16.6	
Vinyl chloride	10.67	1.0	10	0	107	65	137	10.83	1.49	20.5	
Xylenes, Total	31.24	1.0	30	0	104	72	130	30.37	2.82	16.1	
Surr: 1,2-Dichloroethane-d4	48.46	5.0	50	0	96.9	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	48.96	5.0	50	0	97.9	76.5	125	0	0	0	
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191024060

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144		
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Graham	
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102419-01-SW-U-A-1	10/24/19	1115	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	102419-02-SW-A-A-1	10/24/19	1130	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	102419-03-SW-D-A-1	10/24/19	1145	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	102419-04-SW-B-A-1	10/24/19	1100	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	102419-05-SW-B-A-1	10/24/19	1200	A	W		✓	1	TSS
				P					
006	102419-TB01 Lot # VOA-F463			A	TB			1	trip blank
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

J.M. 10/24/19

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 10/24/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: J. M.	Date/Time 10/24/19 4:35 PM

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 6°C	Y ☒ N ☐	(Y) N	(Y) N
Notes:		Notes:	

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi



Adirondack Environmental Services, Inc

191024060

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo
191024060

TAT: **2**

DateDue: 10/28/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

10/24/2019

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191024060-001	102419-01-SW-U-A-1	Water	10/24/2019	10/28/2019	B	A					
191024060-002	102419-02-SW-A-A-1	Water	10/24/2019	10/28/2019	B	A					
191024060-003	102419-03-SW-D-A-1	Water	10/24/2019	10/28/2019	B	A					
191024060-004	102419-04-SW-B-A-1	Water	10/24/2019	10/28/2019	B	A					
191024060-005	102419-05-SW-B-A-1	Water	10/24/2019	10/28/2019		A					
191024060-006	102419-TB01	Trip Blank	10/24/2019	10/28/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
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November 01, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191025058
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 10/25/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *01-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191025058	

Sample containers were supplied by Adirondack Environmental Services.

This report has been updated to include the missing compound 1,3-dichloropropane from the QC data.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-01-SW-U-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1242	**0.049**	0.065	J	µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 9:05:34 AM
PCB, Total	**0.049**	0.065	J	µg/L	1	10/28/2019 9:05:34 AM
Surr: Decachlorobiphenyl	**76.8**	57.1-135		%REC	1	10/28/2019 9:05:34 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Acetone	**ND**	5.0		µg/L	1	10/28/2019 2:42:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 2:42:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Benzene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 2:42:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-01-SW-U-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/28/2019 2:42:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 2:42:00 PM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	10/28/2019 2:42:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	10/28/2019 2:42:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/28/2019 2:42:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/28/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.5**	1.3		mg/L	1	10/28/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-02-SW-A-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1242	**0.040**	0.065	J	µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 9:18:54 AM
PCB, Total	**0.040**	0.065	J	µg/L	1	10/28/2019 9:18:54 AM
Surr: Decachlorobiphenyl	**92.2**	57.1-135		%REC	1	10/28/2019 9:18:54 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Acetone	**ND**	5.0		µg/L	1	10/28/2019 3:04:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 3:04:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Benzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 3:04:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-02-SW-A-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 3:04:00 PM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	10/28/2019 3:04:00 PM
Surr: 4-Bromofluorobenzene	**99.4**	76.5-125		%REC	1	10/28/2019 3:04:00 PM
Surr: Toluene-d8	**97.4**	80.4-121		%REC	1	10/28/2019 3:04:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/28/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**16.8**	1.3		mg/L	1	10/28/2019

CLIENT: AECOM Environment
Work Order: **191025058**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102519-03-SW-D-A-1
Collection Date: 10/25/2019
Lab Sample ID: 191025058-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 9:32:13 AM
Surr: Decachlorobiphenyl	**106**	57.1-135		%REC	1	10/28/2019 9:32:13 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Acetone	**ND**	5.0		µg/L	1	10/28/2019 3:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 3:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	10/28/2019 3:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 3:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Chlorobenzene	**4.3**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-03-SW-D-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**1.2**	1.0		µg/L	1	10/28/2019 3:26:00 PM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	10/28/2019 3:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 3:26:00 PM
Surr: 1,2-Dichloroethane-d4	**95.4**	80.9-122		%REC	1	10/28/2019 3:26:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/28/2019 3:26:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/28/2019 3:26:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/28/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**14.0**	1.3		mg/L	1	10/28/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-04-SW-B-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 9:45:31 AM
Surr: Decachlorobiphenyl	**122**	57.1-135		%REC	1	10/28/2019 9:45:31 AM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Acetone	**ND**	5.0		µg/L	1	10/28/2019 3:47:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 3:47:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Benzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 3:47:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-04-SW-B-A-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 3:47:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	10/28/2019 3:47:00 PM
Surr: 4-Bromofluorobenzene	**94.5**	76.5-125		%REC	1	10/28/2019 3:47:00 PM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	10/28/2019 3:47:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/28/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**33.5**	1.3		mg/L	1	10/28/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-05-SW-B-C-1
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/28/2019)						
TSS (Residue, Non-Filterable)	**15.5**	1.3		mg/L	1	10/28/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT: AECOM Environment
Work Order: **191025058**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102519-TB01
Collection Date: 10/25/2019
Lab Sample ID: 191025058-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Acetone	**3.0**	5.0	J	µg/L	1	10/28/2019 4:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 4:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Benzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 4:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 4:09:00 PM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	10/28/2019 4:09:00 PM
Surr: 4-Bromofluorobenzene	**94.1**	76.5-125		%REC	1	10/28/2019 4:09:00 PM
Surr: Toluene-d8	**98.3**	80.4-121		%REC	1	10/28/2019 4:09:00 PM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102519-TB02
Work Order:	**191025058**	**Collection Date:**	10/25/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191025058-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	10/28/2019 4:30:00 PM
Acetone	**ND**	5.0		µg/L	1	10/28/2019 4:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/28/2019 4:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Benzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/28/2019 4:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Toluene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/28/2019 4:30:00 PM
Surr: 1,2-Dichloroethane-d4	**95.7**	80.9-122		%REC	1	10/28/2019 4:30:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	10/28/2019 4:30:00 PM
Surr: Toluene-d8	**98.8**	80.4-121		%REC	1	10/28/2019 4:30:00 PM

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76330

mblk

SeqNo: **2727609** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **mb-76330** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.1428	0.0100	0.1	0	143	57.1	135	0	0		S

lcs

SeqNo: **2727783** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **LCS-76330** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3102	0.0650	0.5	0	62	60	140	0	0		
PCB, Total	0.3102	0.0650	0.5	0	62	60	140	0	0		
Surr: Decachlorobiphenyl	0.0552	0	0.1	0	55.2	57.1	135	0	0		S

ms

SeqNo: **2727677** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **191025058-001c (102519-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.558	0.0650	0.5	0.049	102	46.7	130	0	0		
PCB, Total	0.558	0.0650	0.5	0.049	102	51	150	0	0		
Surr: Decachlorobiphenyl	0.109	0	0.1	0	109	57.1	135	0	0		

msd

SeqNo: **2727678** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **191025058-001c (102519-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76330

msd				
SeqNo: **2727678**	**PrepDate:10/28/2019**	TestNo: **SW8082A**	RunNo: **176737**
Samp ID: **191025058-001c (102519-01-SW-U-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4924	0.0650	0.5	0.049	88.7	46.7	130	0.558	12.5	30	
PCB, Total	0.4924	0.0650	0.5	0.049	88.7	51	150	0.558	12.5	30	
Surr: Decachlorobiphenyl	0.0958	0	0.1	0	95.8	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76338

LCS

SeqNo: **2728575** **PrepDate:10/28/2019** TestNo: **SM2540D** RunNo: **176786**
Samp ID: **LCS-76338** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	500	40.0	489	0	102	86.5	114	0	0		

DUP

SeqNo: **2728583** **PrepDate:10/28/2019** TestNo: **SM2540D** RunNo: **176786**
Samp ID: **191023026-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	86.5	5.00	0	0	0	0	0	79.5	8.43	10	

DUP

SeqNo: **2728593** **PrepDate:10/28/2019** TestNo: **SM2540D** RunNo: **176786**
Samp ID: **191025058-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	18.53	1.30	0	0	0	0	0	18.53	0	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176762

mblk	SeqNo: **2727993**	TestNo: **SW8260C**	RunNo: **176762**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	5.0									
1,1,2,2-Tetrachloroethane	ND	5.0									
1,1,2-Trichloroethane	ND	5.0									
1,1-Dichloroethane	ND	5.0									
1,1-Dichloroethene	ND	5.0									
1,2,3-Trichloropropane	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,2-Dichloroethane	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,3-Dichloropropane	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	5.0									
Carbon disulfide	ND	5.0									
Carbon tetrachloride	ND	5.0									
Chlorobenzene	ND	5.0									
Chloroethane	ND	10									
Chloroform	ND	5.0									
Dibromochloromethane	ND	5.0									
Ethylbenzene	ND	5.0									
Methylene chloride	ND	5.0									
Tetrachloroethene	ND	5.0									
Toluene	ND	5.0									
trans-1,2-Dichloroethene	ND	5.0									
Trichloroethene	ND	5.0									
Vinyl chloride	ND	10									
Xylenes, Total	ND	10									
Surr: 1,2-Dichloroethane-d4	47.2	5.0	50	0	94.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.92	5.0	50	0	91.8	76.5	125	0	0		
Surr: Toluene-d8	48.65	5.0	50	0	97.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176762

lcs

SeqNo: **2727991** TestNo: **SW8260C** RunNo: **176762**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.19	5.0	10	0	112	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.49	5.0	10	0	74.9	72.3	118	0	0		
1,1,2-Trichloroethane	8.96	5.0	10	0	89.6	73.1	123	0	0		
1,1-Dichloroethane	9.56	5.0	10	0	95.6	73.2	127	0	0		
1,1-Dichloroethene	9.87	5.0	10	0	98.7	70.3	128	0	0		
1,2,3-Trichloropropane	3.46	5.0	5	0	69.2	68.4	115	0	0		J
1,2-Dichlorobenzene	9.02	5.0	10	0	90.2	71	124	0	0		
1,2-Dichloroethane	8.61	5.0	10	0	86.1	72.5	127	0	0		
1,3-Dichlorobenzene	8.62	5.0	10	0	86.2	72.2	121	0	0		
1,3-Dichloropropane	4.32	5.0	5	0	86.4	76	122	0	0		J
1,4-Dichlorobenzene	8.23	5.0	10	0	82.3	71.7	127	0	0		
2-Butanone	8.04	10	10	0	80.4	65.1	132	0	0		J
4-Methyl-2-pentanone	7.01	10	10	0	70.1	68.7	118	0	0		J
Acetone	8.45	10	10	0	84.5	69.2	133	0	0		J
Benzene	10.43	5.0	10	0	104	71.2	122	0	0		
Carbon disulfide	5.1	5.0	5	0	102	67.8	134	0	0		
Carbon tetrachloride	11.99	5.0	10	0	120	74.5	122	0	0		
Chlorobenzene	9.35	5.0	10	0	93.5	72.7	124	0	0		
Chloroethane	7.82	10	10	0	78.2	72.3	136	0	0		J
Chloroform	9	5.0	10	0	90	71.6	133	0	0		
Dibromochloromethane	10.23	5.0	10	0	102	70.6	124	0	0		
Ethylbenzene	9.7	5.0	10	0	97	70.9	126	0	0		
Methylene chloride	8.98	5.0	10	0	89.8	66.3	130	0	0		
Tetrachloroethene	10.46	5.0	10	0	105	72.4	119	0	0		
Toluene	9.32	5.0	10	0	93.2	71.8	116	0	0		
trans-1,2-Dichloroethene	10.02	5.0	10	0	100	70.3	120	0	0		
Trichloroethene	9.91	5.0	10	0	99.1	73	127	0	0		
Vinyl chloride	8.91	10	10	0	89.1	65.2	134	0	0		J
Xylenes, Total	27.89	10	30	0	93	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.1	5.0	50	0	96.2	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.59	5.0	50	0	97.2	76.5	125	0	0		
Surr: Toluene-d8	49.73	5.0	50	0	99.5	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176762

ms	SeqNo: **2728213**	TestNo: **SW8260C**	RunNo: **176762**
	Samp ID: **191025058-001b (102519-01-SW-U-**	Units: **µg/L**	Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.51	1.0	10	0	95.1	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	7.78	1.0	10	0	77.8	70.1	123	0	0		
1,1,2-Trichloroethane	8.85	1.0	10	0	88.5	72.1	119	0	0		
1,1-Dichloroethane	9.11	1.0	10	0	91.1	70.4	126	0	0		
1,1-Dichloroethene	9.77	1.0	10	0	97.7	70.2	125	0	0		
1,2,3-Trichloropropane	3.45	1.0	5	0	69	53.7	101	0	0		
1,2-Dichlorobenzene	8.49	1.0	10	0	84.9	70.2	123	0	0		
1,2-Dichloroethane	8.32	1.0	10	0	83.2	73.5	126	0	0		
1,3-Dichlorobenzene	8.35	1.0	10	0	83.5	70.4	124	0	0		
1,3-Dichloropropane	4.08	1.0	5	0	81.6	64	125	0	0		
1,4-Dichlorobenzene	8.26	1.0	10	0.21	80.5	70.8	127	0	0		
2-Butanone	6.12	5.0	10	0	61.2	60.5	123	0	0		
4-Methyl-2-pentanone	7.39	5.0	10	0	73.9	52.8	133	0	0		
Acetone	13.54	5.0	10	0	135	56.3	135	0	0		S
Benzene	9.08	1.0	10	0	90.8	70.2	127	0	0		
Carbon disulfide	4.9	1.0	5	0	98	62.2	130	0	0		
Carbon tetrachloride	10.14	1.0	10	0	101	56.4	137	0	0		
Chlorobenzene	9.29	1.0	10	0	92.9	72.7	128	0	0		
Chloroethane	9.12	1.0	10	0	91.2	71.3	135	0	0		
Chloroform	8.48	1.0	10	0	84.8	70.2	125	0	0		
Dibromochloromethane	9.29	1.0	10	0	92.9	69.5	123	0	0		
Ethylbenzene	9.88	1.0	10	0	98.8	71.9	129	0	0		
Methylene chloride	7.88	1.0	10	0	78.8	65.3	123	0	0		
Tetrachloroethene	10.18	1.0	10	0	102	74.5	121	0	0		
Toluene	9.2	1.0	10	0	92	73	122	0	0		
trans-1,2-Dichloroethene	9.59	1.0	10	0	95.9	69.1	133	0	0		
Trichloroethene	9.43	1.0	10	0	94.3	71.1	126	0	0		
Vinyl chloride	9.42	1.0	10	0	94.2	65	137	0	0		
Xylenes, Total	28.45	1.0	30	0	94.8	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.75	5.0	50	0	97.5	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.36	5.0	50	0	98.7	76.5	125	0	0		
Surr: Toluene-d8	49.02	5.0	50	0	98	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191025058
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176762

msd

SeqNo: **2728216** TestNo: **SW8260C** RunNo: **176762**
Samp ID: **191025058-001b (102519-01-SW-U-** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.92	1.0	10	0	79.2	71.6	126	9.51	18.2	20.4	
1,1,2,2-Tetrachloroethane	7.37	1.0	10	0	73.7	70.1	123	7.78	5.41	18.6	
1,1,2-Trichloroethane	7.86	1.0	10	0	78.6	72.1	119	8.85	11.8	20	
1,1-Dichloroethane	7.9	1.0	10	0	79	70.4	126	9.11	14.2	19.2	
1,1-Dichloroethene	7.67	1.0	10	0	76.7	70.2	125	9.77	24.1	16.1	Z
1,2,3-Trichloropropane	3.45	1.0	5	0	69	53.7	101	3.45	0	20	
1,2-Dichlorobenzene	7.67	1.0	10	0	76.7	70.2	123	8.49	10.1	17.9	
1,2-Dichloroethane	7.22	1.0	10	0	72.2	73.5	126	8.32	14.2	15.6	S
1,3-Dichlorobenzene	7.32	1.0	10	0	73.2	70.4	124	8.35	13.1	14.3	
1,3-Dichloropropane	3.78	1.0	5	0	75.6	64	125	4.08	7.63	0	
1,4-Dichlorobenzene	7.48	1.0	10	0.21	72.7	70.8	127	8.26	9.91	14.4	
2-Butanone	6.37	5.0	10	0	63.7	60.5	123	6.12	4.00	15	
4-Methyl-2-pentanone	7.22	5.0	10	0	72.2	52.8	133	7.39	2.33	11.9	
Acetone	7.58	5.0	10	0	75.8	56.3	135	13.54	56.4	10.6	Z
Benzene	7.64	1.0	10	0	76.4	70.2	127	9.08	17.2	18.4	
Carbon disulfide	3.78	1.0	5	0	75.6	62.2	130	4.9	25.8	13.1	Z
Carbon tetrachloride	8.14	1.0	10	0	81.4	56.4	137	10.14	21.9	20.3	Z
Chlorobenzene	7.97	1.0	10	0	79.7	72.7	128	9.29	15.3	19.6	
Chloroethane	7.21	1.0	10	0	72.1	71.3	135	9.12	23.4	27.8	
Chloroform	7.42	1.0	10	0	74.2	70.2	125	8.48	13.3	20.3	
Dibromochloromethane	8.14	1.0	10	0	81.4	69.5	123	9.29	13.2	18.8	
Ethylbenzene	8.22	1.0	10	0	82.2	71.9	129	9.88	18.3	16.3	Z
Methylene chloride	6.41	1.0	10	0	64.1	65.3	123	7.88	20.6	21.4	S
Tetrachloroethene	7.96	1.0	10	0	79.6	74.5	121	10.18	24.5	20.9	Z
Toluene	7.77	1.0	10	0	77.7	73	122	9.2	16.9	19.4	
trans-1,2-Dichloroethene	7.49	1.0	10	0	74.9	69.1	133	9.59	24.6	16.1	Z
Trichloroethene	7.75	1.0	10	0	77.5	71.1	126	9.43	19.6	16.6	Z
Vinyl chloride	7.42	1.0	10	0	74.2	65	137	9.42	23.8	20.5	Z
Xylenes, Total	24.42	1.0	30	0	81.4	72	130	28.45	15.2	16.1	
Surr: 1,2-Dichloroethane-d4	47.6	5.0	50	0	95.2	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.7	5.0	50	0	99.4	76.5	125	0	0	0	
Surr: Toluene-d8	49.59	5.0	50	0	99.2	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191025058

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
Samplers: (Signature)		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102519-01-SW-U-A-1	10/25/19	0945	A/P	W		✓	6	PCBs
	↓	↓	↓	A/P	↓		↓	6	VOCs
	↓	↓	↓	A/P	↓		↓	3	TSS
002	102519-02-SW-A-A-1	10/25/19	1010	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	102519-03-SW-D-A-1	10/25/19	1030	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	102519-04-SW-B-A-1	10/25/19	0930	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	102519-05-SW-B-C-1	10/25/19	1100	A/P	W		✓	1	TSS
	102519-~~TB~~01			A/P	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

VOA - FLG 3
VOA - HCl 3

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/25/19 4:15P
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	Knaz	10/25/19 438pm

Temperature
Ambient or (Chilled) 4°C
Notes:_____

AES Bottles
Y ☑ N ☐

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi

191025058

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 19102505S

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
	102519-TB02		A/P	TB			1	trip blank
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/25/19 4:15P
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	Kmaz	10/25/19 4:38pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 4° C	Y ☑ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

191025058

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 229608

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/29/2019

10/25/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191025058-001	102519-01-SW-U-A-1	Water	10/25/2019	10/29/2019	C	B	A				
191025058-002	102519-02-SW-A-A-1	Water	10/25/2019	10/29/2019	C	B	A				
191025058-003	102519-03-SW-D-A-1	Water	10/25/2019	10/29/2019	C	B	A				
191025058-004	102519-04-SW-B-A-1	Water	10/25/2019	10/29/2019	C	B	A				
191025058-005	102519-05-SW-B-C-1	Water	10/25/2019	10/29/2019			A				
191025058-006	102519-TB01	Trip Blank	10/25/2019	10/29/2019		A					
191025058-007	102519-TB02	Trip Blank	10/25/2019	10/29/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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October 30, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191028028
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/28/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *30-Oct-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191028028	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

- ND : Not Detected at reporting limit
- J: Analyte detected below quantitation limit
- B: Analyte detected in Blank
- X : Exceeds maximum contamination limit
- H: Hold time exceeded
- N: Matrix Spike below acceptable limits
- N+: Matrix Spike is above acceptable limits
- C: CCV below acceptable Limits
- C+: CCV above acceptable Limits
- S: LCS Spike recovery is below acceptable limits
- S+: LCS Spike recovery is above acceptable limits
- Z: Duplication outside acceptable limits
- T : Tentatively Identified Compound-Estimated
- E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT: AECOM Environment
Work Order: **191028028**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102819-01-SW-U-A-1
Collection Date: 10/28/2019
Lab Sample ID: 191028028-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 3:02:04 PM
Surr: Decachlorobiphenyl	**80.8**	57.1-135		%REC	1	10/28/2019 3:02:04 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 1:37:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 1:37:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 1:37:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Chlorobenzene	**2.6**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-01-SW-U-A-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.5**	1.0	J	µg/L	1	10/29/2019 1:37:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 1:37:00 PM
Surr: 1,2-Dichloroethane-d4	**93.3**	80.9-122		%REC	1	10/29/2019 1:37:00 PM
Surr: 4-Bromofluorobenzene	**99.0**	76.5-125		%REC	1	10/29/2019 1:37:00 PM
Surr: Toluene-d8	**94.2**	80.4-121		%REC	1	10/29/2019 1:37:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/29/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**22.2**	2.0		mg/L	1	10/29/2019

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-02-SW-A-B-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 3:15:23 PM
Surr: Decachlorobiphenyl	**78.4**	57.1-135		%REC	1	10/28/2019 3:15:23 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 1:58:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 1:58:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 1:58:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0	N	µg/L	1	10/29/2019 1:58:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Chlorobenzene	**1.3**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-02-SW-A-B-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	10/29/2019 1:58:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 1:58:00 PM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	10/29/2019 1:58:00 PM
Surr: 4-Bromofluorobenzene	**97.5**	76.5-125		%REC	1	10/29/2019 1:58:00 PM
Surr: Toluene-d8	**95.5**	80.4-121		%REC	1	10/29/2019 1:58:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/29/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**20.6**	2.0		mg/L	1	10/29/2019

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT: AECOM Environment
Work Order: **191028028**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102819-03-SW-D-B-1
Collection Date: 10/28/2019
Lab Sample ID: 191028028-003
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 3:42:00 PM
Surr: Decachlorobiphenyl	**92.4**	57.1-135		%REC	1	10/28/2019 3:42:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 2:20:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 2:20:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 2:20:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-03-SW-D-B-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 2:20:00 PM
Surr: 1,2-Dichloroethane-d4	**99.2**	80.9-122		%REC	1	10/29/2019 2:20:00 PM
Surr: 4-Bromofluorobenzene	**96.9**	76.5-125		%REC	1	10/29/2019 2:20:00 PM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	10/29/2019 2:20:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/29/2019)						
TSS (Residue, Non-Filterable)	**20.7**	1.3		mg/L	1	10/29/2019

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT: AECOM Environment
Work Order: **191028028**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102819-04-SW-B-A-1
Collection Date: 10/28/2019
Lab Sample ID: 191028028-004
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/28/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
PCB, Total	**ND**	0.065		µg/L	1	10/28/2019 3:28:42 PM
Surr: Decachlorobiphenyl	**82.0**	57.1-135		%REC	1	10/28/2019 3:28:42 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 2:41:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 2:41:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 2:41:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-04-SW-B-A-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 2:41:00 PM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	10/29/2019 2:41:00 PM
Surr: 4-Bromofluorobenzene	**107**	76.5-125		%REC	1	10/29/2019 2:41:00 PM
Surr: Toluene-d8	**95.2**	80.4-121		%REC	1	10/29/2019 2:41:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/29/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**25.8**	2.0		mg/L	1	10/29/2019

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102819-05-SW-B-A-1
Work Order:	**191028028**	**Collection Date:**	10/28/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191028028-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/29/2019)						
TSS (Residue, Non-Filterable)	**21.4**	2.0		mg/L	1	10/29/2019

Adirondack Environmental Services, Inc

Date: *30-Oct-19*

CLIENT: AECOM Environment
Work Order: **191028028**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 102819-TB01
Collection Date: 10/28/2019
Lab Sample ID: 191028028-006
Matrix: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 3:03:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 3:03:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 3:03:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 3:03:00 PM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	10/29/2019 3:03:00 PM
Surr: 4-Bromofluorobenzene	**93.6**	76.5-125		%REC	1	10/29/2019 3:03:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	10/29/2019 3:03:00 PM

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76330

mblk

SeqNo: **2727609** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **mb-76330** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.1428	0.0100	0.1	0	143	57.1	135	0	0		S

lcs

SeqNo: **2727783** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **LCS-76330** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.3102	0.0650	0.5	0	62	60	140	0	0		
PCB, Total	0.3102	0.0650	0.5	0	62	60	140	0	0		
Surr: Decachlorobiphenyl	0.0552	0	0.1	0	55.2	57.1	135	0	0		S

ms

SeqNo: **2727677** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **191025058-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.558	0.0650	0.5	0.049	102	46.7	130	0	0		
PCB, Total	0.558	0.0650	0.5	0.049	102	51	150	0	0		
Surr: Decachlorobiphenyl	0.109	0	0.1	0	109	57.1	135	0	0		

msd

SeqNo: **2727678** PrepDate:**10/28/2019** TestNo: **SW8082A** RunNo: **176737**
Samp ID: **191025058-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76330

msd	SeqNo: **2727678**	**PrepDate:10/28/2019**	TestNo: **SW8082A**	RunNo: **176737**
	Samp ID: **191025058-001c**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **10/28/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4924	0.0650	0.5	0.049	88.7	46.7	130	0.558	12.5	30	
PCB, Total	0.4924	0.0650	0.5	0.049	88.7	51	150	0.558	12.5	30	
Surr: Decachlorobiphenyl	0.0958	0	0.1	0	95.8	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76365

LCS

SeqNo: **2730027** PrepDate:**10/29/2019** TestNo: **SM2540D** RunNo: **176839**
Samp ID: **LCS-76365** PrepRef:**(Gen Prep)** Units: **mg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	504	40.0	489	0	103	86.5	114	0	0		

DUP

SeqNo: **2730029** PrepDate:**10/29/2019** TestNo: **SM2540D** RunNo: **176839**
Samp ID: **191028016-001F** PrepRef: Units: **mg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	252	6.70	0	0	0	0	0	232.7	7.98	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

mblk

SeqNo: **2728638** TestNo: **SW8260C** RunNo: **176793**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.19	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.99	5.0	50	0	96	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.95	5.0	50	0	97.9	76.5	125	0	0		
Surr: Toluene-d8	47.51	5.0	50	0	95	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

lcs	SeqNo: **2728636**	TestNo: **SW8260C**	RunNo: **176793**
	Samp ID: **lcs**	Units: **µg/L**	Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.84	1.0	10	0	98.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.19	1.0	10	0	91.9	73.1	123	0	0		
1,1-Dichloroethane	9.59	1.0	10	0	95.9	73.2	127	0	0		
1,1-Dichloroethene	9.86	1.0	10	0	98.6	70.3	128	0	0		
1,2,3-Trichloropropane	3.68	1.0	5	0	73.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.23	1.0	10	0	92.3	71	124	0	0		
1,2-Dichloroethane	8.79	1.0	10	0	87.9	72.5	127	0	0		
1,3-Dichlorobenzene	9.3	1.0	10	0	93	72.2	121	0	0		
1,3-Dichloropropane	4.22	1.0	5	0	84.4	76	122	0	0		
1,4-Dichlorobenzene	8.79	1.0	10	0	87.9	71.7	127	0	0		
2-Butanone	9.48	5.0	10	0	94.8	65.1	132	0	0		
4-Methyl-2-pentanone	8.23	5.0	10	0	82.3	68.7	118	0	0		
Acetone	8.29	5.0	10	0	82.9	69.2	133	0	0		
Benzene	9.17	1.0	10	0	91.7	71.2	122	0	0		
Carbon disulfide	4.9	1.0	5	0	98	67.8	134	0	0		
Carbon tetrachloride	10.17	1.0	10	0	102	74.5	122	0	0		
Chlorobenzene	9.65	1.0	10	0	96.5	72.7	124	0	0		
Chloroethane	8.99	1.0	10	0	89.9	72.3	136	0	0		
Chloroform	8.87	1.0	10	0	88.7	71.6	133	0	0		
Dibromochloromethane	9.34	1.0	10	0	93.4	70.6	124	0	0		
Ethylbenzene	10.23	1.0	10	0	102	70.9	126	0	0		
Methylene chloride	8.18	1.0	10	0	81.8	66.3	130	0	0		
Tetrachloroethene	11.85	1.0	10	0	118	72.4	119	0	0		
Toluene	9.43	1.0	10	0	94.3	71.8	116	0	0		
trans-1,2-Dichloroethene	9.77	1.0	10	0	97.7	70.3	120	0	0		
Trichloroethene	9.53	1.0	10	0	95.3	73	127	0	0		
Vinyl chloride	9.1	1.0	10	0	91	65.2	134	0	0		
Xylenes, Total	31.21	1.0	30	0	104	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.3	5.0	50	0	96.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.5	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	49.03	5.0	50	0	98.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

ms	SeqNo: **2729181**	TestNo: **SW8260C**	RunNo: **176793**
	Samp ID: **191028028-002b (102819-02-SW-A-**	Units: **µg/L**	Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.33	1.0	10	0	93.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.46	1.0	10	0	64.6	70.1	123	0	0		S
1,1,2-Trichloroethane	8.48	1.0	10	0	84.8	72.1	119	0	0		
1,1-Dichloroethane	8.92	1.0	10	0	89.2	70.4	126	0	0		
1,1-Dichloroethene	9.56	1.0	10	0	95.6	70.2	125	0	0		
1,2,3-Trichloropropane	3.1	1.0	5	0	62	53.7	101	0	0		
1,2-Dichlorobenzene	7.88	1.0	10	0.25	76.3	70.2	123	0	0		
1,2-Dichloroethane	7.91	1.0	10	0	79.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.61	1.0	10	0	76.1	70.4	124	0	0		
1,3-Dichloropropane	4.01	1.0	5	0	80.2	64	125	0	0		
1,4-Dichlorobenzene	7.32	1.0	10	0	73.2	70.8	127	0	0		
2-Butanone	8.27	5.0	10	0	82.7	60.5	123	0	0		
4-Methyl-2-pentanone	6.96	5.0	10	0	69.6	52.8	133	0	0		
Acetone	8.57	5.0	10	0	85.7	56.3	135	0	0		
Benzene	8.2	1.0	10	0	82	70.2	127	0	0		
Carbon disulfide	4.53	1.0	5	0	90.6	62.2	130	0	0		
Carbon tetrachloride	10.01	1.0	10	0	100	56.4	137	0	0		
Chlorobenzene	8.54	1.0	10	1.29	72.5	72.7	128	0	0		S
Chloroethane	7.77	1.0	10	0	77.7	71.3	135	0	0		
Chloroform	8.2	1.0	10	0	82	70.2	125	0	0		
Dibromochloromethane	8.81	1.0	10	0	88.1	69.5	123	0	0		
Ethylbenzene	7.87	1.0	10	0	78.7	71.9	129	0	0		
Methylene chloride	7.19	1.0	10	0	71.9	65.3	123	0	0		
Tetrachloroethene	9.6	1.0	10	0	96	74.5	121	0	0		
Toluene	8.27	1.0	10	0	82.7	73	122	0	0		
trans-1,2-Dichloroethene	9.5	1.0	10	0	95	69.1	133	0	0		
Trichloroethene	9.03	1.0	10	0	90.3	71.1	126	0	0		
Vinyl chloride	8.75	1.0	10	0	87.5	65	137	0	0		
Xylenes, Total	23.14	1.0	30	0	77.1	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.57	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.07	5.0	50	0	88.1	76.5	125	0	0		
Surr: Toluene-d8	48.44	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191028028
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

msd

SeqNo: **2729182** TestNo: **SW8260C** RunNo: **176793**
Samp ID: **191028028-002b (102819-02-SW-A-** Units: **µg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.44	1.0	10	0	84.4	71.6	126	9.33	10.0	20.4	
1,1,2,2-Tetrachloroethane	6.66	1.0	10	0	66.6	70.1	123	6.46	3.05	18.6	S
1,1,2-Trichloroethane	8.16	1.0	10	0	81.6	72.1	119	8.48	3.85	20	
1,1-Dichloroethane	8.47	1.0	10	0	84.7	70.4	126	8.92	5.18	19.2	
1,1-Dichloroethene	9.03	1.0	10	0	90.3	70.2	125	9.56	5.70	16.1	
1,2,3-Trichloropropane	3.14	1.0	5	0	62.8	53.7	101	3.1	1.28	20	
1,2-Dichlorobenzene	8.36	1.0	10	0.25	81.1	70.2	123	7.88	5.91	17.9	
1,2-Dichloroethane	7.88	1.0	10	0	78.8	73.5	126	7.91	0.380	15.6	
1,3-Dichlorobenzene	7.82	1.0	10	0	78.2	70.4	124	7.61	2.72	14.3	
1,3-Dichloropropane	3.87	1.0	5	0	77.4	64	125	4.01	3.55	0	
1,4-Dichlorobenzene	8.07	1.0	10	0	80.7	70.8	127	7.32	9.75	14.4	
2-Butanone	8.97	5.0	10	0	89.7	60.5	123	8.27	8.12	15	
4-Methyl-2-pentanone	7.64	5.0	10	0	76.4	52.8	133	6.96	9.32	11.9	
Acetone	9.09	5.0	10	0	90.9	56.3	135	8.57	5.89	10.6	
Benzene	8.03	1.0	10	0	80.3	70.2	127	8.2	2.09	18.4	
Carbon disulfide	4.42	1.0	5	0	88.4	62.2	130	4.53	2.46	13.1	
Carbon tetrachloride	9.23	1.0	10	0	92.3	56.4	137	10.01	8.11	20.3	
Chlorobenzene	8.68	1.0	10	1.29	73.9	72.7	128	8.54	1.63	19.6	
Chloroethane	7.69	1.0	10	0	76.9	71.3	135	7.77	1.03	27.8	
Chloroform	7.86	1.0	10	0	78.6	70.2	125	8.2	4.23	20.3	
Dibromochloromethane	8.88	1.0	10	0	88.8	69.5	123	8.81	0.791	18.8	
Ethylbenzene	7.63	1.0	10	0	76.3	71.9	129	7.87	3.10	16.3	
Methylene chloride	7.23	1.0	10	0	72.3	65.3	123	7.19	0.555	21.4	
Tetrachloroethene	9.3	1.0	10	0	93	74.5	121	9.6	3.17	20.9	
Toluene	8.29	1.0	10	0	82.9	73	122	8.27	0.242	19.4	
trans-1,2-Dichloroethene	9.02	1.0	10	0	90.2	69.1	133	9.5	5.18	16.1	
Trichloroethene	8.62	1.0	10	0	86.2	71.1	126	9.03	4.65	16.6	
Vinyl chloride	8.21	1.0	10	0	82.1	65	137	8.75	6.37	20.5	
Xylenes, Total	23.2	1.0	30	0	77.3	72	130	23.14	0.259	16.1	
Surr: 1,2-Dichloroethane-d4	49.28	5.0	50	0	98.6	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	44.79	5.0	50	0	89.6	76.5	125	0	0	0	
Surr: Toluene-d8	47.22	5.0	50	0	94.4	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191028028

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patryck Gehan	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102819-01-SW-U-A-1	10/28/19	1310	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	102819-02-SW-A-B-1	10/28/19	1330	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	102819-03-SW-D-B-1	10/28/19	1350	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	102819-04-SW-B-A-1	10/28/19	1255	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	102819-05-SW-B-A-1	10/28/19	1400	A/P	W		✓	1	TSS
006	102819-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Trip Blank
Lot# VOA-F471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/28/19 4:15p
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	Kmg	10/28/19 430pm

Temperature: Ambient or (Chilled) Notes: 4°C

AES Bottles: (Y) ☐ N

Properly Preserved: (Y) N Notes:

Received Within Holding Times: (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

191028028

Adirondack Environmental Services, Inc

191028028

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

191028028

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 229608

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/30/2019

10/28/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191028028-001	102819-01-SW-U-A-1	Water	10/28/2019	10/30/2019	C	B	A				
191028028-002	102819-02-SW-A-B-1	Water	10/28/2019	10/30/2019	C	B	A				
191028028-003	102819-03-SW-D-B-1	Water	10/28/2019	10/30/2019	C	B	A				
191028028-004	102819-04-SW-B-A-1	Water	10/28/2019	10/30/2019	C	B	A				
191028028-005	102819-05-SW-B-A-1	Water	10/28/2019	10/30/2019			A				
191028028-006	102819-TB01	Trip Blank	10/28/2019	10/30/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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Bulkhead Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/15/18 – 10/26/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (10 working days) to evaluate conditions within the river during the sheet pile bulkhead installation activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) TSS samples collected from each monitoring buoy at approximately shallow, mid-depth, and near bottom in the water column. These samples are also analyzed for turbidity in the laboratory to allow comparison with the real-time measurements and TSS data;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes turbidity/ TSS/ chemistry data collected during the above referenced reporting period

Total Suspended Solids/ Turbidity Sampling

In accordance with the Monitoring Plan, during the sheet pile installation (10/15/18 through 10/26/18), 90 daily TSS/ turbidity water grab samples were collected. Turbidity was analyzed in the field and in the laboratory. A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The TSS and turbidity grab samples were each collected in 500 milliliter (ml) poly bottles. While the sample was being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to Eurofins laboratory in Lancaster, PA.

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

Field turbidity data and laboratory TSS data collected during the reporting period are presented in Table 1.

- Real-time turbidity observations at the Site were typically less than 13 NTU during this period (n=89), with the one remaining observation at 15.5 NTU. The laboratory analyzed turbidity samples ranged from 3 to 24 NTU, suggesting all data collected (field and lab) was in the same general range.
- The lower portion of the water column continued to have the highest turbidity (average 4.9 NTU). The middle and surficial horizon consistently had the lowest values (averages 4.4 and 4.3 NTU respectively).
- Although there was some minor variability in the data set, field and laboratory turbidity measurements were generally consistent with one another.

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 sheetpile installation during the period 10/15/18 through 10/26/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings). TSS and turbidity samples were collected from two additional depths.

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (Table 2). The chemical sampling/ monitoring lab reports are presented in Attachment A.

PCBs were undetected (filtered and non-filtered) during the monitoring program. Over the reporting period, there were two low level exceedances of the water quality criteria (Table 3) for zinc and mercury which are not believed to be Site-related, This low level detection may be representative of ambient Site conditions, is consistent with previous monitoring results, and does not appear related on Site remedial activities.

Summary

Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the remainder of bulkhead installation (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency will be reduced to collection of two samples per week. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the sheetpile installation.

Table 1: Water Quality Detections Summary

Sample ID	Sample Date/ Time	Field Turbidity (NTU)	Lab Turbidity (NTU)	Lab TSS (mg/L)
101518-01-SW-U-A-1	10/15/18 11:50	11.1	11	12200
101518-02-SW-A-A-1	10/15/18 12:30	12.8	13	15500
101518-03-SW-D-A-1	10/15/18 11:15	9.6	9.4	10000
101618-01-SW-U-A-1	10/16/18 14:05	6.1	6.8	8000
101618-02-SW-A-A-1	10/16/18 13:05	6.5	7.8	7160
101618-03-SW-D-A-1	10/16/18 12:05	5.7	6.9	6710
101718-01-SW-U-A-1	10/17/18 9:45	4.1	6	8210
101718-02-SW-A-A-1	10/17/18 9:10	4.1	7.6	9250
101718-03-SW-D-A-1	10/17/18 8:35	5.7	8.3	9850
101818-01-SW-U-A-1	10/18/18 10:25	3.7	6.7	7160
101818-02-SW-A-A-1	10/18/18 9:50	5.2	8.8	10000
101818-03-SW-D-A-1	10/18/18 9:10	4.8	7.5	8510
101918-01-SW-U-A-1	10/19/18 8:25	6.5	6.6	7460
101918-02-SW-A-A-1	10/19/18 9:00	5.2	6	5820
101918-03-SW-D-A-1	10/19/18 9:50	7.3	8.3	9250
102218-01-SW-U-A-1	10/22/18 10:10	2.9	5.5	5710
102218-02-SW-A-A-1	10/22/18 10:45	2.8	6.3	4860
102218-03-SW-D-A-1	10/22/18 11:20	5	7.5	9710
102318-01-SW-U-A-1	10/23/18 8:00	3.2	7.4	5670
102318-02-SW-A-A-1	10/23/18 8:40	4	5.8	7010
102318-03-SW-D-A-1	10/23/18 9:50	3	6.8	5820
102418-01-SW-U-A-1	10/24/18 8:20	2.8	5.5	5220
102418-02-SW-A-A-1	10/24/18 8:55	2.1	5.2	5820
102418-03-SW-D-A-1	10/24/18 9:45	4.1	4	5670
102518-01-SW-U-A-1	10/25/18 8:00	4.2	5.2	6420
102518-02-SW-A-A-1	10/25/18 8:40	3.7	6.5	4630
102518-03-SW-D-A-1	10/25/18 9:30	3	4.7	4180
102618-01-SW-U-A-1	10/26/18 10:10	2.1	3.6	3430
102618-02-SW-A-A-1	10/26/18 9:25	2.5	5.1	4480
102618-03-SW-D-A-1	10/26/18 8:45	3	5.7	4480
101518-01-SW-U-B-1	10/15/18 11:55	10.4	10	8960
101518-02-SW-A-B-1	10/15/18 12:45	12	11	13900
101518-03-SW-D-B-1	10/15/18 11:20	8.6	10	11800
101618-01-SW-U-B-1	10/16/18 14:10	5.9	7.9	6420
101618-02-SW-A-B-1	10/16/18 13:10	6	7.3	7010
101618-03-SW-D-B-1	10/16/18 12:10	5.4	6.7	7750
101718-01-SW-U-B-1	10/17/18 9:50	3.2	8.2	8510
101718-02-SW-A-B-1	10/17/18 9:15	3.8	8.1	9550
101718-03-SW-D-B-1	10/17/18 8:45	4.8	7.7	9550

Sample ID	Sample Date/ Time	Field Turbidity (NTU)	Lab Turbidity (NTU)	Lab TSS (mg/L)
101818-01-SW-U-B-1	10/18/18 10:30	2.5	5.5	6420
101818-02-SW-A-B-1	10/18/18 9:55	4	8.9	8660
101818-03-SW-D-B-1	10/18/18 9:15	3.9	6.9	8510
101918-01-SW-U-B-1	10/19/18 8:30	4.5	6.5	7010
101918-02-SW-A-B-1	10/19/18 9:05	5	5.7	6270
101918-03-SW-D-B-1	10/19/18 9:55	7.2	24	18200
102218-01-SW-U-B-1	10/22/18 10:15	2.7	4.5	5290
102218-02-SW-A-B-1	10/22/18 10:50	2.8	5.6	4860
102218-03-SW-D-B-1	10/22/18 11:25	4	6.6	5430
102318-01-SW-U-B-1	10/23/18 8:10	3.1	5.8	5370
102318-02-SW-A-B-1	10/23/18 8:45	3.7	6	6720
102318-03-SW-D-B-1	10/23/18 9:55	3	5.7	5520
102418-01-SW-U-B-1	10/24/18 8:25	2.4	4	5370
102418-02-SW-A-B-1	10/24/18 9:00	1.8	4.5	4930
102418-03-SW-D-B-1	10/24/18 9:55	2.3	4.7	4480
102518-01-SW-U-B-1	10/25/18 8:05	3.6	6	5670
102518-02-SW-A-B-1	10/25/18 8:45	3.5	4	4780
102518-03-SW-D-B-1	10/25/18 9:35	2.8	5.2	4480
102618-01-SW-U-B-1	10/26/18 10:15	2.5	4	3750 J
102618-02-SW-A-B-1	10/26/18 9:30	2.7	5.8	3880
102618-03-SW-D-B-1	10/26/18 8:50	2.7	5.2	4480
101518-01-SW-U-C-1	10/15/18 12:00	9.4	11	12400
101518-02-SW-A-C-1	10/15/18 12:50	10	11	11800
101518-03-SW-D-C-1	10/15/18 11:25	9.1	9.7	9550
101618-01-SW-U-C-1	10/16/18 14:15	5.1	6.5	6270
101618-02-SW-A-C-1	10/16/18 13:15	5.7	6.6	7610
101618-03-SW-D-C-1	10/16/18 12:15	5.1	7.8	6130
101718-01-SW-U-C-1	10/17/18 9:55	3	4.5	6270
101718-02-SW-A-C-1	10/17/18 9:20	3.7	6.8	8360
101718-03-SW-D-C-1	10/17/18 8:50	4.5	7.5	9400
101818-01-SW-U-C-1	10/18/18 10:35	2	5.8	6120
101818-02-SW-A-C-1	10/18/18 10:00	4.1	7.4	8210
101818-03-SW-D-C-1	10/18/18 9:20	3	7.3	8360
101918-01-SW-U-C-1	10/19/18 8:35	4.6	5.7	6420
101918-02-SW-A-C-1	10/19/18 9:10	4.2	5.7	5520
101918-03-SW-D-C-1	10/19/18 10:00	15.5	15	25100
102218-01-SW-U-C-1	10/22/18 10:20	2.4	5.6	5290
102218-02-SW-A-C-1	10/22/18 11:00	2.6	6.4	5000
102218-03-SW-D-C-1	10/22/18 11:30	4.1	7	5570
102318-01-SW-U-C-1	10/23/18 8:15	2.9	5.3	5220

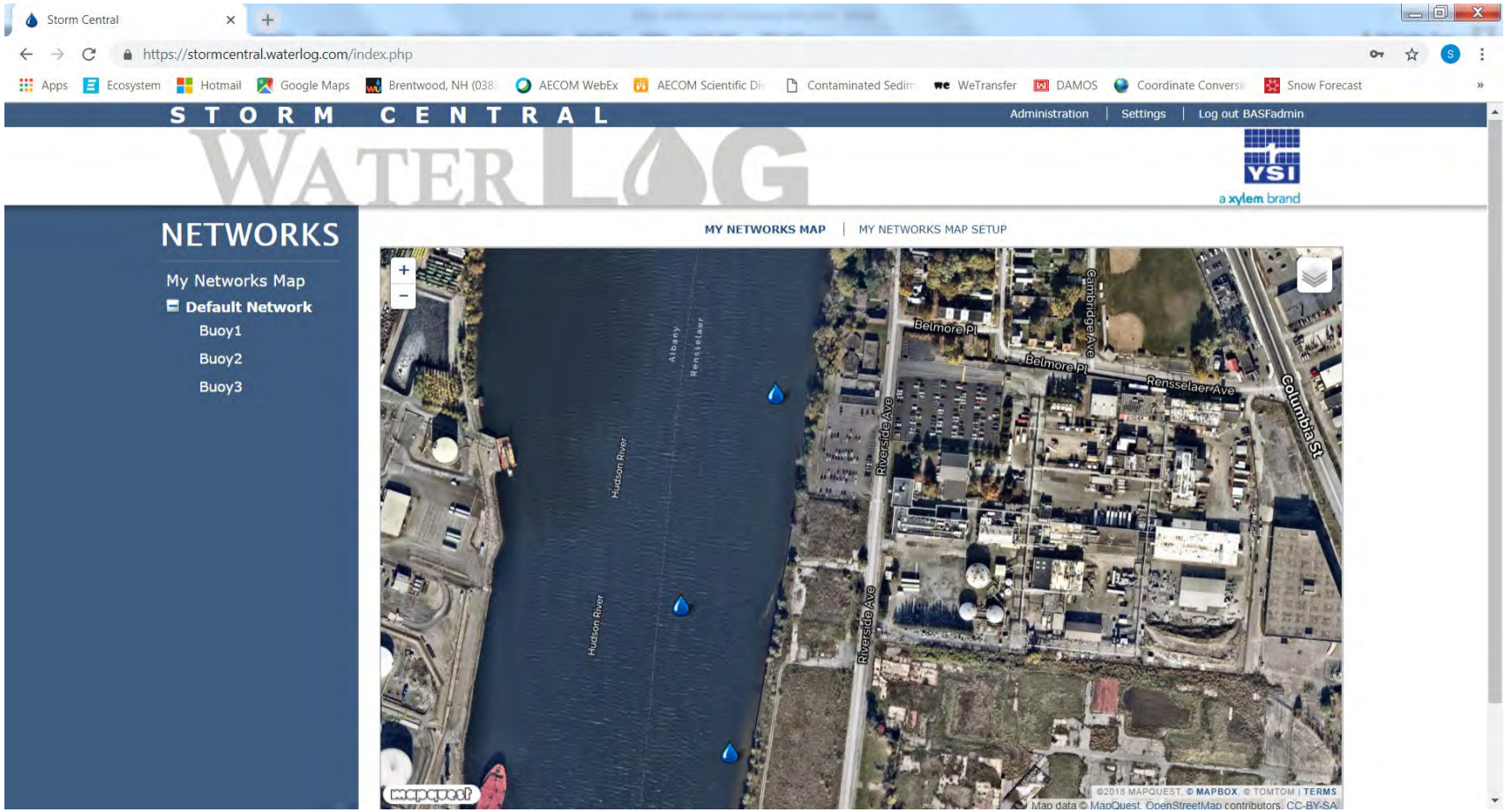
Sample ID	Sample Date/ Time	Field Turbidity (NTU)	Lab Turbidity (NTU)	Lab TSS (mg/L)
102318-02-SW-A-C-1	10/23/18 8:50	3.6	5.1	5520
102318-03-SW-D-C-1	10/23/18 10:00	4.2	4	5520
102418-01-SW-U-C-1	10/24/18 8:30	1.7	5	4030
102418-02-SW-A-C-1	10/24/18 9:05	1.6	4.4	4480
102418-03-SW-D-C-1	10/24/18 10:00	2	4.7	4630
102518-01-SW-U-C-1	10/25/18 8:10	3.2	4.9	5520
102518-02-SW-A-C-1	10/25/18 8:50	3	5.2	5070
102518-03-SW-D-C-1	10/25/18 9:40	2.6	5.7	3730
102618-01-SW-U-C-1	10/26/18 10:20	2	5.6	3280
102618-02-SW-A-C-1	10/26/18 9:35	2.2	4.5	4030
102618-03-SW-D-C-1	10/26/18 8:55	2.9	5.9	3580

Table 2: Water Quality Exceedances Summary

Sample ID	Analyte	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
101518-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		
101518-01-SW-U-A-1	ZINC	D	µg/l	18.6	12.6	J	
101518-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101518-02-SW-A-A-1	ZINC	D	µg/l	17.8	11.4	J	
101518-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
101518-03-SW-D-A-1	ZINC	D	µg/l	17.9	12.3	J	
101618-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.7		
101618-01-SW-U-A-1	ZINC	D	µg/l	17.2	6.7	J	
101618-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		
101618-02-SW-A-A-1	ZINC	D	µg/l	15.9	12.2	J	
101618-03-SW-D-A-1	ARSENIC	D	µg/l	150	0.88	J	
101618-03-SW-D-A-1	CHLOROBENZENE	T	µg/l	5	0.3	J	
101618-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.9		
101618-03-SW-D-A-1	ZINC	D	µg/l	15.0	14.2	J	
101618-03-SW-D-A-2	CHLOROBENZENE	T	µg/l	5	0.2	J	
101618-03-SW-D-A-2	DICHLOROBENZENE (SUM)	T	µg/l	5	0.7		
101618-03-SW-D-A-2	ZINC	D	µg/l	15.4	13.3	J	
101718-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		
101718-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101718-03-SW-D-A-1	ARSENIC	D	µg/l	150	0.75	J	
101718-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		
101818-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101818-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
101818-02-SW-A-A-1	ZINC	D	µg/l	17.8	13.8	J	
101818-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101818-03-SW-D-A-1	ZINC	D	µg/l	19.5	13.5	J	
101918-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101918-01-SW-U-A-1	ZINC	D	µg/l	16.6	12	J	
101918-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.5		
101918-02-SW-A-A-1	ZINC	D	µg/l	16.6	12.1	J	

Sample ID	Analyte	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
101918-03-SW-D-C-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
101918-03-SW-D-C-1	ZINC	D	µg/l	17.0	17.5		X
102218-01-SW-U-A-1	ZINC	D	µg/l	17.5	10.4	J	
102218-02-SW-A-A-1	CHROMIUM, TOTAL	D	µg/l	163.9	4.4		
102218-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102218-02-SW-A-A-1	ZINC	D	µg/l	16.4	11.9	J	
102218-03-SW-D-A-1	MERCURY	T	µg/l	0.05	0.064	J	X
102218-03-SW-D-A-1	ZINC	D	µg/l	16.8	10.4	J	
102318-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
102318-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
102318-03-SW-D-C-1	ARSENIC	D	µg/l	150	0.92	J	
102318-03-SW-D-C-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
102318-03-SW-D-C-2	ARSENIC	D	µg/l	150	0.88	J	
102318-03-SW-D-C-2	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102418-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
102418-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
102418-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102518-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102518-01-SW-U-A-1	ZINC	D	µg/l	16.8	12.7	J	
102518-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
102518-03-SW-D-A-1	CHLOROBENZENE	T	µg/l	5	0.2	J	
102518-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
102618-01-SW-U-B-1	CHROMIUM, TOTAL	D	µg/l	164.3	0.92	J	
102618-01-SW-U-B-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102618-01-SW-U-B-1	ZINC	D	µg/l	16.5	13.1	J	
102618-02-SW-A-B-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.2		
102618-02-SW-A-B-1	ZINC	D	µg/l	16.9	13.1	J	
102618-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
102618-03-SW-D-A-1	ZINC	D	µg/l	16.8	11.8	J	

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 29, 2018 10:02

Project: Rensselaer

Account #: 04285
Group Number: 1998856
SDG: RNS27
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101518-01-SW-U-A-1 Grab Surface Water	10/15/2018 11:50	9853650
101518-01-SW-U-A-1 Grab Surface Water	10/15/2018 11:50	9853651
101518-01-SW-U-B-1 Grab Surface Water	10/15/2018 11:55	9853652
101518-01-SW-U-C-1 Grab Surface Water	10/15/2018 12:00	9853653
101518-02-SW-A-A-1 Grab Surface Water	10/15/2018 12:30	9853654
101518-02-SW-A-A-1 Grab Surface Water	10/15/2018 12:30	9853655
101518-02-SW-A-B-1 Grab Surface Water	10/15/2018 12:45	9853656
101518-02-SW-A-C-1 Grab Surface Water	10/15/2018 12:50	9853657
101518-03-SW-D-A-1 Grab Surface Water	10/15/2018 11:15	9853658
101518-03-SW-D-A-1 Grab Surface Water	10/15/2018 11:15	9853659
101518-03-SW-D-B-1 Grab Surface Water	10/15/2018 11:20	9853660
101518-03-SW-D-C-1 Grab Surface Water	10/15/2018 11:25	9853661
101518-TB-01 Water	10/15/2018 15:00	9853662

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101518-01-SW-U-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:50
SDG#: RNS27-01

BASF Corporation
ELLE Sample #: WW 9853650
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101518-01-SW-U-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:50
SDG#: RNS27-01

BASF Corporation
ELLE Sample #: WW 9853650
ELLE Group #: 1998856
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 23:01	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 23:01	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 15:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 03:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001101A	10/17/2018 12:50	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18289121451A	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:41	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-01-SW-U-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:50
SDG#: RNS27-02

BASF Corporation
ELLE Sample #: WW 9853651
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 15:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:03	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-01-SW-U-B-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:55
SDG#: RNS27-03

BASF Corporation
ELLE Sample #: WW 9853652
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,960	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451A	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:41	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-01-SW-U-C-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:00
SDG#: RNS27-04

BASF Corporation
ELLE Sample #: WW 9853653
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451A	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:35	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-02-SW-A-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:30
SDG#: RNS27-05

BASF Corporation
ELLE Sample #: WW 9853654
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.141	0.706	1
14188	PCB-1221	11104-28-2	N.D. D1	0.141	0.706	1
14188	PCB-1232	11141-16-5	N.D. D1	0.141	0.706	1
14188	PCB-1242	53469-21-9	N.D. D1	0.141	0.706	1
14188	PCB-1248	12672-29-6	N.D. D1	0.141	0.706	1
14188	PCB-1254	11097-69-1	N.D. D1	0.141	0.706	1
14188	PCB-1260	11096-82-5	N.D. D1	0.141	0.706	1
14188	PCB-1262	37324-23-5	N.D. D1	0.105	0.706	1
14188	PCB-1268	11100-14-4	N.D. D1	0.105	0.706	1
14188	Total PCBs	1336-36-3	N.D.	0.105	0.706	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.80 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	19.2	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101518-02-SW-A-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:30
SDG#: RNS27-05

BASF Corporation
ELLE Sample #: WW 9853654
ELLE Group #: 1998856
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 23:20	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 23:20	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 16:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:05	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001101A	10/17/2018 13:14	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18289121451A	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:35	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-02-SW-A-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:30
SDG#: RNS27-06

BASF Corporation
ELLE Sample #: WW 9853655
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 16:10	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:07	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-02-SW-A-B-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:45
SDG#: RNS27-07

BASF Corporation
ELLE Sample #: WW 9853656
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	13,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451A	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:36	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-02-SW-A-C-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 12:50
SDG#: RNS27-08

BASF Corporation
ELLE Sample #: WW 9853657
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451B	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:36	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-03-SW-D-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:15
SDG#: RNS27-09

BASF Corporation
ELLE Sample #: WW 9853658
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.132	0.661	1
14188	PCB-1221	11104-28-2	N.D. D1	0.132	0.661	1
14188	PCB-1232	11141-16-5	N.D. D1	0.132	0.661	1
14188	PCB-1242	53469-21-9	N.D. D1	0.132	0.661	1
14188	PCB-1248	12672-29-6	N.D. D1	0.132	0.661	1
14188	PCB-1254	11097-69-1	N.D. D1	0.132	0.661	1
14188	PCB-1260	11096-82-5	N.D. D1	0.132	0.661	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0979	0.661	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0979	0.661	1
14188	Total PCBs	1336-36-3	N.D.	0.0979	0.661	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.4	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101518-03-SW-D-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:15
SDG#: RNS27-09

BASF Corporation
ELLE Sample #: WW 9853658
ELLE Group #: 1998856
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 12:32	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 12:32	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 16:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:14	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:50	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001101A	10/17/2018 13:22	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18289121451B	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:36	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-03-SW-D-A-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:15
SDG#: RNS27-10

BASF Corporation
ELLE Sample #: WW 9853659
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.142	0.710	1
14188	PCB-1221	11104-28-2	N.D. D1	0.142	0.710	1
14188	PCB-1232	11141-16-5	N.D. D1	0.142	0.710	1
14188	PCB-1242	53469-21-9	N.D. D1	0.142	0.710	1
14188	PCB-1248	12672-29-6	N.D. D1	0.142	0.710	1
14188	PCB-1254	11097-69-1	N.D. D1	0.142	0.710	1
14188	PCB-1260	11096-82-5	N.D. D1	0.142	0.710	1
14188	PCB-1262	37324-23-5	N.D. D1	0.105	0.710	1
14188	PCB-1268	11100-14-4	N.D. D1	0.105	0.710	1
14188	Total PCBs	1336-36-3	N.D.	0.105	0.710	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.3 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182900009A	10/18/2018 16:31	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182900009A	10/17/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182900705002A	10/20/2018 04:16	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182900705002	10/18/2018 05:24	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-03-SW-D-B-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:20
SDG#: RNS27-11

BASF Corporation
ELLE Sample #: WW 9853660
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451B	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:36	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-03-SW-D-C-1 Grab Surface Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 11:25
SDG#: RNS27-12

BASF Corporation
ELLE Sample #: WW 9853661
ELLE Group #: 1998856
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,550	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18289121451B	10/16/2018 20:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385803A	10/17/2018 16:36	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101518-TB-01 Water**
COC: 568032

Project Name: **Rensselaer**

Submittal Date/Time: 10/16/2018 10:20
Collection Date/Time: 10/15/2018 15:00
SDG#: RNS27-13TB

BASF Corporation
ELLE Sample #: WW 9853662
ELLE Group #: 1998856
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 21:20	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 21:20	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:02

Group Number: 1998856

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E182984AA	Sample number(s): 9853650,9853654,9853662		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: L182991AA	Sample number(s): 9853658		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182900009A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182900705002A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182920571401	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659		
Mercury	N.D.	0.050	0.20
	NTU	NTU	NTU
Batch number: 18289121451A	Sample number(s): 9853650,9853652-9853654,9853656		
Turbidity	0.15 J	0.140	1.00
Batch number: 18289121451B	Sample number(s): 9853657-9853658,9853660-9853661		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:02

Group Number: 1998856

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18290001101A	Sample number(s): 9853650,9853654,9853658		
Total Hardness	N.D.	3,000	10,000
Batch number: 18290385803A	Sample number(s): 9853653-9853654,9853656-9853658,9853660-9853661		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18290385804A	Sample number(s): 9853650,9853652		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: E182984AA	Sample number(s): 9853650,9853654,9853662								
Benzene	20	18.74	20	20.79	94	104	80-120	10	30
Chlorobenzene	20	20.68	20	19.71	103	99	80-120	5	30
1,2-Dichlorobenzene	20	20.48	20	20.47	102	102	80-120	0	30
1,3-Dichlorobenzene	20	21.21	20	19.91	106	100	80-120	6	30
1,4-Dichlorobenzene	20	20.88	20	20.11	104	101	80-120	4	30
Batch number: L182991AA	Sample number(s): 9853658								
Benzene	20	21.16	20	20.9	106	104	80-120	1	30
Chlorobenzene	20	21.89	20	21.68	109	108	80-120	1	30
1,2-Dichlorobenzene	20	21.51	20	21.28	108	106	80-120	1	30
1,3-Dichlorobenzene	20	21.19	20	21.24	106	106	80-120	0	30
1,4-Dichlorobenzene	20	21.49	20	21.51	107	108	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182900009A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659								
PCB-1016	5.01	3.53	5.01	3.79	71	76	50-140	7	36
PCB-1260	5.00	4.00	5.00	4.73	80	95	50-140	17	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182900705002A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659								
Arsenic	10	9.96			100		85-115		
Cadmium	5.00	4.90			98		85-115		
Chromium	50	50.69			101		85-115		
Copper	50	57.7			115		85-115		
Lead	15	16.19			108		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:02

Group Number: 1998856

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	518.49			104		85-115		
Batch number: 182920571401	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659								
Mercury	1.00	0.901			90		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18289121451A	Sample number(s): 9853650,9853652-9853654,9853656								
Turbidity	10	9.70			97		90-104		
Batch number: 18289121451B	Sample number(s): 9853657-9853658,9853660-9853661								
Turbidity	10	9.70			97		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18290001101A	Sample number(s): 9853650,9853654,9853658								
Total Hardness	40000	39550			99		85-110		
Batch number: 18290385803A	Sample number(s): 9853653-9853654,9853656-9853658,9853660-9853661								
Total Suspended Solids	150000	144300			96		89-105		
Batch number: 18290385804A	Sample number(s): 9853650,9853652								
Total Suspended Solids	150000	147800			99		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182900705002A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659 UNSPK: 9853650									
Arsenic	N.D.	10	11.2			112		70-130		
Cadmium	N.D.	5.00	5.03			101		70-130		
Chromium	N.D.	50	51.71			103		70-130		
Copper	N.D.	50	53.34			107		70-130		
Lead	N.D.	15	15.92			106		70-130		
Zinc	14.32	500	525.51			102		70-130		
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18290001101A	Sample number(s): 9853650,9853654,9853658 UNSPK: 9853650									
Total Hardness	89400	80000	158440			86		85-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:02

Group Number: 1998856

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182900705002A	Sample number(s): 9853650-9853651,9853654-9853655,9853658-9853659 BKG: 9853650			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	14.32	13.74	4 (1)	20
	N T U	N T U		
Batch number: 18289121451A	Sample number(s): 9853650,9853652-9853654,9853656 BKG: 9853650			
Turbidity	11	11	0	8
Batch number: 18289121451B	Sample number(s): 9853657-9853658,9853660-9853661 BKG: 9853657			
Turbidity	11	11	0	8
	ug/l	ug/l		
Batch number: 18290001101A	Sample number(s): 9853650,9853654,9853658 BKG: 9853650			
Total Hardness	89400	79900	11* (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E182984AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9853650	98	99	94	92
9853654	97	99	95	94
9853662	95	91	93	96
Blank	89	89	95	95
LCS	96	98	96	97
LCSD	100	108	112	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9853658	106	110	105	106

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:02

Group Number: 1998856

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	102	101	100	98
LCS	102	101	101	100
LCSD	102	104	100	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182900009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9853650	67	86	65	78
9853651	61	90	59	87
9853654	55	78	54	75
9853655	56	82	54	81
9853658	64	77	61	74
9853659	60	84	59	84
Blank	62	98	61	97
LCS	58	33	55	34
LCSD	56	85	55	83
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1998856 Sample # 9853650-62

COC # 568032

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F,N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260C	Turbidity – SM2130	Remarks
101518-01-SW-U-A-1	10/15/18	1150	✓		13	2	2	1	1	1	1	1	3	1	
101518-01-SW-U-B-1	10/15/18	1155	✓		2							1		1	
101518-01-SW-U-C-1	10/15/18	1200	✓		2							1		1	
101518-02-SW-A-A-1	10/15/18	1230	✓		13	2	2	1	1	1	1	1	3	1	
101518-02-SW-A-B-1	10/15/18	1245	✓		2							1		1	
101518-02-SW-A-C-1	10/15/18	1250	✓		2							1		1	
101518-03-SW-D-A-1	10/15/18	1115	✓		13	2	2	1	1	1	1	1	3	1	
101518-03-SW-D-B-1	10/15/18	1120	✓		2						1			1	
101518-03-SW-D-C-1	10/15/18	1125	✓		2						1			1	
101518-TB-01	10/15/18	1500	✓		1								1		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/17/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/15/18	1600			
			[signature]	10/16/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.5-1.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230147

Group Number(s): 1998856

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/16/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kristin Zeigler (2123) at 12:25 on 10/16/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.5	DT	Wet	Y	Bagged	N
2	DT131	1.1	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 26, 2018 10:24

Project: Rensselaer

Account #: 04285
Group Number: 1999340
SDG: RNS28
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101618-01-SW-U-A-1 Grab Surface Water	10/16/2018 14:05	9855584
101618-01-SW-U-A-1 Filtered Grab Surface Water	10/16/2018 14:05	9855585
101618-01-SW-U-B-1 Grab Surface Water	10/16/2018 14:10	9855586
101618-01-SW-U-C-1 Grab Surface Water	10/16/2018 14:15	9855587
101618-02-SW-A-A-1 Grab Surface Water	10/16/2018 13:05	9855588
101618-02-SW-A-A-1 MS Grab Surface Water	10/16/2018 13:05	9855589
101618-02-SW-A-A-1 MSD Grab Surface Water	10/16/2018 13:05	9855590
101618-02-SW-A-A-1 DUP Grab Surface Water	10/16/2018 13:05	9855591
101618-02-SW-A-A-1 Filtered Grab Surface Water	10/16/2018 13:05	9855592
101618-02-SW-A-A-1 MS Filtered Grab Surface Water	10/16/2018 13:05	9855593
101618-02-SW-A-A-1 MSD Filtered Grab Surface Water	10/16/2018 13:05	9855594
101618-02-SW-A-A-1 DUP Filtered Grab Surface Water	10/16/2018 13:05	9855595
101618-02-SW-A-B-1 Grab Surface Water	10/16/2018 13:10	9855596
101618-02-SW-A-C-1 Grab Surface Water	10/16/2018 13:15	9855597
101618-03-SW-D-A-1 Grab Surface Water	10/16/2018 12:05	9855598
101618-03-SW-D-A-1 Filtered Grab Surface Water	10/16/2018 12:05	9855599
101618-03-SW-D-B-1 Grab Surface Water	10/16/2018 12:10	9855600
101618-03-SW-D-C-1 Grab Surface Water	10/16/2018 12:15	9855601
101618-03-SW-D-A-2 Grab Surface Water	10/16/2018 12:30	9855602
101618-03-SW-D-A-2 Filtered Grab Surface Water	10/16/2018 12:30	9855603
101618-TB-01 Water	10/16/2018 14:00	9855604

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101618-01-SW-U-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:05
SDG#: RNS28-01

BASF Corporation
ELLE Sample #: WW 9855584
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101618-01-SW-U-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:05
SDG#: RNS28-01

BASF Corporation
ELLE Sample #: WW 9855584
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 18:04	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 18:04	Chelsea B Riehl	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910003A	10/19/2018 15:32	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910003A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 18:31	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18290121451A	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385805A	10/17/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:05
SDG#: RNS28-02

BASF Corporation
ELLE Sample #: WW 9855585
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910003A	10/19/2018 15:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910003A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:13	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-01-SW-U-B-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:10
SDG#: RNS28-03

BASF Corporation
ELLE Sample #: WW 9855586
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.9	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451A	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:42	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-01-SW-U-C-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:15
SDG#: RNS28-04

BASF Corporation
ELLE Sample #: WW 9855587
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,270	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451A	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:42	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05BKG

BASF Corporation
ELLE Sample #: WW 9855588
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.137	0.687	1
14188	PCB-1221	11104-28-2	N.D. D1	0.137	0.687	1
14188	PCB-1232	11141-16-5	N.D. D1	0.137	0.687	1
14188	PCB-1242	53469-21-9	N.D. D1	0.137	0.687	1
14188	PCB-1248	12672-29-6	N.D. D1	0.137	0.687	1
14188	PCB-1254	11097-69-1	N.D. D1	0.137	0.687	1
14188	PCB-1260	11096-82-5	N.D. D1	0.137	0.687	1
14188	PCB-1262	37324-23-5	N.D. D1	0.102	0.687	1
14188	PCB-1268	11100-14-4	N.D. D1	0.102	0.687	1
14188	Total PCBs	1336-36-3	N.D.	0.102	0.687	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.73 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05BKG

BASF Corporation
ELLE Sample #: WW 9855588
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 18:28	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 18:28	Chelsea B Riehl	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910003A	10/19/2018 15:53	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910003A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:39	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 18:39	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18290121451A	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:42	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MS Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05MS

BASF Corporation
ELLE Sample #: WW 9855589
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	23	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	24	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	24	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.44 D2	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	5.68 D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	10.1	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.4	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	54.9	0.70	4.0	1
06033	Copper	7440-50-8	55.1	9.9	40.0	1
06035	Lead	7439-92-1	16.6	1.1	3.0	1
06049	Zinc	7440-66-6	549	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	152,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670
State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 18:51	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 18:51	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MS Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05MS

BASF Corporation
ELLE Sample #: WW 9855589
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910003A	10/19/2018 16:04	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910003A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:45	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 18:47	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MSD Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05MSD

BASF Corporation
ELLE Sample #: WW 9855590
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	23	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	25	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	24	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.61 D2	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	5.28 D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	9.89	0.0930	0.628	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.2	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	52.9	0.70	4.0	1
06033	Copper	7440-50-8	53.6	9.9	40.0	1
06035	Lead	7439-92-1	16.1	1.1	3.0	1
06049	Zinc	7440-66-6	529	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.89	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	149,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 19:15	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 19:15	Chelsea B Riehl	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910003A	10/19/2018 16:14	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MSD Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05MSD

BASF Corporation
ELLE Sample #: WW 9855590
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910003A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:48	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 18:56	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 DUP Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-05DUP

BASF Corporation
ELLE Sample #: WW 9855591
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	16.1	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry		**EPA 130.2 modified**	**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 19:04	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06BKG

BASF Corporation
ELLE Sample #: WW 9855592
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the associated samples were non-detect, the data is reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 17:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 08:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06BKG

BASF Corporation
ELLE Sample #: WW 9855592
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MS Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06MS

BASF Corporation
ELLE Sample #: WW 9855593
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.25 D2	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	5.91 D2	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	10.2	0.0877	0.592	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since this sample is the matrix spike, the data is reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.6	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	51.2	0.70	4.0	1
06033	Copper	7440-50-8	51.9	9.9	40.0	1
06035	Lead	7439-92-1	15.4	1.1	3.0	1
06049	Zinc	7440-66-6	517	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.87	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 17:18	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 08:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MS Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06MS

BASF Corporation
ELLE Sample #: WW 9855593
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MSD Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06MSD

BASF Corporation
ELLE Sample #: WW 9855594
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.38 D2	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	5.75 D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	10.1	0.0916	0.619	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary.
Since this sample is the matrix spike duplicate, the data is reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.0	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	50.9	0.70	4.0	1
06033	Copper	7440-50-8	52.4	9.9	40.0	1
06035	Lead	7439-92-1	15.1	1.1	3.0	1
06049	Zinc	7440-66-6	516	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.88	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 17:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 MSD Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06MSD

BASF Corporation
ELLE Sample #: WW 9855594
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-A-1 DUP Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:05
SDG#: RNS28-06DUP

BASF Corporation
ELLE Sample #: WW 9855595
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/19/2018 23:55	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 08:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-B-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:10
SDG#: RNS28-07

BASF Corporation
ELLE Sample #: WW 9855596
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,010	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451A	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:42	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-02-SW-A-C-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 13:15
SDG#: RNS28-08

BASF Corporation
ELLE Sample #: WW 9855597
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.6	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,610	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451B	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385804A	10/17/2018 16:42	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:05
SDG#: RNS28-09

BASF Corporation
ELLE Sample #: WW 9855598
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.9 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the associated samples were non-detect, the data is reported.

Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.9	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,710	1,000	3,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:05
SDG#: RNS28-09

BASF Corporation
ELLE Sample #: WW 9855598
ELLE Group #: 1999340
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 19:39	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 19:39	Chelsea B Riehl	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 17:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 00:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 19:12	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18290121451B	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385805A	10/17/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:05
SDG#: RNS28-10

BASF Corporation
ELLE Sample #: WW 9855599
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the associated samples were non-detect, the data is reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.88 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 17:49	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:15	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:05
SDG#: RNS28-10

BASF Corporation
ELLE Sample #: WW 9855599
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-B-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:10
SDG#: RNS28-11

BASF Corporation
ELLE Sample #: WW 9855600
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,750	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451B	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385805A	10/17/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-C-1 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:15
SDG#: RNS28-12

BASF Corporation
ELLE Sample #: WW 9855601
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,130	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18290121451B	10/17/2018 19:45	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18290385805A	10/17/2018 23:45	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-2 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:30
SDG#: RNS28-13

BASF Corporation
ELLE Sample #: WW 9855602
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.534	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.534	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.534	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.534	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.534	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.534	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.534	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0791	0.534	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0791	0.534	1
14188	Total PCBs	1336-36-3	N.D.	0.0791	0.534	1
	The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the associated samples were non-detect, the data is reported.					
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.0 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-2 Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:30
SDG#: RNS28-13

BASF Corporation
ELLE Sample #: WW 9855602
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 20:02	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 20:02	Chelsea B Riehl	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 18:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705001A	10/20/2018 01:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571401	10/22/2018 06:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705001	10/19/2018 04:54	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571401	10/21/2018 10:40	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18290001103A	10/17/2018 19:20	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-2 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:30
SDG#: RNS28-14

BASF Corporation
ELLE Sample #: WW 9855603
ELLE Group #: 1999340
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the associated samples were non-detect, the data is reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182910004A	10/19/2018 18:10	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182910004A	10/18/2018 16:38	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182910705002A	10/20/2018 00:17	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182910705002	10/19/2018 04:54	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-03-SW-D-A-2 Filtered Grab Surface Water**
COC: 567595

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 12:30
SDG#: RNS28-14

BASF Corporation
ELLE Sample #: WW 9855603
ELLE Group #: 1999340
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101618-TB-01 Water**
COC: 567596

Project Name: **Rensselaer**

Submittal Date/Time: 10/17/2018 10:05
Collection Date/Time: 10/16/2018 14:00
SDG#: RNS28-15TB

BASF Corporation
ELLE Sample #: **WW 9855604**
ELLE Group #: **1999340**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182982AA	10/25/2018 20:26	Chelsea B Riehl	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182982AA	10/25/2018 20:26	Chelsea B Riehl	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 1999340
Reported: 10/26/2018 10:24

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182982AA	Sample number(s): 9855584,9855588-9855590,9855598,9855602,9855604		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182910003A	Sample number(s): 9855584-9855585,9855588-9855590		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182910004A	Sample number(s): 9855592-9855594,9855598-9855599,9855602-9855603		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182910705001A	Sample number(s): 9855584,9855588-9855591,9855598,9855602		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182910705002A	Sample number(s): 9855585,9855592-9855595,9855599,9855603		
Arsenic	N.D.	0.68	2.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 10:24

Group Number: 1999340

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182920571401	Sample number(s): 9855584,9855588-9855591,9855598,9855602		
Mercury	N.D.	0.050	0.20
Batch number: 182920571402	Sample number(s): 9855585,9855592-9855595,9855599,9855603		
Mercury	N.D.	0.050	0.20
	N T U	N T U	N T U
Batch number: 18290121451A	Sample number(s): 9855584,9855586-9855588,9855596		
Turbidity	0.20 J	0.140	1.00
Batch number: 18290121451B	Sample number(s): 9855597-9855598,9855600-9855601		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18290001103A	Sample number(s): 9855584,9855588-9855591,9855598,9855602		
Total Hardness	N.D.	3,000	10,000
Batch number: 18290385804A	Sample number(s): 9855586-9855588,9855596-9855597		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18290385805A	Sample number(s): 9855584,9855598,9855600-9855601		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W182982AA	Sample number(s): 9855584,9855588-9855590,9855598,9855602,9855604								
Benzene	20	22.13	20	21.26	111	106	80-120	4	30
Chlorobenzene	20	23.1	20	22.37	116	112	80-120	3	30
1,2-Dichlorobenzene	20	23.25	20	23.13	116	116	80-120	1	30
1,3-Dichlorobenzene	20	23.52	20	23.28	118	116	80-120	1	30
1,4-Dichlorobenzene	20	23.86	20	23.15	119	116	80-120	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182910003A	Sample number(s): 9855584-9855585,9855588-9855590								
PCB-1016	5.01	2.62			52		50-140		
PCB-1260	5.00	2.72			54		50-140		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 10:24

Group Number: 1999340

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182910004A	Sample number(s): 9855592-9855594,9855598-9855599,9855602-9855603								
PCB-1016	5.01	3.12			62		50-140		
PCB-1260	5.00	4.33			87		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182910705001A	Sample number(s): 9855584,9855588-9855591,9855598,9855602								
Arsenic	10	10.19			102		85-115		
Cadmium	5.00	5.06			101		85-115		
Chromium	50	52.08			104		85-115		
Copper	50	51.57			103		85-115		
Lead	15	15.36			102		85-115		
Zinc	500	521.72			104		85-115		
Batch number: 182910705002A	Sample number(s): 9855585,9855592-9855595,9855599,9855603								
Arsenic	10	10.68			107		85-115		
Cadmium	5.00	5.11			102		85-115		
Chromium	50	50.26			101		85-115		
Copper	50	52.25			105		85-115		
Lead	15	14.96			100		85-115		
Zinc	500	512.51			103		85-115		
Batch number: 182920571401	Sample number(s): 9855584,9855588-9855591,9855598,9855602								
Mercury	1.00	0.901			90		85-115		
Batch number: 182920571402	Sample number(s): 9855585,9855592-9855595,9855599,9855603								
Mercury	1.00	0.927			93		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18290121451A	Sample number(s): 9855584,9855586-9855588,9855596								
Turbidity	10	9.70			97		90-104		
Batch number: 18290121451B	Sample number(s): 9855597-9855598,9855600-9855601								
Turbidity	10	9.70			97		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18290001103A	Sample number(s): 9855584,9855588-9855591,9855598,9855602								
Total Hardness	40000	38780			97		85-110		
Batch number: 18290385804A	Sample number(s): 9855586-9855588,9855596-9855597								
Total Suspended Solids	150000	147800			99		89-105		
Batch number: 18290385805A	Sample number(s): 9855584,9855598,9855600-9855601								
Total Suspended Solids	150000	148000			99		89-105		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 10:24

Group Number: 1999340

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W182982AA	Sample number(s): 9855584,9855588-9855590,9855598,9855602,9855604 UNSPK: 9855588									
Benzene	N.D.	20	22.87	20	22.54	114	113	80-120	1	30
Chlorobenzene	N.D.	20	23.33	20	23.23	117	116	80-120	0	30
1,2-Dichlorobenzene	N.D.	20	22.94	20	23.39	115	117	80-120	2	30
1,3-Dichlorobenzene	0.638	20	24.21	20	24.64	118	120	80-120	2	30
1,4-Dichlorobenzene	N.D.	20	23.91	20	24.02	120	120	80-120	0	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182910003A	Sample number(s): 9855584-9855585,9855588-9855590 UNSPK: 9855588									
PCB-1016	N.D.	6.14	4.44	6.29	4.61	72	73	50-140	4	36
PCB-1260	N.D.	6.13	5.68	6.28	5.28	93	84	50-140	7	38
Batch number: 182910004A	Sample number(s): 9855592-9855594,9855598-9855599,9855602-9855603 UNSPK: 9855592									
PCB-1016	N.D.	5.93	4.25	6.20	4.38	72	71	50-140	3	36
PCB-1260	N.D.	5.92	5.91	6.19	5.75	100	93	50-140	3	38
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 182910705001A	Sample number(s): 9855584,9855588-9855591,9855598,9855602 UNSPK: 9855588									
Arsenic	0.692	10	11.4	10	11.21	107	105	70-130	2	20
Cadmium	N.D.	5.00	5.09	5.00	5.22	102	104	70-130	3	20
Chromium	0.734	50	54.88	50	52.89	108	104	70-130	4	20
Copper	N.D.	50	55.1	50	53.6	110	107	70-130	3	20
Lead	N.D.	15	16.65	15	16.07	111	107	70-130	4	20
Zinc	13.33	500	548.99	500	528.62	107	103	70-130	4	20
Batch number: 182910705002A	Sample number(s): 9855585,9855592-9855595,9855599,9855603 UNSPK: 9855592									
Arsenic	N.D.	10	10.57	10	10.99	106	110	70-130	4	20
Cadmium	N.D.	5.00	5.21	5.00	5.12	104	102	70-130	2	20
Chromium	N.D.	50	51.23	50	50.9	102	102	70-130	1	20
Copper	N.D.	50	51.91	50	52.36	104	105	70-130	1	20
Lead	N.D.	15	15.38	15	15.1	103	101	70-130	2	20
Zinc	12.22	500	516.78	500	515.78	101	101	70-130	0	20
Batch number: 182920571401	Sample number(s): 9855584,9855588-9855591,9855598,9855602 UNSPK: 9855588									
Mercury	N.D.	1.00	0.906	1.00	0.893	91	89	80-120	1	20
Batch number: 182920571402	Sample number(s): 9855585,9855592-9855595,9855599,9855603 UNSPK: 9855592									
Mercury	N.D.	1.00	0.875	1.00	0.883	87	88	80-120	1	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18290001103A	Sample number(s): 9855584,9855588-9855591,9855598,9855602 UNSPK: 9855588									
Total Hardness	74380	80000	151600	80000	148740	97	93	85-110	2	7

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 10:24

Group Number: 1999340

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182910705001A	Sample number(s): 9855584,9855588-9855591,9855598,9855602 BKG: 9855588			
Arsenic	0.692	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.734	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13.33	16.13	19 (1)	20
Batch number: 182910705002A	Sample number(s): 9855585,9855592-9855595,9855599,9855603 BKG: 9855592			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	12.22	10.96	11 (1)	20
Batch number: 182920571401	Sample number(s): 9855584,9855588-9855591,9855598,9855602 BKG: 9855588			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182920571402	Sample number(s): 9855585,9855592-9855595,9855599,9855603 BKG: 9855592			
Mercury	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18290121451A	Sample number(s): 9855584,9855586-9855588,9855596 BKG: 9855588			
Turbidity	7.80	7.80	0	8
Batch number: 18290121451B	Sample number(s): 9855597-9855598,9855600-9855601 BKG: 9855601			
Turbidity	7.80	7.70	1	8
	ug/l	ug/l		
Batch number: 18290001103A	Sample number(s): 9855584,9855588-9855591,9855598,9855602 BKG: 9855588			
Total Hardness	74380	69400	7 (1)	7

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 10:24

Group Number: 1999340

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182982AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9855584	95	102	96	89
9855588	95	100	97	89
9855589	96	100	99	94
9855590	95	98	99	93
9855598	94	99	97	89
9855602	95	102	96	89
9855604	97	101	97	90
Blank	95	101	98	90
LCS	95	97	98	93
LCSD	95	104	100	93
MS	96	100	99	94
MSD	95	98	99	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182910003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9855584	55	74	53	74
9855585	65	77	61	75
9855588	53	80	50	79
9855589	64	80	62	78
9855590	61	76	58	74
Blank	65	33	61	33
LCS	26*	47	25*	47
MS	64	80	62	78
MSD	61	76	58	74
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 182910004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9855592	67	84	64	82
9855593	59	82	56	79
9855594	52	80	49	78
9855598	56	76	54	74
9855599	72	83	69	83
9855602	71	79	68	78
9855603	66	77	62	73

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1999340
Reported: 10/26/2018 10:24

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182910004A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
Blank	20*	19	19*	19
LCS	19*	57	19*	56
MS	59	82	56	79
MSD	52	80	49	78
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1999340 Sample # 9855584-604

COC # 567595

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (unfiltered)	F Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130	Remarks
101618-01-SW-U-A-1	10/16/18	1405	✓		13	2	2	1	1	1	1	1	3	1	
101618-01-SW-U-B-1	10/16/18	1410	✓		2							1		1	
101618-01-SW-U-C-1	10/16/18	1415	✓		2							1		1	
101618-02-SW-A-A-1	10/16/18	1305	✓		13	2	2	1	1	1	1	1	3	1	MS/MSD
101618-02-SW-A-B-1	10/16/18	1310	✓		2							1		1	
101618-02-SW-A-C-1	10/16/18	1315	✓		2							1		1	
101618-03-SW-D-A-1	10/16/18	1205	✓		13	2	2	1	1	1	1	1	3	1	
101618-03-SW-D-B-1	10/16/18	1210	✓		2							1		1	
101618-03-SW-D-C-1	10/16/18	1215	✓		2							1		1	
101618-03-SW-D-A-2	10/16/18	1230	✓		11	2	2	1	1	1	1		3		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/18/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/16/18	1800			
			[signature]	10/17/18	1005

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.6 - 1.3 °C 2.0

③ KM2 2123 10/17/18

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1999340 Sample # 9855584-604

COC # 567596

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Total # of Containers

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (unfiltered)	F Metals (Filtered)	P,N Metals (unfiltered)	N Mercury	N Hardness	N TSS	H VOCs - 8260C	Turbidity - SM 2130
101618-TB-01	10/16/18	1400	✓										1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/18/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patt Nunn	10/16/18	1800			
			Kristin Zo	10/17/18	1005

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 0.6-1.3 °C 2.0 (1)

KM2 2123 10/17/18

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • FOR HELP COMPLETING FORM CHECK OUT https://www.eurofinsus.com/coc

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0718

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Sample Administration Receipt Documentation Log

Doc Log ID: 230274

Group Number(s): 1999340

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/17/2018 10:05
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Kristin Zeigler (2123) at 11:23 on 10/17/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.3	DT	Wet	Y	Bagged	N
2	DT42-03	2.0	DT	Wet	Y	Bagged	N
3	DT42-03	0.6	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
101618-02-SW-A-A-1	35	13	MS/MSD written in remarks on COC

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 26, 2018 13:28

Project: Rensselaer

Account #: 04285
Group Number: 1999942
SDG: RNS29
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101718-01-SW-U-A-1 Grab Surface Water	10/17/2018 09:45	9858122
101718-01-SW-U-A-1 Filtered Grab Surface Water	10/17/2018 09:45	9858123
101718-01-SW-U-B-1 Grab Surface Water	10/17/2018 09:50	9858124
101718-01-SW-U-C-1 Grab Surface Water	10/17/2018 09:55	9858125
101718-02-SW-A-A-1 Grab Surface Water	10/17/2018 09:10	9858126
101718-02-SW-A-A-1 Filtered Grab Surface Water	10/17/2018 09:10	9858127
101718-02-SW-A-B-1 Grab Surface Water	10/17/2018 09:15	9858128
101718-02-SW-A-C-1 Grab Surface Water	10/17/2018 09:20	9858129
101718-03-SW-D-A-1 Grab Surface Water	10/17/2018 08:35	9858130
101718-03-SW-D-A-1 Filtered Grab Surface Water	10/17/2018 08:35	9858131
101718-03-SW-D-B-1 Grab Surface Water	10/17/2018 08:45	9858132
101718-03-SW-D-C-1 Grab Surface Water	10/17/2018 08:50	9858133
101718-TB-01 Water	10/17/2018 14:00	9858134

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101718-01-SW-U-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:45
SDG#: RNS29-01

BASF Corporation
ELLE Sample #: WW 9858122
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,210	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101718-01-SW-U-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:45
SDG#: RNS29-01

BASF Corporation
ELLE Sample #: WW 9858122
ELLE Group #: 1999942
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 00:01	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 00:01	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 21:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 10:19	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:32	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:45
SDG#: RNS29-02

BASF Corporation
ELLE Sample #: WW 9858123
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 22:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:47	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-01-SW-U-B-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:50
SDG#: RNS29-03

BASF Corporation
ELLE Sample #: WW 9858124
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,510	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:32	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-01-SW-U-C-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:55
SDG#: RNS29-04

BASF Corporation
ELLE Sample #: WW 9858125
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,270	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:32	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-02-SW-A-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:10
SDG#: RNS29-05

BASF Corporation
ELLE Sample #: WW 9858126
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D2	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.6	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,250	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101718-02-SW-A-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:10
SDG#: RNS29-05

BASF Corporation
ELLE Sample #: WW 9858126
ELLE Group #: 1999942
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 00:21	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 00:21	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 22:18	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:50	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 10:44	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:32	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:10
SDG#: RNS29-06

BASF Corporation
ELLE Sample #: WW 9858127
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 22:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101718-02-SW-A-B-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:15
SDG#: RNS29-07

BASF Corporation
ELLE Sample #: WW 9858128
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,550	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:33	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-02-SW-A-C-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 09:20
SDG#: RNS29-08

BASF Corporation
ELLE Sample #: WW 9858129
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,360	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:33	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-03-SW-D-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 08:35
SDG#: RNS29-09

BASF Corporation
ELLE Sample #: WW 9858130
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,850	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101718-03-SW-D-A-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 08:35
SDG#: RNS29-09

BASF Corporation
ELLE Sample #: WW 9858130
ELLE Group #: 1999942
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 00:41	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 00:41	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 22:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 10:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:33	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 08:35
SDG#: RNS29-10

BASF Corporation
ELLE Sample #: WW 9858131
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 22:50	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920003A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182920705001A	10/22/2018 08:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182920571402	10/22/2018 09:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182920705001	10/21/2018 05:28	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182920571402	10/21/2018 11:00	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-03-SW-D-B-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 08:45
SDG#: RNS29-11

BASF Corporation
ELLE Sample #: WW 9858132
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,550	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:33	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-03-SW-D-C-1 Grab Surface Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 08:50
SDG#: RNS29-12

BASF Corporation
ELLE Sample #: WW 9858133
ELLE Group #: 1999942
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18291121451A	10/18/2018 20:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18292385801A	10/19/2018 12:33	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101718-TB-01 Water**
COC: 567597

Project Name: **Rensselaer**

Submittal Date/Time: 10/18/2018 10:20
Collection Date/Time: 10/17/2018 14:00
SDG#: RNS29-13TB

BASF Corporation
ELLE Sample #: WW 9858134
ELLE Group #: 1999942
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 21:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 21:40	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1999942
Reported: 10/26/2018 13:28

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E182984AA	Sample number(s): 9858122,9858126,9858130,9858134		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182920003A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182920571402	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131		
Mercury	N.D.	0.050	0.20
Batch number: 182920705001A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18291121451A	Sample number(s): 9858122,9858124-9858126,9858128-9858130,9858132-9858133		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18292385801A	Sample number(s): 9858122,9858124-9858126,9858128-9858130,9858132-9858133		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18295001101A	Sample number(s): 9858122,9858126,9858130		
Total Hardness	N.D.	3,000	10,000

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:28

Group Number: 1999942

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: E182984AA	Sample number(s): 9858122,9858126,9858130,9858134								
Benzene	20	18.74	20	20.79	94	104	80-120	10	30
Chlorobenzene	20	20.68	20	19.71	103	99	80-120	5	30
1,2-Dichlorobenzene	20	20.48	20	20.47	102	102	80-120	0	30
1,3-Dichlorobenzene	20	21.21	20	19.91	106	100	80-120	6	30
1,4-Dichlorobenzene	20	20.88	20	20.11	104	101	80-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182920003A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131								
PCB-1016	5.01	4.14	5.01	4.41	83	88	50-140	6	36
PCB-1260	5.00	4.44	5.00	4.62	89	92	50-140	4	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182920571402	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131								
Mercury	1.00	0.927			93		85-115		
Batch number: 182920705001A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131								
Arsenic	10	8.59			86		85-115		
Cadmium	5.00	4.55			91		85-115		
Chromium	50	44.83			90		85-115		
Copper	50	45.66			91		85-115		
Lead	15	13.87			92		85-115		
Zinc	500	450.42			90		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18291121451A	Sample number(s): 9858122,9858124-9858126,9858128-9858130,9858132-9858133								
Turbidity	10	9.80			98		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18292385801A	Sample number(s): 9858122,9858124-9858126,9858128-9858130,9858132-9858133								
Total Suspended Solids	150000	145200	150000	146800	97	98	89-105	1	5
Batch number: 18295001101A	Sample number(s): 9858122,9858126,9858130								
Total Hardness	40000	38720			97		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:28

Group Number: 1999942

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182920705001A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131 UNSPK: 9858122									
Arsenic	N.D.	10	10.76			108		70-130		
Cadmium	N.D.	5.00	4.99			100		70-130		
Chromium	1.36	50	49.44			96		70-130		
Copper	N.D.	50	51.54			103		70-130		
Lead	N.D.	15	15.81			105		70-130		
Zinc	12.05	500	508.33			99		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18295001101A	Sample number(s): 9858122,9858126,9858130 UNSPK: 9858122									
Total Hardness	69840	80000	157860			110		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182920705001A	Sample number(s): 9858122-9858123,9858126-9858127,9858130-9858131 BKG: 9858122			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.36	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	12.05	N.D.	200* (1)	20
	N T U	N T U		
Batch number: 18291121451A	Sample number(s): 9858122,9858124-9858126,9858128-9858130,9858132-9858133 BKG: 9858128			
Turbidity	8.10	8.10	0	8
	ug/l	ug/l		
Batch number: 18295001101A	Sample number(s): 9858122,9858126,9858130 BKG: 9858122			
Total Hardness	69840	73480	5 (1)	7

Surrogate Quality Control

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:28

Group Number: 1999942

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E182984AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9858122	99	103	94	92
9858126	95	99	96	94
9858130	96	95	95	92
9858134	98	101	101	92
Blank	89	89	95	95
LCS	96	98	96	97
LCSD	100	108	112	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182920003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9858122	80	79	75	78
9858123	73	73	69	70
9858126	72	78	67	77
9858127	77	77	71	74
9858130	70	76	65	74
9858131	73	76	68	74
Blank	78	67	74	65
LCS	78	77	77	75
LCSD	85	74	81	70
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1999942 Sample # 9858122 - 34

COC # 567597

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehen	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) P	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
101718-01-SW-U-A-1	10/17/18	0945	✓		13	2	2	1	1	1	1	1	3	1	
101718-01-SW-U-B-1	10/17/18	0950	✓		2							1		1	
101718-01-SW-U-C-1	10/17/18	0955	✓		2							1		1	
101718-02-SW-A-A-1	10/17/18	0910	✓		13	2	2	1	1	1	1	1	3	1	
101718-02-SW-A-B-1	10/17/18	0915	✓		2							1		1	
101718-02-SW-A-C-1	10/17/18	0920	✓		2							1		1	
101718-03-SW-D-A-1	10/17/18	0835	✓		13	2	2	1	1	1	1	1	3	1	
101718-03-SW-D-B-1	10/17/18	0845	✓		2							1		1	
101718-03-SW-D-C-1	10/17/18	0850	✓		2							1		1	
101718-TB-01	10/17/18	1400	✓		1								1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/19/18

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/17/18	1430			
			[signature]	10-18-18	1610

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230419

Group Number(s): 1999942

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/18/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 12:39 on 10/18/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.5	DT	Wet	Y	Bagged	N
2	DT131	1.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 29, 2018 10:12

Project: Rensselaer

Account #: 04285
Group Number: 2000444
SDG: RNS30
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101818-01-SW-U-A-1 Grab Surface Water	10/18/2018 10:25	9860170
101818-01-SW-U-A-1 Filtered Grab Surface Water	10/18/2018 10:25	9860171
101818-01-SW-U-B-1 Grab Surface Water	10/18/2018 10:30	9860172
101818-01-SW-U-C-1 Grab Surface Water	10/18/2018 10:35	9860173
101818-02-SW-A-A-1 Grab Surface Water	10/18/2018 09:50	9860174
101818-02-SW-A-A-1 Filtered Grab Surface Water	10/18/2018 09:50	9860175
101818-02-SW-A-B-1 Grab Surface Water	10/18/2018 09:55	9860176
101818-02-SW-A-C-1 Grab Surface Water	10/18/2018 10:00	9860177
101818-03-SW-D-A-1 Grab Surface Water	10/18/2018 09:10	9860178
101818-03-SW-D-A-1 Filtered Grab Surface Water	10/18/2018 09:10	9860179
101818-03-SW-D-B-1 Grab Surface Water	10/18/2018 09:15	9860180
101818-03-SW-D-C-1 Grab Surface Water	10/18/2018 09:20	9860181
101818-01-SW-A-3 Grab Water	10/18/2018 12:30	9860182
101818-01-SW-A-3 Filtered Grab Water	10/18/2018 12:30	9860183
101818-TB-01 Water	10/18/2018	9860184

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101818-01-SW-U-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:25
SDG#: RNS30-01

BASF Corporation
ELLE Sample #: WW 9860170
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.1	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-U-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:25
SDG#: RNS30-01

BASF Corporation
ELLE Sample #: WW 9860170
ELLE Group #: 2000444
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 01:02	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 01:02	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 00:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:41	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 11:08	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18292121451A	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:25
SDG#: RNS30-02

BASF Corporation
ELLE Sample #: WW 9860171
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 00:24	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:43	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-U-B-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:30
SDG#: RNS30-03

BASF Corporation
ELLE Sample #: WW 9860172
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101818-01-SW-U-C-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:35
SDG#: RNS30-04

BASF Corporation
ELLE Sample #: WW 9860173
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,120	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-02-SW-A-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:50
SDG#: RNS30-05

BASF Corporation
ELLE Sample #: WW 9860174
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.6	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101818-02-SW-A-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:50
SDG#: RNS30-05

BASF Corporation
ELLE Sample #: WW 9860174
ELLE Group #: 2000444
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 01:22	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 01:22	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 00:35	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 04:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 11:15	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:50
SDG#: RNS30-06

BASF Corporation
ELLE Sample #: WW 9860175
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 00:45	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-02-SW-A-B-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:55
SDG#: RNS30-07

BASF Corporation
ELLE Sample #: WW 9860176
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.9	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,660	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-02-SW-A-C-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 10:00
SDG#: RNS30-08

BASF Corporation
ELLE Sample #: WW 9860177
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,210	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-03-SW-D-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:10
SDG#: RNS30-09

BASF Corporation
ELLE Sample #: WW 9860178
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.73 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.9	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	94,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,510	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101818-03-SW-D-A-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:10
SDG#: RNS30-09

BASF Corporation
ELLE Sample #: WW 9860178
ELLE Group #: 2000444
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 12:54	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 12:54	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 00:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 11:44	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:10
SDG#: RNS30-10

BASF Corporation
ELLE Sample #: WW 9860179
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.5 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 01:06	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:04	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-03-SW-D-B-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:15
SDG#: RNS30-11

BASF Corporation
ELLE Sample #: WW 9860180
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.9	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,510	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-03-SW-D-C-1 Grab Surface Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 09:20
SDG#: RNS30-12

BASF Corporation
ELLE Sample #: WW 9860181
ELLE Group #: 2000444
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,360	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18292121451B	10/19/2018 17:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18295385802A	10/22/2018 15:31	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-A-3 Grab Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 12:30
SDG#: RNS30-13FB

BASF Corporation
ELLE Sample #: WW 9860182
ELLE Group #: 2000444
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.8 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 22:00	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 22:00	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 01:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-A-3 Grab Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 12:30
SDG#: RNS30-13FB

BASF Corporation
ELLE Sample #: WW 9860182
ELLE Group #: 2000444
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:06	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-01-SW-A-3 Filtered Grab Water**
COC: 567397

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018 12:30
SDG#: RNS30-14FB

BASF Corporation
ELLE Sample #: WW 9860183
ELLE Group #: 2000444
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182920050A	10/23/2018 01:27	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182920050A	10/22/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705002A	10/23/2018 05:08	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571401	10/23/2018 06:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705002	10/22/2018 05:30	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571401	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101818-TB-01 Water**
COC: 567598

Project Name: **Rensselaer**

Submittal Date/Time: 10/19/2018 10:20
Collection Date/Time: 10/18/2018
SDG#: RNS30-15TB

BASF Corporation
ELLE Sample #: **WW 9860184**
ELLE Group #: **2000444**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 22:20	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 22:20	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:12

Group Number: 2000444

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E182984AA	Sample number(s): 9860170,9860174,9860182,9860184		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: L182991AA	Sample number(s): 9860178		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182920050A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182940571401	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183		
Mercury	N.D.	0.050	0.20
Batch number: 182940705002A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	NTU	NTU	NTU
Batch number: 18292121451A	Sample number(s): 9860170		
Turbidity	0.20 J	0.140	1.00
Batch number: 18292121451B	Sample number(s): 9860172-9860174,9860176-9860178,9860180-9860181		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:12

Group Number: 2000444

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18295001101A	Sample number(s): 9860170,9860174,9860178		
Total Hardness	N.D.	3,000	10,000
Batch number: 18295385802A	Sample number(s): 9860170,9860172-9860174,9860176-9860178,9860180-9860181		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E182984AA	Sample number(s): 9860170,9860174,9860182,9860184								
Benzene	20	18.74	20	20.79	94	104	80-120	10	30
Chlorobenzene	20	20.68	20	19.71	103	99	80-120	5	30
1,2-Dichlorobenzene	20	20.48	20	20.47	102	102	80-120	0	30
1,3-Dichlorobenzene	20	21.21	20	19.91	106	100	80-120	6	30
1,4-Dichlorobenzene	20	20.88	20	20.11	104	101	80-120	4	30
Batch number: L182991AA	Sample number(s): 9860178								
Benzene	20	21.16	20	20.9	106	104	80-120	1	30
Chlorobenzene	20	21.89	20	21.68	109	108	80-120	1	30
1,2-Dichlorobenzene	20	21.51	20	21.28	108	106	80-120	1	30
1,3-Dichlorobenzene	20	21.19	20	21.24	106	106	80-120	0	30
1,4-Dichlorobenzene	20	21.49	20	21.51	107	108	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182920050A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183								
PCB-1016	5.01	4.52	5.01	4.46	90	89	50-140	1	36
PCB-1260	5.00	4.60	5.00	4.67	92	93	50-140	1	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182940571401	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183								
Mercury	1.00	0.922			92		85-115		
Batch number: 182940705002A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183								
Arsenic	10	10.49			105		85-115		
Cadmium	5.00	5.06			101		85-115		
Chromium	50	53.69			107		85-115		
Copper	50	52.8			106		85-115		
Lead	15	15.43			103		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:12

Group Number: 2000444

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	528.51			106		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18292121451A	Sample number(s): 9860170								
Turbidity	10	9.80			98		90-104		
Batch number: 18292121451B	Sample number(s): 9860172-9860174,9860176-9860178,9860180-9860181								
Turbidity	10	9.80			98		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18295001101A	Sample number(s): 9860170,9860174,9860178								
Total Hardness	40000	38720			97		85-110		
Batch number: 18295385802A	Sample number(s): 9860170,9860172-9860174,9860176-9860178,9860180-9860181								
Total Suspended Solids	150000	145500			97		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182940705002A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183 UNSPK: 9860170									
Arsenic	N.D.	10	10.44			104		70-130		
Cadmium	N.D.	5.00	4.90			98		70-130		
Chromium	N.D.	50	50.61			101		70-130		
Copper	N.D.	50	51.86			104		70-130		
Lead	N.D.	15	15.47			103		70-130		
Zinc	15.05	500	511.72			99		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182940705002A	Sample number(s): 9860170-9860171,9860174-9860175,9860178-9860179,9860182-9860183 BKG: 9860170			

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:12

Group Number: 2000444

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Arsenic	N.D.	0.685	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	15.05	14.48	4 (1)	20
	N T U	N T U		
Batch number: 18292121451A	Sample number(s): 9860170 BKG: 9860170			
Turbidity	6.70	6.60	2	8
Batch number: 18292121451B	Sample number(s): 9860172-9860174,9860176-9860178,9860180-9860181 BKG: 9860174			
Turbidity	8.80	8.80	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E182984AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9860170	93	100	93	100
9860174	106	98	97	116
9860182	91	94	114	92
9860184	104	105	87	79*
Blank	89	89	95	95
LCS	96	98	96	97
LCSD	100	108	112	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9860178	109	105	107	105
Blank	102	101	100	98
LCS	102	101	101	100
LCSD	102	104	100	102
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:12

Group Number: 2000444

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182920050A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9860170	82	81	76	79
9860171	76	83	72	80
9860174	72	79	69	77
9860175	71	79	67	76
9860178	80	78	73	74
9860179	73	79	69	79
9860182	80	91	74	85
9860183	85	92	79	87
Blank	51	50	47	48
LCS	86	71	83	68
LCSD	87	80	83	80
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2000444 Sample # 9860170-84

COC # 567397

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Graham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	Remarks
101818-01-SW-U-A-1	10/18/18	1025	✓		13	2	2	1	1	1	1	1	3	1	
101818-01-SW-U-B-1	10/18/18	1030	✓		2							1		1	
101818-01-SW-U-C-1	10/18/18	1035	✓		2							1		1	
101818-02-SW-A-A-1	10/18/18	0950	✓		13	2	2	1	1	1	1	1	3	1	
101818-02-SW-A-B-1	10/18/18	0955	✓		2							1		1	
101818-02-SW-A-C-1	10/18/18	1000	✓		2							1		1	
101818-03-SW-D-A-1	10/18/18	0910	✓		13	2	2	1	1	1	1	1	3	1	
101818-03-SW-D-B-1	10/18/18	0915	✓		2							1		1	
101818-03-SW-D-C-1	10/18/18	0920	✓		2							1		1	
101818-01-SW-A-3	10/18/18	1230	✓		10	2	2	1	1	1			3		Field Blank

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/20/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/18/18	1500			
			[signature]	10/19/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other X

Temperature upon receipt 0.4 | 1.3 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2000444 Sample # 9860170 - 84

COC # 567598

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Total # of Containers

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	F PCBs (unfiltered)	F,N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
101818 - TB-01	10/18/18		✓										1		Trip Blank

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

For Lab Use Only

FSC: ____

SCR#: ____

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/20/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Date	Time		Date	Time
Relinquished by	10/18/18	1500	Received by		
Relinquished by			Received by		
Relinquished by			Received by		
Relinquished by			Received by		
Relinquished by			Received by	10/19/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 0.4/1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230564

Group Number(s): 2000444

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/19/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:34 on 10/19/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.4	DT	Wet	Y	Bagged	N
2	DT146	1.3	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 26, 2018 13:31

Project: Rensselaer

Account #: 04285
Group Number: 2000757
SDG: RNS31
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101918-01-SW-U-A-1 Grab Surface Water	10/19/2018 08:25	9861838
101918-01-SW-U-A-1 Grab Surface Water	10/19/2018 08:25	9861839
101918-01-SW-U-B-1 Grab Surface Water	10/19/2018 08:30	9861840
101918-01-SW-U-C-1 Grab Surface Water	10/19/2018 08:35	9861841
101918-02-SW-A-A-1 Grab Surface Water	10/19/2018 09:00	9861842
101918-02-SW-A-A-1 Grab Surface Water	10/19/2018 09:00	9861843
101918-02-SW-A-B-1 Grab Surface Water	10/19/2018 09:05	9861844
101918-02-SW-A-C-1 Grab Surface Water	10/19/2018 09:10	9861845
101918-03-SW-D-A-1 Grab Surface Water	10/19/2018 09:50	9861846
101918-03-SW-D-B-1 Grab Surface Water	10/19/2018 09:55	9861847
101918-03-SW-D-C-1 Grab Surface Water	10/19/2018 10:00	9861848
101918-03-SW-D-C-1 Grab Surface Water	10/19/2018 10:00	9861849
101918-TB-01 Water	10/19/2018 12:00	9861850

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101918-01-SW-U-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 08:25
SDG#: RNS31-01

BASF Corporation
ELLE Sample #: WW 9861838
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.6	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,460	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101918-01-SW-U-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 08:25
SDG#: RNS31-01

BASF Corporation
ELLE Sample #: WW 9861838
ELLE Group #: 2000757
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 02:03	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 02:03	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 22:06	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:27	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 11:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18293121451A	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-01-SW-U-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 08:25
SDG#: RNS31-02

BASF Corporation
ELLE Sample #: WW 9861839
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 22:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:49	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-01-SW-U-B-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 08:30
SDG#: RNS31-03

BASF Corporation
ELLE Sample #: WW 9861840
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,010	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451A	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-01-SW-U-C-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 08:35
SDG#: RNS31-04

BASF Corporation
ELLE Sample #: WW 9861841
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451B	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-02-SW-A-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:00
SDG#: RNS31-05

BASF Corporation
ELLE Sample #: WW 9861842
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.5 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,820	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101918-02-SW-A-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:00
SDG#: RNS31-05

BASF Corporation
ELLE Sample #: WW 9861842
ELLE Group #: 2000757
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 02:22	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 02:22	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 22:48	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 12:00	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18293121451A	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-02-SW-A-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:00
SDG#: RNS31-06

BASF Corporation
ELLE Sample #: WW 9861843
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 22:59	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-02-SW-A-B-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:05
SDG#: RNS31-07

BASF Corporation
ELLE Sample #: WW 9861844
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,270	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451A	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-02-SW-A-C-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:10
SDG#: RNS31-08

BASF Corporation
ELLE Sample #: WW 9861845
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451B	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-03-SW-D-A-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:50
SDG#: RNS31-09

BASF Corporation
ELLE Sample #: WW 9861846
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,250	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451B	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-03-SW-D-B-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 09:55
SDG#: RNS31-10

BASF Corporation
ELLE Sample #: WW 9861847
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	24	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	18,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18293121451B	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-03-SW-D-C-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 10:00
SDG#: RNS31-11

BASF Corporation
ELLE Sample #: WW 9861848
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D2	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.2 J	1.1	3.0	1
06049	Zinc	7440-66-6	19.8	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	25,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101918-03-SW-D-C-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 10:00
SDG#: RNS31-11

BASF Corporation
ELLE Sample #: WW 9861848
ELLE Group #: 2000757
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/26/2018 02:42	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/26/2018 02:42	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 23:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18295001101A	10/22/2018 12:08	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18293121451B	10/20/2018 12:25	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385801A	10/23/2018 10:56	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-03-SW-D-C-1 Grab Surface Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 10:00
SDG#: RNS31-12

BASF Corporation
ELLE Sample #: WW 9861849
ELLE Group #: 2000757
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.530	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.530	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.530	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.530	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.530	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.530	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.530	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0784	0.530	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0784	0.530	1
14188	Total PCBs	1336-36-3	N.D.	0.0784	0.530	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	17.5	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182950008A	10/23/2018 23:20	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182950008A	10/22/2018 16:30	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182940705003A	10/23/2018 05:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182940571402	10/23/2018 07:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182940705003	10/22/2018 05:45	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182940571402	10/22/2018 16:35	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101918-TB-01 Water**
COC: 567599

Project Name: **Rensselaer**

Submittal Date/Time: 10/20/2018 09:40
Collection Date/Time: 10/19/2018 12:00
SDG#: RNS31-13TB

BASF Corporation
ELLE Sample #: **WW 9861850**
ELLE Group #: **2000757**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E182984AA	10/25/2018 22:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E182984AA	10/25/2018 22:40	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:31

Group Number: 2000757

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E182984AA	Sample number(s): 9861838,9861842,9861848,9861850		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182950008A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182940571402	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849		
Mercury	N.D.	0.050	0.20
Batch number: 182940705003A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18293121451A	Sample number(s): 9861838,9861840,9861842,9861844		
Turbidity	0.20 J	0.140	1.00
Batch number: 18293121451B	Sample number(s): 9861841,9861845-9861848		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18295001101A	Sample number(s): 9861838,9861842,9861848		
Total Hardness	N.D.	3,000	10,000
Batch number: 18296385801A	Sample number(s): 9861838,9861840-9861842,9861844-9861848		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:31

Group Number: 2000757

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: E182984AA	Sample number(s): 9861838,9861842,9861848,9861850								
Benzene	20	18.74	20	20.79	94	104	80-120	10	30
Chlorobenzene	20	20.68	20	19.71	103	99	80-120	5	30
1,2-Dichlorobenzene	20	20.48	20	20.47	102	102	80-120	0	30
1,3-Dichlorobenzene	20	21.21	20	19.91	106	100	80-120	6	30
1,4-Dichlorobenzene	20	20.88	20	20.11	104	101	80-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182950008A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849								
PCB-1016	5.01	3.39	5.01	3.02	68	60	50-140	11	36
PCB-1260	5.00	4.50	5.00	4.25	90	85	50-140	6	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182940571402	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849								
Mercury	1.00	0.881			88		85-115		
Batch number: 182940705003A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849								
Arsenic	10	10.82			108		85-115		
Cadmium	5.00	5.28			106		85-115		
Chromium	50	52.49			105		85-115		
Copper	50	52.52			105		85-115		
Lead	15	15.79			105		85-115		
Zinc	500	528.35			106		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18293121451A	Sample number(s): 9861838,9861840,9861842,9861844								
Turbidity	10	10			100		90-104		
Batch number: 18293121451B	Sample number(s): 9861841,9861845-9861848								
Turbidity	10	10			100		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18295001101A	Sample number(s): 9861838,9861842,9861848								
Total Hardness	40000	38720			97		85-110		
Batch number: 18296385801A	Sample number(s): 9861838,9861840-9861842,9861844-9861848								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/26/2018 13:31

Group Number: 2000757

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Suspended Solids	150000	151800			101		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182940571402	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849 UNSPK: 9861838									
Mercury	N.D.	1.00	0.868			87		80-120		
Batch number: 182940705003A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849 UNSPK: 9861838									
Arsenic	N.D.	10	10.47			105		70-130		
Cadmium	N.D.	5.00	5.03			101		70-130		
Chromium	N.D.	50	49.34			99		70-130		
Copper	N.D.	50	51.15			102		70-130		
Lead	N.D.	15	15.12			101		70-130		
Zinc	15.01	500	505.61			98		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182940571402	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849 BKG: 9861838			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182940705003A	Sample number(s): 9861838-9861839,9861842-9861843,9861848-9861849 BKG: 9861838			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	15.01	11.94	23* (1)	20
	N T U	N T U		
Batch number: 18293121451B	Sample number(s): 9861841,9861845-9861848 BKG: 9861847			

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2000757
Reported: 10/26/2018 13:31

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc NTU	DUP Conc NTU	DUP RPD	DUP RPD Max
Turbidity	24	25	4	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E182984AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9861838	95	105	96	94
9861842	101	103	87	111
9861848	93	99	110	92
9861850	98	97	98	94
Blank	89	89	95	95
LCS	96	98	96	97
LCSD	100	108	112	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182950008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9861838	66	82	64	79
9861839	62	77	60	76
9861842	63	86	60	82
9861843	60	83	58	81
9861848	55	70	53	66
9861849	71	80	68	78
Blank	69	83	66	81
LCS	54	90	51	89
LCSD	40	90	39	86
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2000757 Sample # 9861838-50

COC # 567599

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229609
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (F;Filtered) F	PCBs (Unfiltered)	Metals (F;Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
101918-01-SW-U-A-1	10/19/18	0825	✓		13	2	2	1	1	1	1	1	3	1	
101918-01-SW-U-B-1	10/19/18	0830	✓		2							1		1	
101918-01-SW-U-C-1	10/19/18	0835	✓		3							1		1	
101918-02-SW-A-A-1	10/19/18	0900	✓		13	2	2	1	1	1	1	1	3	1	
101918-02-SW-A-B-1	10/19/18	0905	✓		2							1		1	
101918-02-SW-A-C-1	10/19/18	0910	✓		2							1		1	
101918-03-SW-D-A-1	10/19/18	0950	✓		2							1		1	
101918-03-SW-D-B-1	10/19/18	0955	✓		2							1		1	
101918-03-SW-D-C-1	10/19/18	1000	✓		13	2	2	1	1	1	1	1	3	1	
101918-TB-01	10/19/18	1200	✓		1								1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/21/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/19/18	1400	[signature]		
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	10/20/18	940

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.0-1.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230685

Group Number(s): 20007757

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/20/2018 9:40
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 11:40 on 10/20/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.0	DT	Wet	Y	Bagged	N
2	DT131	1.2	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 29, 2018 10:20

Project: Rensselaer

Account #: 04285
Group Number: 2001239
SDG: RNS32
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102218-01-SW-U-A-1 Grab Surface Water	10/22/2018 10:10	9863742
102218-01-SW-U-A-1 Filtered Grab Surface Water	10/22/2018 10:10	9863743
102218-01-SW-U-B-1 Grab Surface Water	10/22/2018 10:15	9863744
102218-01-SW-U-C-1 Grab Surface Water	10/22/2018 10:20	9863745
102218-02-SW-A-A-1 Grab Surface Water	10/22/2018 10:45	9863746
102218-02-SW-A-A-1 Filtered Grab Surface Water	10/22/2018 10:45	9863747
102218-02-SW-A-B-1 Grab Surface Water	10/22/2018 10:50	9863748
102218-02-SW-A-C-1 Grab Surface Water	10/22/2018 11:00	9863749
102218-03-SW-D-A-1 Grab Surface Water	10/22/2018 11:20	9863750
102218-03-SW-D-A-1 Filtered Grab Surface Water	10/22/2018 11:20	9863751
102218-03-SW-D-B-1 Grab Surface Water	10/22/2018 11:25	9863752
102218-03-SW-D-C-1 Grab Surface Water	10/22/2018 11:30	9863753
102218-TB-01 Water	10/22/2018 14:30	9863754

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **102218-01-SW-U-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:10
SDG#: RNS32-01

BASF Corporation
ELLE Sample #: WW 9863742
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.130	0.651	1
14188	PCB-1221	11104-28-2	N.D. D1	0.130	0.651	1
14188	PCB-1232	11141-16-5	N.D. D1	0.130	0.651	1
14188	PCB-1242	53469-21-9	N.D. D1	0.130	0.651	1
14188	PCB-1248	12672-29-6	N.D. D1	0.130	0.651	1
14188	PCB-1254	11097-69-1	N.D. D1	0.130	0.651	1
14188	PCB-1260	11096-82-5	N.D. D1	0.130	0.651	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0964	0.651	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0964	0.651	1
14188	Total PCBs	1336-36-3	N.D.	0.0964	0.651	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.73 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,710	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102218-01-SW-U-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:10
SDG#: RNS32-01

BASF Corporation
ELLE Sample #: WW 9863742
ELLE Group #: 2001239
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 13:16	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 13:16	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 19:37	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 08:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 12:56	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18296121451A	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:10
SDG#: RNS32-02

BASF Corporation
ELLE Sample #: WW 9863743
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.641	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.641	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.641	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.641	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.641	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.641	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.641	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0949	0.641	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0949	0.641	1
14188	Total PCBs	1336-36-3	N.D.	0.0949	0.641	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 19:48	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:07	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-01-SW-U-B-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:15
SDG#: RNS32-03

BASF Corporation
ELLE Sample #: WW 9863744
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,290	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102218-01-SW-U-C-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:20
SDG#: RNS32-04

BASF Corporation
ELLE Sample #: WW 9863745
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,290	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-02-SW-A-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:45
SDG#: RNS32-05

BASF Corporation
ELLE Sample #: WW 9863746
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.129	0.644	1
14188	PCB-1221	11104-28-2	N.D. D1	0.129	0.644	1
14188	PCB-1232	11141-16-5	N.D. D1	0.129	0.644	1
14188	PCB-1242	53469-21-9	N.D. D1	0.129	0.644	1
14188	PCB-1248	12672-29-6	N.D. D1	0.129	0.644	1
14188	PCB-1254	11097-69-1	N.D. D1	0.129	0.644	1
14188	PCB-1260	11096-82-5	N.D. D1	0.129	0.644	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0954	0.644	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0954	0.644	1
14188	Total PCBs	1336-36-3	N.D.	0.0954	0.644	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,860	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102218-02-SW-A-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:45
SDG#: RNS32-05

BASF Corporation
ELLE Sample #: WW 9863746
ELLE Group #: 2001239
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 13:38	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 13:38	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 19:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:10	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 13:21	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:45
SDG#: RNS32-06

BASF Corporation
ELLE Sample #: WW 9863747
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	4.4	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 20:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:12	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-02-SW-A-B-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 10:50
SDG#: RNS32-07

BASF Corporation
ELLE Sample #: WW 9863748
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,860	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-02-SW-A-C-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:00
SDG#: RNS32-08

BASF Corporation
ELLE Sample #: WW 9863749
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-03-SW-D-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:20
SDG#: RNS32-09

BASF Corporation
ELLE Sample #: WW 9863750
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.72 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.064 J	0.050	0.20	1
Wet Chemistry		**EPA 130.2 modified**	**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,200	6,000	20,000	2
		SM 2130 B-2011	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,710	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102218-03-SW-D-A-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:20
SDG#: RNS32-09

BASF Corporation
ELLE Sample #: WW 9863750
ELLE Group #: 2001239
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 13:59	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 13:59	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 20:19	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:14	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 13:30	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:20
SDG#: RNS32-10

BASF Corporation
ELLE Sample #: WW 9863751
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182960036A	10/24/2018 20:30	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182960036A	10/23/2018 20:00	Osvaldo R Sanchez	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182970705001A	10/25/2018 09:16	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182970571401	10/25/2018 08:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182970705001	10/24/2018 04:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182970571401	10/24/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-03-SW-D-B-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:25
SDG#: RNS32-11

BASF Corporation
ELLE Sample #: WW 9863752
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,430	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-03-SW-D-C-1 Grab Surface Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 11:30
SDG#: RNS32-12

BASF Corporation
ELLE Sample #: WW 9863753
ELLE Group #: 2001239
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,570	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18296121451B	10/23/2018 18:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18296385804A	10/23/2018 23:25	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **102218-TB-01 Water**
COC: 567600

Project Name: **Rensselaer**

Submittal Date/Time: 10/23/2018 10:30
Collection Date/Time: 10/22/2018 14:30
SDG#: RNS32-13TB

BASF Corporation
ELLE Sample #: WW 9863754
ELLE Group #: 2001239
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L182991AA	10/26/2018 11:48	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L182991AA	10/26/2018 11:48	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:20

Group Number: 2001239

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L182991AA	Sample number(s): 9863742,9863746,9863750,9863754		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182960036A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182970571401	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751		
Mercury	N.D.	0.050	0.20
Batch number: 182970705001A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18296121451A	Sample number(s): 9863742		
Turbidity	0.20 J	0.140	1.00
Batch number: 18296121451B	Sample number(s): 9863744-9863746,9863748-9863750,9863752-9863753		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18296385804A	Sample number(s): 9863742,9863744-9863746,9863748-9863750,9863752-9863753		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18298001101A	Sample number(s): 9863742,9863746,9863750		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:20

Group Number: 2001239

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: L182991AA	Sample number(s): 9863742,9863746,9863750,9863754								
Benzene	20	21.16	20	20.9	106	104	80-120	1	30
Chlorobenzene	20	21.89	20	21.68	109	108	80-120	1	30
1,2-Dichlorobenzene	20	21.51	20	21.28	108	106	80-120	1	30
1,3-Dichlorobenzene	20	21.19	20	21.24	106	106	80-120	0	30
1,4-Dichlorobenzene	20	21.49	20	21.51	107	108	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182960036A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751								
PCB-1016	5.01	3.36	5.01	3.80	67	76	50-140	12	36
PCB-1260	5.00	3.73	5.00	4.35	75	87	50-140	15	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182970571401	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751								
Mercury	1.00	0.863			86		85-115		
Batch number: 182970705001A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751								
Arsenic	10	10.2			102		85-115		
Cadmium	5.00	5.15			103		85-115		
Chromium	50	51.05			102		85-115		
Copper	50	50.49			101		85-115		
Lead	15	15.13			101		85-115		
Zinc	500	497.84			100		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18296121451A	Sample number(s): 9863742								
Turbidity	10	9.70			97		90-104		
Batch number: 18296121451B	Sample number(s): 9863744-9863746,9863748-9863750,9863752-9863753								
Turbidity	10	9.70			97		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18296385804A	Sample number(s): 9863742,9863744-9863746,9863748-9863750,9863752-9863753								
Total Suspended Solids	150000	149600	150000	145400	100	97	89-105	3	5
Batch number: 18298001101A	Sample number(s): 9863742,9863746,9863750								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:20

Group Number: 2001239

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	39040			98		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182970571401	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751 UNSPK: 9863742									
Mercury	N.D.	1.00	0.898			90		80-120		
Batch number: 182970705001A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751 UNSPK: 9863742									
Arsenic	N.D.	10	9.74			97		70-130		
Cadmium	N.D.	5.00	4.71			94		70-130		
Chromium	0.732	50	49.19			97		70-130		
Copper	N.D.	50	49.07			98		70-130		
Lead	N.D.	15	15			100		70-130		
Zinc	11.33	500	481.41			94		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18298001101A	Sample number(s): 9863742,9863746,9863750 UNSPK: 9863742									
Total Hardness	83180	80000	159300			95		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182970571401	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751 BKG: 9863742			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182970705001A	Sample number(s): 9863742-9863743,9863746-9863747,9863750-9863751 BKG: 9863742			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.732	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:20

Group Number: 2001239

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Zinc	11.33	10.68	6 (1)	20
	N T U	N T U		
Batch number: 18296121451B	Sample number(s): 9863744-9863746,9863748-9863750,9863752-9863753 BKG: 9863753			
Turbidity	7.00	7.00	0	8
	ug/l	ug/l		
Batch number: 18298001101A	Sample number(s): 9863742,9863746,9863750 BKG: 9863742			
Total Hardness	83180	84140	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L182991AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9863742	117	109	103	89
9863746	97	97	96	90
9863750	104	102	100	98
9863754	104	103	101	97
Blank	102	101	100	98
LCS	102	101	101	100
LCSD	102	104	100	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182960036A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9863742	80	75	76	72
9863743	69	72	66	68
9863746	64	61	64	61
9863747	68	71	65	68
9863750	79	70	77	69
9863751	81	80	79	79
Blank	74	68	72	65
LCS	66	36	65	35
LCSD	77	41	75	40

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/29/2018 10:20

Group Number: 2001239

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182960036A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2001239 Sample # 9863742-54

COC # 567600

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	FN Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	H TSS	VOCs – 8260c	Turbidity – SM2130
102218-01-SW-U-A-1	10/22/18	1010	✓		13	2	2	1	1	1	1	1	3	1
102218-01-SW-U-B-1	10/22/18	1015	✓		2							1		1
102218-01-SW-U-C-1	10/22/18	1020	✓		2							1		1
102218-02-SW-A-A-1	10/22/18	1045	✓		13	2	2	1	1	1	1	1	3	1
102218-02-SW-A-B-1	10/22/18	1050	✓		2							1		1
102218-02-SW-A-C-1	10/22/18	1100	✓		2							1		1
102218-03-SW-D-A-1	10/22/18	1120	✓		13	2	2	1	1	1	1	1	3	1
102218-03-SW-D-B-1	10/22/18	1125	✓		2							1		1
102218-03-SW-D-C-1	10/22/18	1130	✓		2							1		1
102218-TB-01	10/22/18	1430	✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/24/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/22/18	1600			
			[signature]	10/23/18	10:30

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.9-1.1 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230834

Group Number(s): 2001239

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/23/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	No
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 12:05 on 10/23/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.1	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

Sample ID Discrepancy Details: Hudson River OU-2

Sample ID on COC	Sample ID on Label	Comments
102218-TB-01	*none*	No label on TB vial.

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 30, 2018 10:23

Project: Rensselaer

Account #: 04285
Group Number: 2001797
SDG: RNS33
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102318-01-SW-U-A-1 Grab Surface Water	10/23/2018 08:00	9865798
102318-01-SW-U-A-1 Filtered Grab Surface Water	10/23/2018 08:00	9865799
102318-01-SW-U-B-1 Grab Surface Water	10/23/2018 08:10	9865800
102318-01-SW-U-C-1 Grab Surface Water	10/23/2018 08:15	9865801
102318-02-SW-A-A-1 Grab Surface Water	10/23/2018 08:40	9865802
102318-02-SW-A-A-1 Filtered Grab Surface Water	10/23/2018 08:40	9865803
102318-02-SW-A-B-1 Grab Surface Water	10/23/2018 08:45	9865804
102318-02-SW-A-C-1 Grab Surface Water	10/23/2018 08:50	9865805
102318-03-SW-D-A-1 Grab Surface Water	10/23/2018 09:50	9865806
102318-03-SW-D-B-1 Grab Surface Water	10/23/2018 09:55	9865807
102318-03-SW-D-C-1 Grab Surface Water	10/23/2018 10:00	9865808
102318-03-SW-D-C-1 Filtered Grab Surface Water	10/23/2018 10:00	9865809
102318-03-SW-D-C-2 Grab Surface Water	10/23/2018 10:15	9865810
102318-03-SW-D-C-2 Filtered Grab Surface Water	10/23/2018 10:15	9865811
102318-TB-01 Water	10/23/2018 14:00	9865812

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **102318-01-SW-U-A-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:00
SDG#: RNS33-01

BASF Corporation
ELLE Sample #: WW 9865798
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,670	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102318-01-SW-U-A-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:00
SDG#: RNS33-01

BASF Corporation
ELLE Sample #: WW 9865798
ELLE Group #: 2001797
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183013AA	10/28/2018 23:44	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183013AA	10/28/2018 23:44	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 18:31	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:42	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 12:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 14:23	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:52	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:00
SDG#: RNS33-02

BASF Corporation
ELLE Sample #: WW 9865799
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 18:41	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:52	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-01-SW-U-B-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:10
SDG#: RNS33-03

BASF Corporation
ELLE Sample #: WW 9865800
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,370	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:52	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102318-01-SW-U-C-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:15
SDG#: RNS33-04

BASF Corporation
ELLE Sample #: WW 9865801
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.3	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,220	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:52	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-02-SW-A-A-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:40
SDG#: RNS33-05

BASF Corporation
ELLE Sample #: WW 9865802
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,010	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102318-02-SW-A-A-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:40
SDG#: RNS33-05

BASF Corporation
ELLE Sample #: WW 9865802
ELLE Group #: 2001797
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183013AA	10/29/2018 00:08	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183013AA	10/29/2018 00:08	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 18:52	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:54	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 14:31	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:52	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:40
SDG#: RNS33-06

BASF Corporation
ELLE Sample #: WW 9865803
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 19:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 16:57	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-02-SW-A-B-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:45
SDG#: RNS33-07

BASF Corporation
ELLE Sample #: WW 9865804
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:53	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-02-SW-A-C-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 08:50
SDG#: RNS33-08

BASF Corporation
ELLE Sample #: WW 9865805
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121451B	10/24/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:53	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-A-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 09:50
SDG#: RNS33-09

BASF Corporation
ELLE Sample #: WW 9865806
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,820	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121452A	10/24/2018 17:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:53	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-B-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 09:55
SDG#: RNS33-10

BASF Corporation
ELLE Sample #: WW 9865807
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18297121452A	10/24/2018 17:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:53	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:00
SDG#: RNS33-11

BASF Corporation
ELLE Sample #: WW 9865808
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.79 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-1 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:00
SDG#: RNS33-11

BASF Corporation
ELLE Sample #: WW 9865808
ELLE Group #: 2001797
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183013AA	10/29/2018 00:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183013AA	10/29/2018 00:32	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 19:13	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:03	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:03	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705004A	10/30/2018 04:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:03	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:03	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:03	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183010705004	10/29/2018 15:50	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 14:39	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18297121452A	10/24/2018 17:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385802A	10/25/2018 10:53	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:00
SDG#: RNS33-12

BASF Corporation
ELLE Sample #: WW 9865809
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.92 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 19:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:05	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-2 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:15
SDG#: RNS33-13FD

BASF Corporation
ELLE Sample #: WW 9865810
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.99 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	91,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183013AA	10/29/2018 00:56	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183013AA	10/29/2018 00:56	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 19:34	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-2 Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:15
SDG#: RNS33-13FD

BASF Corporation
ELLE Sample #: WW 9865810
ELLE Group #: 2001797
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:07	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2 modified	1	18298001101A	10/25/2018 14:48	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **102318-03-SW-D-C-2 Filtered Grab Surface Water**
COC: 568539

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 10:15
SDG#: RNS33-14FD

BASF Corporation
ELLE Sample #: WW 9865811
ELLE Group #: 2001797
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.88 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182980009A	10/28/2018 19:44	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182980009A	10/25/2018 17:07	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	182980705001A	10/25/2018 17:09	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	182980571401	10/26/2018 13:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182980705001	10/25/2018 04:57	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182980571401	10/26/2018 08:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102318-TB-01 Water**
COC: 568540

Project Name: **Rensselaer**

Submittal Date/Time: 10/24/2018 11:10
Collection Date/Time: 10/23/2018 14:00
SDG#: RNS33-15TB

BASF Corporation
ELLE Sample #: WW 9865812
ELLE Group #: 2001797
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W183013AA	10/28/2018 23:20	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W183013AA	10/28/2018 23:20	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/30/2018 10:23

Group Number: 2001797

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W183013AA	Sample number(s): 9865798,9865802,9865808,9865810,9865812		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182980009A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182980571401	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811		
Mercury	N.D.	0.050	0.20
Batch number: 182980705001A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	5.4 J	0.70	10.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183010705004A	Sample number(s): 9865808		
Chromium	N.D.	0.70	10.0
	N T U	N T U	N T U
Batch number: 18297121451B	Sample number(s): 9865798,9865800-9865802,9865804-9865805		
Turbidity	0.15 J	0.140	1.00
Batch number: 18297121452A	Sample number(s): 9865806-9865808		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18298001101A	Sample number(s): 9865798,9865802,9865808,9865810		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/30/2018 10:23

Group Number: 2001797

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000
Batch number: 18298385802A	Sample number(s): 9865798,9865800-9865802,9865804-9865808		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W183013AA	Sample number(s): 9865798,9865802,9865808,9865810,9865812								
Benzene	20	22.37	20	22.25	112	111	80-120	1	30
Chlorobenzene	20	23.13	20	22.88	116	114	80-120	1	30
1,2-Dichlorobenzene	20	23.7	20	23.07	119	115	80-120	3	30
1,3-Dichlorobenzene	20	23.8	20	23.66	119	118	80-120	1	30
1,4-Dichlorobenzene	20	23.74	20	23.83	119	119	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182980009A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811								
PCB-1016	5.01	3.03	5.01	3.93	60	79	50-140	26	36
PCB-1260	5.00	4.05	5.00	4.73	81	95	50-140	15	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182980571401	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811								
Mercury	1.00	0.882			88		85-115		
Batch number: 182980705001A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811								
Arsenic	10	10.48			105		85-115		
Cadmium	5.00	5.02			100		85-115		
Chromium	50	52.23			104		85-115		
Copper	50	53.2			106		85-115		
Lead	15	15.56			104		85-115		
Zinc	500	534.03			107		85-115		
Batch number: 183010705004A	Sample number(s): 9865808								
Chromium	50	50.25			101		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18297121451B	Sample number(s): 9865798,9865800-9865802,9865804-9865805								
Turbidity	10	10			100		90-104		
Batch number: 18297121452A	Sample number(s): 9865806-9865808								
Turbidity	10	9.90			99		90-104		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/30/2018 10:23

Group Number: 2001797

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18298001101A	Sample number(s): 9865798,9865802,9865808,9865810								
Total Hardness	40000	39040			98		85-110		
Batch number: 18298385802A	Sample number(s): 9865798,9865800-9865802,9865804-9865808								
Total Suspended Solids	150000	144800			97		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182980571401	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811 UNSPK: 9865798									
Mercury	N.D.	1.00	0.878			88		80-120		
Batch number: 182980705001A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811 UNSPK: 9865798									
Arsenic	N.D.	10	10.27			103		70-130		
Cadmium	N.D.	5.00	5.13			103		70-130		
Chromium	N.D.	50	52.07			104		70-130		
Copper	N.D.	50	52.29			105		70-130		
Lead	N.D.	15	15.66			104		70-130		
Zinc	N.D.	500	507.73			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182980571401	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811 BKG: 9865798			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182980705001A	Sample number(s): 9865798-9865799,9865802-9865803,9865808-9865811 BKG: 9865798			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/30/2018 10:23

Group Number: 2001797

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l N T U	DUP Conc ug/l N T U	DUP RPD	DUP RPD Max
Batch number: 18297121451B	Sample number(s): 9865798,9865800-9865802,9865804-9865805 BKG: 9865798			
Turbidity	7.40	7.40	0	8
Batch number: 18297121452A	Sample number(s): 9865806-9865808 BKG: 9865806			
Turbidity	6.80	6.70	1	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W183013AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9865798	99	105	96	86
9865802	97	104	96	87
9865808	100	103	95	87
9865810	99	103	95	86
9865812	98	100	96	86
Blank	94	101	97	88
LCS	95	102	99	93
LCSD	96	102	98	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182980009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9865798	67	81	65	79
9865799	67	81	66	80
9865802	52	66	51	64
9865803	69	81	69	81
9865808	60	73	59	72
9865809	59	74	56	71
9865810	70	76	69	74
9865811	76	84	74	83
Blank	66	47	63	46
LCS	26*	66	26*	64
LCSD	65	83	64	83

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Reported: 10/30/2018 10:23

Group Number: 2001797

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182980009A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2001797 Sample # 9865798 - 812

COC # 568539

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229688
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	PCBs (Filtered)	PCBs (Unfiltered)	Metals (Filtered)	Metals (Unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130
102318-01-SW-U-A-1	10/23/18	0800	✓					✓						13	2	2	1	1	1	1	1	3	1
102318-01-SW-U-B-1	10/23/18	0810	✓					✓						2							1		1
102318-01-SW-U-C-1	10/23/18	0815	✓					✓						2							1		1
102318-02-SW-A-A-1	10/23/18	0840	✓					✓						13	2	2	1	1	1	1	1	3	1
102318-02-SW-A-B-1	10/23/18	0845	✓					✓						2							1		1
102318-02-SW-A-C-1	10/23/18	0850	✓					✓						2							1		1
102318-03-SW-D-A-1	10/23/18	0950	✓					✓						2							1		1
102318-03-SW-D-B-1	10/23/18	0955	✓					✓						2							1		1
102318-03-SW-D-C-1	10/23/18	1000	✓					✓						13	2	2	1	1	1	1	1	3	1
102318-03-SW-D-C-2	10/23/18	1015	✓					✓						11	2	2	1	1	1	1		3	

Analysis Requested

Preservation and Filtration Codes

F		FN	N	N	N		H		

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Duplicate

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/25/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	10/23/18	1600			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	10/24/18	11:10

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx / Other ____

Temperature upon receipt 0.3-0.4 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only 9865798-812

Acct. # 4285 Group # 2001797 Sample # 9865798-

COC # 568540

(3) KMZ 2123 10/24/18

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ | Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ___

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F,N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
102318-TB-01	10/23/18	1400	✓											

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/25/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	10/23/18	1600			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	10/24/18	11:10

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.3-0.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 230953

Group Number(s): 2001797

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/24/2018 11:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 12:35 on 10/24/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.4	DT	Wet	Y	Bagged	N
2	DT42-01	0.3	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
102318-TB-01	-- --	No label on TB vial.

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Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 31, 2018 16:37

Project: Rensselaer

Account #: 04285
Group Number: 2002219
SDG: RNS34
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102418-01-SW-U-A-1 Grab Surface Water	10/24/2018 08:20	9867545
102418-01-SW-U-A-1 Filtered Grab Surface Water	10/24/2018 08:20	9867546
102418-01-SW-U-B-1 Grab Surface Water	10/24/2018 08:25	9867547
102418-01-SW-U-C-1 Grab Surface Water	10/24/2018 08:30	9867548
102418-02-SW-A-A-1 Grab Surface Water	10/24/2018 08:55	9867549
102418-02-SW-A-A-1 Filtered Grab Surface Water	10/24/2018 08:55	9867550
102418-02-SW-A-B-1 Grab Surface Water	10/24/2018 09:00	9867551
102418-02-SW-A-C-1 Grab Surface Water	10/24/2018 09:05	9867552
102418-03-SW-D-A-1 Grab Surface Water	10/24/2018 09:45	9867553
102418-03-SW-D-A-1 Filtered Grab Surface Water	10/24/2018 09:45	9867554
102418-03-SW-D-B-1 Grab Surface Water	10/24/2018 09:55	9867555
102418-03-SW-D-C-1 Grab Surface Water	10/24/2018 10:00	9867556
102418-03-SW-D-C-2 Grab Surface Water	10/24/2018 12:45	9867557
102418-03-SW-D-C-2 Filtered Grab Surface Water	10/24/2018 12:45	9867558
102418-TB-01 Water	10/24/2018 15:00	9867559

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **102418-01-SW-U-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:20
SDG#: RNS34-01

BASF Corporation
ELLE Sample #: WW 9867545
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,220	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102418-01-SW-U-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:20
SDG#: RNS34-01

BASF Corporation
ELLE Sample #: WW 9867545
ELLE Group #: 2002219
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 02:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 02:39	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 20:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 14:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18298001102B	10/25/2018 17:28	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18298121452A	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:20
SDG#: RNS34-02

BASF Corporation
ELLE Sample #: WW 9867546
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 20:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:47	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 14:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-01-SW-U-B-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:25
SDG#: RNS34-03

BASF Corporation
ELLE Sample #: WW 9867547
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,370	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452A	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102418-01-SW-U-C-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:30
SDG#: RNS34-04

BASF Corporation
ELLE Sample #: WW 9867548
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,030	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452A	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:27	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-02-SW-A-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:55
SDG#: RNS34-05

BASF Corporation
ELLE Sample #: WW 9867549
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,820	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102418-02-SW-A-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:55
SDG#: RNS34-05

BASF Corporation
ELLE Sample #: WW 9867549
ELLE Group #: 2002219
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 02:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 02:59	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 21:08	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 14:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18298001102A	10/25/2018 17:43	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18298121452A	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385803A	10/25/2018 15:12	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 08:55
SDG#: RNS34-06

BASF Corporation
ELLE Sample #: WW 9867550
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 21:19	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 14:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-02-SW-A-B-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:00
SDG#: RNS34-07

BASF Corporation
ELLE Sample #: WW 9867551
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,930	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452B	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385803A	10/25/2018 15:12	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-02-SW-A-C-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:05
SDG#: RNS34-08

BASF Corporation
ELLE Sample #: WW 9867552
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452B	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:45
SDG#: RNS34-09

BASF Corporation
ELLE Sample #: WW 9867553
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,670	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-A-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:45
SDG#: RNS34-09

BASF Corporation
ELLE Sample #: WW 9867553
ELLE Group #: 2002219
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 03:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 03:19	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 21:29	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 04:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 15:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18298001102A	10/25/2018 17:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18298121452B	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:45
SDG#: RNS34-10

BASF Corporation
ELLE Sample #: WW 9867554
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 21:40	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 15:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-B-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 09:55
SDG#: RNS34-11

BASF Corporation
ELLE Sample #: WW 9867555
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452B	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-C-1 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 10:00
SDG#: RNS34-12

BASF Corporation
ELLE Sample #: WW 9867556
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,630	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18298121452B	10/25/2018 20:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18298385804A	10/25/2018 15:19	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-C-2 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 12:45
SDG#: RNS34-13EB

BASF Corporation
ELLE Sample #: WW 9867557
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.5 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	10,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/30/2018 23:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/30/2018 23:59	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 21:50	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-C-2 Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 12:45
SDG#: RNS34-13EB

BASF Corporation
ELLE Sample #: WW 9867557
ELLE Group #: 2002219
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 15:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	2	18302001101A	10/29/2018 08:55	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-03-SW-D-C-2 Filtered Grab Surface Water**
COC: 568541

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 12:45
SDG#: RNS34-14EB

BASF Corporation
ELLE Sample #: WW 9867558
ELLE Group #: 2002219
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990012A	10/28/2018 22:01	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990012A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182990705001A	10/27/2018 05:05	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182990571401	10/26/2018 15:07	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182990705001	10/26/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182990571401	10/26/2018 08:30	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102418-TB-01 Water**
COC: 568542

Project Name: **Rensselaer**

Submittal Date/Time: 10/25/2018 10:30
Collection Date/Time: 10/24/2018 15:00
SDG#: RNS34-15TB

BASF Corporation
ELLE Sample #: WW 9867559
ELLE Group #: 2002219
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/30/2018 23:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/30/2018 23:39	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:37

Group Number: 2002219

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E183033AA	Sample number(s): 9867545,9867549,9867553,9867557,9867559		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182990012A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182990571401	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558		
Mercury	N.D.	0.050	0.20
Batch number: 182990705001A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	NTU	NTU	NTU
Batch number: 18298121452A	Sample number(s): 9867545,9867547-9867549		
Turbidity	0.20 J	0.140	1.00
Batch number: 18298121452B	Sample number(s): 9867551-9867553,9867555-9867556		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18298001102A	Sample number(s): 9867549,9867553		
Total Hardness	N.D.	3,000	10,000
Batch number: 18298001102B	Sample number(s): 9867545		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:37

Group Number: 2002219

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000
Batch number: 18298385803A	Sample number(s): 9867549,9867551		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18298385804A	Sample number(s): 9867545,9867547,9867552-9867553,9867555-9867556		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18302001101A	Sample number(s): 9867557		
Total Hardness	N.D.	3,000	10,000
Batch number: 18302385801A	Sample number(s): 9867548		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: E183033AA	Sample number(s): 9867545,9867549,9867553,9867557,9867559								
Benzene	20	21.02			105		80-120		
Chlorobenzene	20	21.42			107		80-120		
1,2-Dichlorobenzene	20	22.07			110		80-120		
1,3-Dichlorobenzene	20	21.79			109		80-120		
1,4-Dichlorobenzene	20	21.85			109		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182990012A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558								
PCB-1016	5.01	4.00	5.01	4.66	80	93	50-140	15	36
PCB-1260	5.00	4.10	5.00	4.73	82	95	50-140	14	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182990571401	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558								
Mercury	1.00	0.875			88		85-115		
Batch number: 182990705001A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558								
Arsenic	10	10.28			103		85-115		
Cadmium	5.00	5.21			104		85-115		
Chromium	50	50.38			101		85-115		
Copper	50	50.56			101		85-115		
Lead	15	15.1			101		85-115		
Zinc	500	504.82			101		85-115		
	NTU	NTU	NTU	NTU					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:37

Group Number: 2002219

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	N T U	N T U	N T U	N T U					
Batch number: 18298121452A	Sample number(s): 9867545,9867547-9867549								
Turbidity	10	9.90			99		90-104		
Batch number: 18298121452B	Sample number(s): 9867551-9867553,9867555-9867556								
Turbidity	10	9.90			99		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18298001102A	Sample number(s): 9867549,9867553								
Total Hardness	40000	39190			98		85-110		
Batch number: 18298001102B	Sample number(s): 9867545								
Total Hardness	40000	39190			98		85-110		
Batch number: 18298385803A	Sample number(s): 9867549,9867551								
Total Suspended Solids	150000	144200			96		89-105		
Batch number: 18298385804A	Sample number(s): 9867545,9867547,9867552-9867553,9867555-9867556								
Total Suspended Solids	150000	145600			97		89-105		
Batch number: 18302001101A	Sample number(s): 9867557								
Total Hardness	40000	39430			99		85-110		
Batch number: 18302385801A	Sample number(s): 9867548								
Total Suspended Solids	150000	148500			99		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 182990571401	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558 UNSPK: 9867545									
Mercury	N.D.	1.00	0.879			88		80-120		
Batch number: 182990705001A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558 UNSPK: 9867545									
Arsenic	N.D.	10	10.82			108		70-130		
Cadmium	N.D.	5.00	5.04			101		70-130		
Chromium	N.D.	50	52.9			106		70-130		
Copper	N.D.	50	52.81			106		70-130		
Lead	N.D.	15	15.6			104		70-130		
Zinc	N.D.	500	515.67			103		70-130		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:37

Group Number: 2002219

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182990571401	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558 BKG: 9867545			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182990705001A	Sample number(s): 9867545-9867546,9867549-9867550,9867553-9867554,9867557-9867558 BKG: 9867545			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18298121452B	Sample number(s): 9867551-9867553,9867555-9867556 BKG: 9867556			
Turbidity	4.70	4.70	0 (1)	8
	ug/l	ug/l		
Batch number: 18298001102B	Sample number(s): 9867545 BKG: 9867545			
Total Hardness	79960	80720	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E183033AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9867545	100	100	101	102
9867549	98	101	102	101
9867553	99	100	101	104
9867557	99	97	101	101

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:37

Group Number: 2002219

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E183033AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9867559	99	100	101	101
Blank	99	100	102	101
LCS	99	98	101	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182990012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9867545	80	81	78	80
9867546	85	84	84	82
9867549	82	76	80	73
9867550	87	82	87	81
9867553	87	80	87	78
9867554	92	79	93	76
9867557	93	42	91	42
9867558	63	25	62	25
Blank	70	36	69	36
LCS	71	41	69	40
LCSD	83	81	82	77
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2002219 Sample # 9867545-59

COC # 568541

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F,N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	H TSS	VOCs – 8260c	Turbidity – SM2130	Remarks
102418-01-SW-U-A-1	10/24/18	0820	✓		13	2	2	1	1	1	1	1	3	1	
102418-01-SW-U-B-1	10/24/18	0825	✓		2							1		1	
102418-01-SW-U-C-1	10/24/18	0830	✓		2							1		1	
102418-02-SW-A-A-1	10/24/18	0855	✓		13	2	2	1	1	1	1	1	3	1	
102418-02-SW-A-B-1	10/24/18	0900	✓		2							1		1	
102418-02-SW-A-C-1	10/24/18	0905	✓		2							1		1	
102418-03-SW-D-A-1	10/24/18	0945	✓		13	2	2	1	1	1	1	1	3	1	
102418-03-SW-D-B-1	10/24/18	0955	✓		2							1		1	
102418-03-SW-D-C-1	10/24/18	1000	✓		2							1		1	
102418-03-SW-D-C-3	10/24/18	1245	✓		11	2	2	1	1	1	1		3		Equipment Blank

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/26/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/24/18	1600			
			[signature]	10/25/18	1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.0 / 0.8 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2002219 Sample # 9867545-59

COC # 568542

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Total # of Containers

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	FN Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
102418-TB-01	10/24/18	1500	✓										1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/26/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/24/18	1600			
			[signature]	10/25/18	1030

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 1.7 | 0.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231108

Group Number(s): 2002219

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/25/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:25 on 10/25/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.2	DT	Wet	Y	Bagged	N
2	DT146	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 31, 2018 16:38

Project: Rensselaer

Account #: 04285
Group Number: 2002747
SDG: RNS35
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102518-01-SW-U-A-1 Grab Surface Water	10/25/2018 08:00	9870160
102518-01-SW-U-A-1 Filtered Grab Surface Water	10/25/2018 08:00	9870161
102518-01-SW-U-B-1 Grab Surface Water	10/25/2018 08:05	9870162
102518-01-SW-U-C-1 Grab Surface Water	10/25/2018 08:10	9870163
102518-02-SW-A-A-1 Grab Surface Water	10/25/2018 08:40	9870164
102518-02-SW-A-A-1 Filtered Grab Surface Water	10/25/2018 08:40	9870165
102518-02-SW-A-B-1 Grab Surface Water	10/25/2018 08:45	9870166
102518-02-SW-A-C-1 Grab Surface Water	10/25/2018 08:50	9870167
102518-03-SW-D-A-1 Grab Surface Water	10/25/2018 09:30	9870168
102518-03-SW-D-A-1 Filtered Grab Surface Water	10/25/2018 09:30	9870169
102518-03-SW-D-B-1 Grab Surface Water	10/25/2018 09:35	9870170
102518-03-SW-D-C-1 Grab Surface Water	10/25/2018 09:40	9870171
102518-TB-01-1 Water	10/25/2018 12:30	9870172

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **102518-01-SW-U-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:00
SDG#: RNS35-01

BASF Corporation
ELLE Sample #: WW 9870160
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102518-01-SW-U-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:00
SDG#: RNS35-01

BASF Corporation
ELLE Sample #: WW 9870160
ELLE Group #: 2002747
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 03:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 03:39	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/28/2018 23:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:12	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 09:34	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:27	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:00
SDG#: RNS35-02

BASF Corporation
ELLE Sample #: WW 9870161
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/28/2018 23:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:14	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-01-SW-U-B-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:05
SDG#: RNS35-03

BASF Corporation
ELLE Sample #: WW 9870162
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,670	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-01-SW-U-C-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:10
SDG#: RNS35-04

BASF Corporation
ELLE Sample #: WW 9870163
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.9	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,520	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-02-SW-A-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:40
SDG#: RNS35-05

BASF Corporation
ELLE Sample #: WW 9870164
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.5	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,630	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102518-02-SW-A-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:40
SDG#: RNS35-05

BASF Corporation
ELLE Sample #: WW 9870164
ELLE Group #: 2002747
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 04:00	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 04:00	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/28/2018 23:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:15	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 09:42	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:40
SDG#: RNS35-06

BASF Corporation
ELLE Sample #: WW 9870165
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/28/2018 23:46	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-02-SW-A-B-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:45
SDG#: RNS35-07

BASF Corporation
ELLE Sample #: WW 9870166
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,780	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-02-SW-A-C-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 08:50
SDG#: RNS35-08

BASF Corporation
ELLE Sample #: WW 9870167
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,070	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-03-SW-D-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 09:30
SDG#: RNS35-09

BASF Corporation
ELLE Sample #: WW 9870168
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	N.D.	0.0930	0.628	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,180	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102518-03-SW-D-A-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 09:30
SDG#: RNS35-09

BASF Corporation
ELLE Sample #: WW 9870168
ELLE Group #: 2002747
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 04:20	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 04:20	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/28/2018 23:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:34	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 10:11	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 09:30
SDG#: RNS35-10

BASF Corporation
ELLE Sample #: WW 9870169
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182990039A	10/29/2018 00:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182990039A	10/26/2018 20:11	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-03-SW-D-B-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 09:35
SDG#: RNS35-11

BASF Corporation
ELLE Sample #: WW 9870170
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-03-SW-D-C-1 Grab Surface Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 09:40
SDG#: RNS35-12

BASF Corporation
ELLE Sample #: WW 9870171
ELLE Group #: 2002747
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,730	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18299121451B	10/26/2018 15:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102518-TB-01-1 Water**
COC: 568543

Project Name: **Rensselaer**

Submittal Date/Time: 10/26/2018 10:30
Collection Date/Time: 10/25/2018 12:30
SDG#: RNS35-13TB

BASF Corporation
ELLE Sample #: WW 9870172
ELLE Group #: 2002747
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/30/2018 22:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/30/2018 22:59	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:38

Group Number: 2002747

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E183033AA	Sample number(s): 9870160,9870164,9870168,9870172		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182990039A	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183010705002A	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183030571401	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169		
Mercury	N.D.	0.050	0.20
	N T U	N T U	N T U
Batch number: 18299121451B	Sample number(s): 9870160,9870162-9870164,9870166-9870168,9870170-9870171		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18302001101A	Sample number(s): 9870160,9870164,9870168		
Total Hardness	N.D.	3,000	10,000
Batch number: 18302385801A	Sample number(s): 9870160,9870162-9870164,9870166-9870168,9870170-9870171		
Total Suspended Solids	N.D.	1,000	3,000

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:38

Group Number: 2002747

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: E183033AA	Sample number(s): 9870160,9870164,9870168,9870172								
Benzene	20	21.02			105		80-120		
Chlorobenzene	20	21.42			107		80-120		
1,2-Dichlorobenzene	20	22.07			110		80-120		
1,3-Dichlorobenzene	20	21.79			109		80-120		
1,4-Dichlorobenzene	20	21.85			109		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182990039A	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169								
PCB-1016	5.01	4.79	5.01	4.63	96	92	50-140	3	36
PCB-1260	5.00	4.91	5.00	4.92	98	98	50-140	0	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183010705002A	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169								
Arsenic	10	10.57			106		85-115		
Cadmium	5.00	4.72			94		85-115		
Chromium	50	49.41			99		85-115		
Copper	50	50.39			101		85-115		
Lead	15	15.38			103		85-115		
Zinc	500	517.28			103		85-115		
Batch number: 183030571401	Sample number(s): 9870160-9870161,9870164-9870165,9870168-9870169								
Mercury	1.00	0.911			91		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18299121451B	Sample number(s): 9870160,9870162-9870164,9870166-9870168,9870170-9870171								
Turbidity	10	9.90			99		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18302001101A	Sample number(s): 9870160,9870164,9870168								
Total Hardness	40000	39430			99		85-110		
Batch number: 18302385801A	Sample number(s): 9870160,9870162-9870164,9870166-9870168,9870170-9870171								
Total Suspended Solids	150000	148500			99		89-105		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/31/2018 16:38

Group Number: 2002747

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc N T U	DUP Conc N T U	DUP RPD	DUP RPD Max
Batch number: 18299121451B	Sample number(s): 9870160,9870162-9870164,9870166-9870168,9870170-9870171 BKG: 9870171			
Turbidity	5.70	5.60	2	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E183033AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9870160	100	99	101	100
9870164	99	101	100	100
9870168	101	99	101	101
9870172	100	100	100	102
Blank	99	100	102	101
LCS	99	98	101	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182990039A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9870160	74	63	73	62
9870161	92	83	92	82
9870164	84	80	84	77
9870165	97	80	96	80
9870168	99	82	98	81
9870169	97	87	96	82
Blank	93	88	93	85
LCS	94	95	94	93
LCSD	91	94	89	93
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2002747 Sample # 9870160-72

COC # 568543

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☑ Surface ☐ NPDES | Other: ____

Preservation and Filtration Codes: F | | FN | N | N | N | | H | | |

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (filtered)	PCBs (unfiltered)	Metals (filtered)	Metals (unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130
102518-01-SW-U-A-1	10/25/18	0800	✓		13	2	2	1	1	1	1	1	3	1
102518-01-SW-U-B-1	10/25/18	0805	✓		2							1		1
102518-01-SW-U-C-1	10/25/18	0810	✓		2							1		1
102518-02-SW-A-A-1	10/25/18	0840	✓		13	2	2	1	1	1	1	1	3	1
102518-02-SW-A-B-1	10/25/18	0845	✓		2							1		1
102518-02-SW-A-C-1	10/25/18	0850	✓		2							1		1
102518-03-SW-D-A-1	10/25/18	0930	✓		13	2	2	1	1	1	1	1	3	1
102518-03-SW-D-B-1	10/25/18	0935	✓		2						1			1
102518-03-SW-D-C-1	10/25/18	0940	✓		2						1			1
102518-TB-01-1	10/25/18	1230	✓		1								1	

Analysis Requested

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/27/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/25/18	1600			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	10/26/18	10:30

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231233

Group Number(s): 2002747

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/26/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 11:54 on 10/26/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.3	DT	Wet	Y	Bagged	N
2	DT42-01	0.3	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 01, 2018 16:57

Project: Rensselaer

Account #: 04285
Group Number: 2003110
SDG: RNS36
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102618-01-SW-U-A-1 Grab Surface Water	10/26/2018 10:10	9872092
102618-01-SW-U-B-1 Grab Surface Water	10/26/2018 10:15	9872093
102618-01-SW-U-B-1MS Grab Surface Water	10/26/2018 10:15	9872094
102618-01-SW-U-B-1MSD Grab Surface Water	10/26/2018 10:15	9872095
102618-01-SW-U-B-1DUP Grab Surface Water	10/26/2018 10:15	9872096
102618-01-SW-U-B-1 Filtered Grab Surface Water	10/26/2018 10:15	9872097
102618-01-SW-U-B-1MS Filtered Grab Surface Water	10/26/2018 10:15	9872098
102618-01-SW-U-B-1MSD Filtered Grab Surface Water	10/26/2018 10:15	9872099
102618-01-SW-U-B-1DUP Filtered Grab Surface Water	10/26/2018 10:15	9872100
102618-01-SW-U-C-1 Grab Surface Water	10/26/2018 10:20	9872101
102618-02-SW-A-A-1 Grab Surface Water	10/26/2018 09:25	9872102
102618-02-SW-A-B-1 Grab Surface Water	10/26/2018 09:30	9872103
102618-02-SW-A-B-1 Filtered Grab Surface Water	10/26/2018 09:30	9872104
102618-02-SW-A-C-1 Grab Surface Water	10/26/2018 09:35	9872105
102618-03-SW-D-A-1 Grab Surface Water	10/26/2018 08:45	9872106
102618-03-SW-D-A-1 Filtered Grab Surface Water	10/26/2018 08:45	9872107
102618-03-SW-D-B-1 Grab Surface Water	10/26/2018 08:50	9872108
102618-03-SW-D-C-1 Grab Surface Water	10/26/2018 08:55	9872109
102618-TB01-1 Water	10/26/2018 14:00	9872110

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **102618-01-SW-U-A-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:10
SDG#: RNS36-01

BASF Corporation
ELLE Sample #: WW 9872092
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	3.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,430	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451A	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02BKG

BASF Corporation
ELLE Sample #: WW 9872093
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,750 J	3,000	9,000	1

Reporting limits were raised due to limited sample volume.

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02BKG

BASF Corporation
ELLE Sample #: WW 9872093
ELLE Group #: 2003110
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 00:39	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 00:39	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020001A	10/31/2018 01:38	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020001A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:01	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 10:35	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18300121451A	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18303385801C	10/30/2018 11:09	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MS Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02MS

BASF Corporation
ELLE Sample #: WW 9872094
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	23	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	23	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	23	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	23	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.33 D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	5.77 D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	11.1	0.0877	0.592	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.1	0.68	2.0	1
06028	Cadmium	7440-43-9	4.8	0.15	1.0	1
06031	Chromium	7440-47-3	52.5	0.70	4.0	1
06033	Copper	7440-50-8	48.9	9.9	40.0	1
06035	Lead	7439-92-1	15.9	1.1	3.0	1
06049	Zinc	7440-66-6	481	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.88	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	157,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 00:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 00:59	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020001A	10/31/2018 01:49	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MS Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02MS

BASF Corporation
ELLE Sample #: WW 9872094
ELLE Group #: 2003110
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020001A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:07	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 10:43	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MSD Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02MSD

BASF Corporation
ELLE Sample #: WW 9872095
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	22	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	23	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	23	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	6.03 D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	5.89 D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	11.9	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.7	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	50.6	0.70	4.0	1
06033	Copper	7440-50-8	49.1	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	498	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	155,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 01:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 01:19	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020001A	10/31/2018 01:59	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MSD Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02MSD

BASF Corporation
ELLE Sample #: WW 9872095
ELLE Group #: 2003110
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020001A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:09	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 10:52	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1DUP Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-02DUP

BASF Corporation
ELLE Sample #: WW 9872096
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**		**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.		0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.		0.15	1.0	1
06031	Chromium	7440-47-3	N.D.		0.70	4.0	1
06033	Copper	7440-50-8	N.D.		9.9	40.0	1
06035	Lead	7439-92-1	N.D.		1.1	3.0	1
06049	Zinc	7440-66-6	N.D.		6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,700		6,000	20,000	2
	SM 2130 B-2011		**N T U**		**N T U**	**N T U**	
12145	Turbidity	n.a.	4.1		0.140	1.00	1
	SM 2540 D-2011		**ug/l**		**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,500	J	3,000	9,000	1
	Reporting limits were raised due to limited sample volume.						

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:05	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571401	10/31/2018 13:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571401	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 11:00	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18300121451A	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18303385801C	10/30/2018 11:09	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-03BKG

BASF Corporation
ELLE Sample #: WW 9872097
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.92 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 02:52	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MS Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-03MS

BASF Corporation
ELLE Sample #: WW 9872098
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.67 D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	6.07 D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	11.7	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.5	0.68	2.0	1
06028	Cadmium	7440-43-9	5.4	0.15	1.0	1
06031	Chromium	7440-47-3	49.9	0.70	4.0	1
06033	Copper	7440-50-8	57.1	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	543	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.89	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:30	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1MSD Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-03MSD

BASF Corporation
ELLE Sample #: WW 9872099
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	6.32 D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	6.49 D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	12.8	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	12.2	0.68	2.0	1
06028	Cadmium	7440-43-9	5.6	0.15	1.0	1
06031	Chromium	7440-47-3	51.2	0.70	4.0	1
06033	Copper	7440-50-8	54.7	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	533	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:13	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:37	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-B-1DUP Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:15
SDG#: RNS36-03DUP

BASF Corporation
ELLE Sample #: WW 9872100
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**		**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.		0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.		0.15	1.0	1
06031	Chromium	7440-47-3	0.78	J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.		9.9	40.0	1
06035	Lead	7439-92-1	N.D.		1.1	3.0	1
06049	Zinc	7440-66-6	12.6	J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:28	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-01-SW-U-C-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 10:20
SDG#: RNS36-04

BASF Corporation
ELLE Sample #: WW 9872101
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,280	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-02-SW-A-A-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 09:25
SDG#: RNS36-05

BASF Corporation
ELLE Sample #: WW 9872102
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-02-SW-A-B-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 09:30
SDG#: RNS36-06

BASF Corporation
ELLE Sample #: WW 9872103
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.2 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,880	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102618-02-SW-A-B-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 09:30
SDG#: RNS36-06

BASF Corporation
ELLE Sample #: WW 9872103
ELLE Group #: 2003110
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 01:59	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 01:59	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 11:08	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 09:30
SDG#: RNS36-07

BASF Corporation
ELLE Sample #: WW 9872104
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:34	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:41	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-02-SW-A-C-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 09:35
SDG#: RNS36-08

BASF Corporation
ELLE Sample #: WW 9872105
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,030	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-03-SW-D-A-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 08:45
SDG#: RNS36-09

BASF Corporation
ELLE Sample #: WW 9872106
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **102618-03-SW-D-A-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 08:45
SDG#: RNS36-09

BASF Corporation
ELLE Sample #: WW 9872106
ELLE Group #: 2003110
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/31/2018 02:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/31/2018 02:19	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:44	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705002A	10/29/2018 06:40	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705002	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571401	10/29/2018 16:30	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18302001101A	10/29/2018 11:16	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 08:45
SDG#: RNS36-10

BASF Corporation
ELLE Sample #: WW 9872107
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183020002A	10/31/2018 03:55	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183020002A	10/29/2018 16:22	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183010705003A	10/29/2018 07:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183030571402	10/31/2018 13:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183010705003	10/28/2018 07:18	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183010571402	10/29/2018 16:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183030571402	10/31/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-03-SW-D-B-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 08:50
SDG#: RNS36-11

BASF Corporation
ELLE Sample #: WW 9872108
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,480	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-03-SW-D-C-1 Grab Surface Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 08:55
SDG#: RNS36-12

BASF Corporation
ELLE Sample #: WW 9872109
ELLE Group #: 2003110
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.9	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	3,580	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18300121451B	10/27/2018 14:55	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18302385801A	10/29/2018 13:28	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **102618-TB01-1 Water**
COC: 568545

Project Name: **Rensselaer**

Submittal Date/Time: 10/27/2018 09:50
Collection Date/Time: 10/26/2018 14:00
SDG#: RNS36-13TB

BASF Corporation
ELLE Sample #: WW 9872110
ELLE Group #: 2003110
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	E183033AA	10/30/2018 23:19	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	E183033AA	10/30/2018 23:19	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation Group Number: 2003110
Reported: 11/01/2018 16:57

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: E183033AA	Sample number(s): 9872093-9872095,9872103,9872106,9872110		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183020001A	Sample number(s): 9872093-9872095		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183020002A	Sample number(s): 9872097-9872099,9872103-9872104,9872106-9872107		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183010705002A	Sample number(s): 9872093-9872096,9872103,9872106		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183010705003A	Sample number(s): 9872097-9872100,9872104,9872107		
Arsenic	N.D.	0.68	2.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183030571401	Sample number(s): 9872093-9872096		
Mercury	N.D.	0.050	0.20
Batch number: 183030571402	Sample number(s): 9872097-9872100,9872103-9872104,9872106-9872107		
Mercury	N.D.	0.050	0.20
	N T U	N T U	N T U
Batch number: 18300121451A	Sample number(s): 9872092-9872093,9872096		
Turbidity	0.15 J	0.140	1.00
Batch number: 18300121451B	Sample number(s): 9872101-9872103,9872105-9872106,9872108-9872109		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18302001101A	Sample number(s): 9872093-9872096,9872103,9872106		
Total Hardness	N.D.	3,000	10,000
Batch number: 18302385801A	Sample number(s): 9872092,9872101-9872103,9872105-9872106,9872108-9872109		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18303385801C	Sample number(s): 9872093,9872096		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: E183033AA	Sample number(s): 9872093-9872095,9872103,9872106,9872110								
Benzene	20	21.02			105		80-120		
Chlorobenzene	20	21.42			107		80-120		
1,2-Dichlorobenzene	20	22.07			110		80-120		
1,3-Dichlorobenzene	20	21.79			109		80-120		
1,4-Dichlorobenzene	20	21.85			109		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183020001A	Sample number(s): 9872093-9872095								
PCB-1016	5.01	3.49			70		50-140		
PCB-1260	5.00	4.01			80		50-140		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183020002A	Sample number(s): 9872097-9872099,9872103-9872104,9872106-9872107								
PCB-1016	5.01	3.31			66		50-140		
PCB-1260	5.00	4.30			86		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183010705002A	Sample number(s): 9872093-9872096,9872103,9872106								
Arsenic	10	10.57			106		85-115		
Cadmium	5.00	4.72			94		85-115		
Chromium	50	49.41			99		85-115		
Copper	50	50.39			101		85-115		
Lead	15	15.38			103		85-115		
Zinc	500	517.28			103		85-115		
Batch number: 183010705003A	Sample number(s): 9872097-9872100,9872104,9872107								
Arsenic	10	11.49			115		85-115		
Cadmium	5.00	5.71			114		85-115		
Chromium	50	48.12			96		85-115		
Copper	50	55.15			110		85-115		
Lead	15	15.72			105		85-115		
Zinc	500	559.26			112		85-115		
Batch number: 183030571401	Sample number(s): 9872093-9872096								
Mercury	1.00	0.911			91		85-115		
Batch number: 183030571402	Sample number(s): 9872097-9872100,9872103-9872104,9872106-9872107								
Mercury	1.00	0.895			90		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18300121451A	Sample number(s): 9872092-9872093,9872096								
Turbidity	10	9.90			99		90-104		
Batch number: 18300121451B	Sample number(s): 9872101-9872103,9872105-9872106,9872108-9872109								
Turbidity	10	9.90			99		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18302001101A	Sample number(s): 9872093-9872096,9872103,9872106								
Total Hardness	40000	39430			99		85-110		
Batch number: 18302385801A	Sample number(s): 9872092,9872101-9872103,9872105-9872106,9872108-9872109								
Total Suspended Solids	150000	148500			99		89-105		
Batch number: 18303385801C	Sample number(s): 9872093,9872096								
Total Suspended Solids	150000	143600			96		89-105		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: E183033AA	Sample number(s): 9872093-9872095,9872103,9872106,9872110 UNSPK: 9872093									
Benzene	N.D.	20	23.11	20	22.23	116	111	80-120	4	30
Chlorobenzene	N.D.	20	22.74	20	22.29	114	111	80-120	2	30
1,2-Dichlorobenzene	N.D.	20	22.76	20	22.35	114	112	80-120	2	30
1,3-Dichlorobenzene	0.246	20	23.15	20	22.67	114	112	80-120	2	30
1,4-Dichlorobenzene	N.D.	20	23.16	20	22.79	116	114	80-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183020001A	Sample number(s): 9872093-9872095 UNSPK: 9872093									
PCB-1016	N.D.	5.93	5.33	6.14	6.03	90	98	50-140	12	36
PCB-1260	N.D.	5.92	5.77	6.13	5.89	97	96	50-140	2	38
Batch number: 183020002A	Sample number(s): 9872097-9872099,9872103-9872104,9872106-9872107 UNSPK: 9872097									
PCB-1016	N.D.	5.82	5.67	5.99	6.32	97	106	50-140	11	36
PCB-1260	N.D.	5.81	6.07	5.98	6.49	104	109	50-140	7	38
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183010705002A	Sample number(s): 9872093-9872096,9872103,9872106 UNSPK: 9872093									
Arsenic	N.D.	10	10.1	10	10.75	101	107	70-130	6	20
Cadmium	N.D.	5.00	4.82	5.00	5.21	96	104	70-130	8	20
Chromium	N.D.	50	52.55	50	50.61	105	101	70-130	4	20
Copper	N.D.	50	48.94	50	49.08	98	98	70-130	0	20
Lead	N.D.	15	15.91	15	15.8	106	105	70-130	1	20
Zinc	14.36	500	481.49	500	497.5	93	97	70-130	3	20
Batch number: 183010705003A	Sample number(s): 9872097-9872100,9872104,9872107 UNSPK: 9872097									
Arsenic	N.D.	10	11.52	10	12.2	115	122	70-130	6	20
Cadmium	N.D.	5.00	5.37	5.00	5.60	107	112	70-130	4	20
Chromium	0.921	50	49.93	50	51.18	98	101	70-130	2	20
Copper	N.D.	50	57.13	50	54.67	114	109	70-130	4	20
Lead	N.D.	15	16.25	15	16.22	108	108	70-130	0	20
Zinc	13.14	500	543.02	500	533.24	106	104	70-130	2	20
Batch number: 183030571401	Sample number(s): 9872093-9872096 UNSPK: 9872093									
Mercury	N.D.	1.00	0.880	1.00	0.904	88	90	80-120	3	20
Batch number: 183030571402	Sample number(s): 9872097-9872100,9872103-9872104,9872106-9872107 UNSPK: 9872097									
Mercury	N.D.	1.00	0.892	1.00	0.904	89	90	80-120	1	20
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18302001101A	Sample number(s): 9872093-9872096,9872103,9872106 UNSPK: 9872093									
Total Hardness	77900	80000	157440	80000	154920	99	96	85-110	2	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183010705002A	Sample number(s): 9872093-9872096,9872103,9872106 BKG: 9872093			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	14.36	N.D.	200* (1)	20
Batch number: 183010705003A	Sample number(s): 9872097-9872100,9872104,9872107 BKG: 9872097			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.921	0.776	17 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13.14	12.6	4 (1)	20
Batch number: 183030571401	Sample number(s): 9872093-9872096 BKG: 9872093			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183030571402	Sample number(s): 9872097-9872100,9872103-9872104,9872106-9872107 BKG: 9872097			
Mercury	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18300121451A	Sample number(s): 9872092-9872093,9872096 BKG: 9872093			
Turbidity	4.00	4.10	2 (1)	8
Batch number: 18300121451B	Sample number(s): 9872101-9872103,9872105-9872106,9872108-9872109 BKG: 9872109			
Turbidity	5.90	5.90	0	8
	ug/l	ug/l		
Batch number: 18302001101A	Sample number(s): 9872093-9872096,9872103,9872106 BKG: 9872093			
Total Hardness	77900	77660	0 (1)	7
Batch number: 18303385801C	Sample number(s): 9872093,9872096 BKG: 9872093			

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Total Suspended Solids	3750	4500	18* (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: E183033AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9872093	102	102	100	100
9872094	99	100	100	99
9872095	99	97	101	101
9872103	99	99	101	101
9872106	100	97	101	101
9872110	99	97	102	101
Blank	99	100	102	101
LCS	99	98	101	99
MS	99	100	100	99
MSD	99	97	101	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183020001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9872093	83	85	86	87
9872094	71	83	78	86
9872095	75	83	81	86
Blank	67	84	71	88
LCS	46	70	48	73
MS	71	83	78	86
MSD	75	83	81	86
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183020002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9872097	89	87	93	89
9872098	81	94	87	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/01/2018 16:57

Group Number: 2003110

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183020002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9872099	93	91	99	97
9872103	87	90	93	95
9872104	83	92	93	95
9872106	90	85	91	96
9872107	86	89	89	97
Blank	69	66	72	67
LCS	46	42	46	45
MS	81	94	87	99
MSD	93	91	99	97
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2003110 Sample # 9872092-110

COC # 568545

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☑ Surface ☐ NPDES | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (unfiltered)	FN Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260 c	Turbidity - SM2130	Remarks
102618-01-SW-U-A-1	10/26/18	1010	✓		2							1		1	
102618-01-SW-U-B-1	10/26/18	1015	✓		33	6	6	3	3	3	1	9		1	MS/MSD
102618-01-SW-U-C-1	10/26/18	1020	✓		2							1		1	
102618-02-SW-A-A-1	10/26/18	0925	✓		2							1		1	
102618-02-SW-A-B-1	10/26/18	0930	✓		13	2	2	1	1	1	1	1	3	1	
102618-02-SW-A-C-1	10/26/18	0935	✓		2							1		1	
102618-03-SW-D-A-1	10/26/18	0845	✓		13	2	2	1	1	1	1	1	3	1	
102618-03-SW-D-B-1	10/26/18	0850	✓		2							1		1	
102618-03-SW-D-C-1	10/26/18	0855	✓		2							1		1	
102618-TB01-01	10/26/18	1400	✓		1								1		

Analysis Requested

Preservation and Filtration Codes: F | | FN | N | N | N | | H | | |

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

For Lab Use Only

FSC: ____

SCR#: ____

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/28/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Geehan	10/28/18	1530			
			Mmr	10/27/18	0950

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.5 | 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231373

Group Number(s): 2003110

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/27/2018 9:50
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:35 on 10/27/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.9	DT	Wet	Y	Bagged	N
2	DT146	0.5	DT	Wet	Y	Bagged	N
3	DT146	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/29/19 – 11/04/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week[1]);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 10/29/19 through 11/04/19. In accordance with the July 2019 Surface Water Remedial

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany.

Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were no exceedances of the water quality criteria.

Typically, field turbidity readings from the YSI EXO2 sonde were observed to be less than 20 NTU until the flows in the river increased (observed values up to 57 NTU). The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall (typically less than 20 NTU) until the flows increased (maximum observed value of 47 NTU). Overall, the turbidity readings continued to be in the near-bottom horizon. Lab TSS values during the early part of the reporting period (10/29 through 10/31) were typically 15-30 mg/L. However due to increased flows, the TSS data from 11/1 and 11/4 ranged from 65 to 111 mg/L.

Summary

Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the chemistry monitoring program during remedial dredging operations will be continued on a daily basis for VOCs/ TSS and three times per week for PCBs. The following criteria also apply to the VOC samples:

- Samples will not be collected for VOCs when low VOC grid cells are being dredged
- Samples will be collected daily during first pass dredging of high VOC cells (only North End HVOC Cuts 4, 5 and 6 remain as of 9/18/19)
- Samples will be collected three days a week during cleanup passes of high VOC cells

The data from the first month's samples are currently being evaluated and AECOM is preparing a summary memorandum detailing the Turbidity/ TSS relationship and will submit to the NYSDEC for review/ approval. AECOM will continue daily turbidity monitoring as described in the Work Plan throughout the duration of the dredging operations until NYSDEC advises that the program can be scaled back.

Figure 1: Example buoy layout (from Monitoring Plan)



P:\Projects\Jobs\Indl_Service\Project Files\BASF-0760\Rensaleer NY\GIS\2019 GIS\RAMP_2_1_Rev.mxd

Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
103019-01-SW-U-A-1	12:05	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			U	18	15.55	0.28	Outgoing Tide (Ebb)	18.5	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
103019-03-SW-D-B-1	12:40	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			D	17	18.27	0.02	Outgoing Tide (Ebb)	22.1	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
110119-01-SW-U-A-1	10:45	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.2			U	21	46.21	4.62	Outgoing Tide (Ebb)	93.2	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
110119-02-SW-A-B-1	11:15	AROCLOR-1242	N	ug/l	0.2	0.034	J		A	20.5	39.75	4.32	Outgoing Tide (Ebb)	85.4	Moon Pool, Double Silt Curtain, Bubble Curtain	7:30
110419-01-SW-U-A-1	11:40	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.9			U	20	51.06	4.11	Outgoing Tide (Ebb)	65.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
110419-02-SW-A-A-1	11:55	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.8			A	24	57.78	3.96	Outgoing Tide (Ebb)	66.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
110419-03-SW-D-A-1	12:15	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.8			D	31	58.91	3.84	Outgoing Tide (Ebb)	70.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
110419-04-SW-B-A-1	11:15	DICHLOROBENZENE (MIXED ISOMERS)	N	ug/l	5	0.6			B	11	52.60	4.4	Outgoing Tide (Ebb)	65.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30

J - Analyte detected below quantitation limit

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 05, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191029051
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 8 samples on 10/29/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *05-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191029051	

Sample containers were supplied by Adirondack Environmental Services.

This report has been revised to remove the LCSD from the report.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-01-SW-U-A-1
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 6:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 6:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 6:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 6:52:00 PM
Surr: 1,2-Dichloroethane-d4	**96.7**	80.9-122		%REC	1	10/29/2019 6:52:00 PM
Surr: 4-Bromofluorobenzene	**88.2**	76.5-125		%REC	1	10/29/2019 6:52:00 PM
Surr: Toluene-d8	**96.7**	80.4-121		%REC	1	10/29/2019 6:52:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**28.8**	2.0		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-02-SW-A-B-1
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 7:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 7:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 7:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 7:13:00 PM
Surr: 1,2-Dichloroethane-d4	**96.1**	80.9-122		%REC	1	10/29/2019 7:13:00 PM
Surr: 4-Bromofluorobenzene	**91.9**	76.5-125		%REC	1	10/29/2019 7:13:00 PM
Surr: Toluene-d8	**94.1**	80.4-121		%REC	1	10/29/2019 7:13:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**27.5**	1.3		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-03-SW-D-B-1
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 7:35:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 7:35:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 7:35:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 7:35:00 PM
Surr: 1,2-Dichloroethane-d4	**94.4**	80.9-122		%REC	1	10/29/2019 7:35:00 PM
Surr: 4-Bromofluorobenzene	**88.6**	76.5-125		%REC	1	10/29/2019 7:35:00 PM
Surr: Toluene-d8	**94.5**	80.4-121		%REC	1	10/29/2019 7:35:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**26.8**	2.0		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-04-SW-B-B-1
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 7:56:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 7:56:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 7:56:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 7:56:00 PM
Surr: 1,2-Dichloroethane-d4	**96.3**	80.9-122		%REC	1	10/29/2019 7:56:00 PM
Surr: 4-Bromofluorobenzene	**95.2**	76.5-125		%REC	1	10/29/2019 7:56:00 PM
Surr: Toluene-d8	**95.2**	80.4-121		%REC	1	10/29/2019 7:56:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**30.0**	2.0		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-05-SW-B-B-1
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/30/2019)						
TSS (Residue, Non-Filterable)	**27.3**	1.3		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-04-SW-U-A-2
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 8:17:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 8:17:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 8:17:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 8:17:00 PM
Surr: 1,2-Dichloroethane-d4	**96.9**	80.9-122		%REC	1	10/29/2019 8:17:00 PM
Surr: 4-Bromofluorobenzene	**89.7**	76.5-125		%REC	1	10/29/2019 8:17:00 PM
Surr: Toluene-d8	**95.4**	80.4-121		%REC	1	10/29/2019 8:17:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**26.2**	2.0		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-01-SW-U-A-3
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-007
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 8:39:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 8:39:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 8:39:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 8:39:00 PM
Surr: 1,2-Dichloroethane-d4	**96.6**	80.9-122		%REC	1	10/29/2019 8:39:00 PM
Surr: 4-Bromofluorobenzene	**89.6**	76.5-125		%REC	1	10/29/2019 8:39:00 PM
Surr: Toluene-d8	**92.8**	80.4-121		%REC	1	10/29/2019 8:39:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/30/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	10/30/2019

Adirondack Environmental Services, Inc

Date: *05-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	102919-TB01
Work Order:	**191029051**	**Collection Date:**	10/29/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191029051-008
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Acetone	**ND**	5.0		µg/L	1	10/29/2019 9:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	10/29/2019 9:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Benzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	10/29/2019 9:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Toluene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	10/29/2019 9:01:00 PM
Surr: 1,2-Dichloroethane-d4	**99.9**	80.9-122		%REC	1	10/29/2019 9:01:00 PM
Surr: 4-Bromofluorobenzene	**86.5**	76.5-125		%REC	1	10/29/2019 9:01:00 PM
Surr: Toluene-d8	**91.3**	80.4-121		%REC	1	10/29/2019 9:01:00 PM

CLIENT: AECOM Environment
Work Order: 191029051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76388

LCS

SeqNo: **2730956** **PrepDate:10/30/2019** TestNo: **SM2540D** RunNo: **176884**
Samp ID: **LCS-76388** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	496	40.0	489	0	101	86.5	114	0	0		

DUP

SeqNo: **2730958** **PrepDate:10/30/2019** TestNo: **SM2540D** RunNo: **176884**
Samp ID: **191029008-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	350	20.0	0	0	0	0	0	316	10.2	10	Z

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191029051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

mblk

SeqNo: **2728638** TestNo: **SW8260C** RunNo: **176793**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.19	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	47.99	5.0	50	0	96	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.95	5.0	50	0	97.9	76.5	125	0	0		
Surr: Toluene-d8	47.51	5.0	50	0	95	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191029051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

lcs

SeqNo: **2728636** TestNo: **SW8260C** RunNo: **176793**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.84	1.0	10	0	98.4	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.46	1.0	10	0	84.6	72.3	118	0	0		
1,1,2-Trichloroethane	9.19	1.0	10	0	91.9	73.1	123	0	0		
1,1-Dichloroethane	9.59	1.0	10	0	95.9	73.2	127	0	0		
1,1-Dichloroethene	9.86	1.0	10	0	98.6	70.3	128	0	0		
1,2,3-Trichloropropane	3.68	1.0	5	0	73.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.23	1.0	10	0	92.3	71	124	0	0		
1,2-Dichloroethane	8.79	1.0	10	0	87.9	72.5	127	0	0		
1,3-Dichlorobenzene	9.3	1.0	10	0	93	72.2	121	0	0		
1,3-Dichloropropane	4.22	1.0	5	0	84.4	76	122	0	0		
1,4-Dichlorobenzene	8.79	1.0	10	0	87.9	71.7	127	0	0		
2-Butanone	9.48	5.0	10	0	94.8	65.1	132	0	0		
4-Methyl-2-pentanone	8.23	5.0	10	0	82.3	68.7	118	0	0		
Acetone	8.29	5.0	10	0	82.9	69.2	133	0	0		
Benzene	9.17	1.0	10	0	91.7	71.2	122	0	0		
Carbon disulfide	4.9	1.0	5	0	98	67.8	134	0	0		
Carbon tetrachloride	10.17	1.0	10	0	102	74.5	122	0	0		
Chlorobenzene	9.65	1.0	10	0	96.5	72.7	124	0	0		
Chloroethane	8.99	1.0	10	0	89.9	72.3	136	0	0		
Chloroform	8.87	1.0	10	0	88.7	71.6	133	0	0		
Dibromochloromethane	9.34	1.0	10	0	93.4	70.6	124	0	0		
Ethylbenzene	10.23	1.0	10	0	102	70.9	126	0	0		
Methylene chloride	8.18	1.0	10	0	81.8	66.3	130	0	0		
Tetrachloroethene	11.85	1.0	10	0	118	72.4	119	0	0		
Toluene	9.43	1.0	10	0	94.3	71.8	116	0	0		
trans-1,2-Dichloroethene	9.77	1.0	10	0	97.7	70.3	120	0	0		
Trichloroethene	9.53	1.0	10	0	95.3	73	127	0	0		
Vinyl chloride	9.1	1.0	10	0	91	65.2	134	0	0		
Xylenes, Total	31.21	1.0	30	0	104	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	48.3	5.0	50	0	96.6	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	50.5	5.0	50	0	101	76.5	125	0	0		
Surr: Toluene-d8	49.03	5.0	50	0	98.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191029051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

ms	SeqNo: **2729181**	TestNo: **SW8260C**	RunNo: **176793**
	Samp ID: **191028028-002b**	Units: **µg/L**	Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.33	1.0	10	0	93.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.46	1.0	10	0	64.6	70.1	123	0	0		S
1,1,2-Trichloroethane	8.48	1.0	10	0	84.8	72.1	119	0	0		
1,1-Dichloroethane	8.92	1.0	10	0	89.2	70.4	126	0	0		
1,1-Dichloroethene	9.56	1.0	10	0	95.6	70.2	125	0	0		
1,2,3-Trichloropropane	3.1	1.0	5	0	62	53.7	101	0	0		
1,2-Dichlorobenzene	7.88	1.0	10	0.25	76.3	70.2	123	0	0		
1,2-Dichloroethane	7.91	1.0	10	0	79.1	73.5	126	0	0		
1,3-Dichlorobenzene	7.61	1.0	10	0	76.1	70.4	124	0	0		
1,3-Dichloropropane	4.01	1.0	5	0	80.2	64	125	0	0		
1,4-Dichlorobenzene	7.32	1.0	10	0	73.2	70.8	127	0	0		
2-Butanone	8.27	5.0	10	0	82.7	60.5	123	0	0		
4-Methyl-2-pentanone	6.96	5.0	10	0	69.6	52.8	133	0	0		
Acetone	8.57	5.0	10	0	85.7	56.3	135	0	0		
Benzene	8.2	1.0	10	0	82	70.2	127	0	0		
Carbon disulfide	4.53	1.0	5	0	90.6	62.2	130	0	0		
Carbon tetrachloride	10.01	1.0	10	0	100	56.4	137	0	0		
Chlorobenzene	8.54	1.0	10	1.29	72.5	72.7	128	0	0		S
Chloroethane	7.77	1.0	10	0	77.7	71.3	135	0	0		
Chloroform	8.2	1.0	10	0	82	70.2	125	0	0		
Dibromochloromethane	8.81	1.0	10	0	88.1	69.5	123	0	0		
Ethylbenzene	7.87	1.0	10	0	78.7	71.9	129	0	0		
Methylene chloride	7.19	1.0	10	0	71.9	65.3	123	0	0		
Tetrachloroethene	9.6	1.0	10	0	96	74.5	121	0	0		
Toluene	8.27	1.0	10	0	82.7	73	122	0	0		
trans-1,2-Dichloroethene	9.5	1.0	10	0	95	69.1	133	0	0		
Trichloroethene	9.03	1.0	10	0	90.3	71.1	126	0	0		
Vinyl chloride	8.75	1.0	10	0	87.5	65	137	0	0		
Xylenes, Total	23.14	1.0	30	0	77.1	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.57	5.0	50	0	99.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	44.07	5.0	50	0	88.1	76.5	125	0	0		
Surr: Toluene-d8	48.44	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191029051
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176793

msd

SeqNo: **2729182** TestNo: **SW8260C** RunNo: **176793**
Samp ID: **191028028-002b** Units: **µg/L** Analysis Date: **10/29/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.44	1.0	10	0	84.4	71.6	126	9.33	10.0	20.4	
1,1,2,2-Tetrachloroethane	6.66	1.0	10	0	66.6	70.1	123	6.46	3.05	18.6	S
1,1,2-Trichloroethane	8.16	1.0	10	0	81.6	72.1	119	8.48	3.85	20	
1,1-Dichloroethane	8.47	1.0	10	0	84.7	70.4	126	8.92	5.18	19.2	
1,1-Dichloroethene	9.03	1.0	10	0	90.3	70.2	125	9.56	5.70	16.1	
1,2,3-Trichloropropane	3.14	1.0	5	0	62.8	53.7	101	3.1	1.28	20	
1,2-Dichlorobenzene	8.36	1.0	10	0.25	81.1	70.2	123	7.88	5.91	17.9	
1,2-Dichloroethane	7.88	1.0	10	0	78.8	73.5	126	7.91	0.380	15.6	
1,3-Dichlorobenzene	7.82	1.0	10	0	78.2	70.4	124	7.61	2.72	14.3	
1,3-Dichloropropane	3.87	1.0	5	0	77.4	64	125	4.01	3.55	0	
1,4-Dichlorobenzene	8.07	1.0	10	0	80.7	70.8	127	7.32	9.75	14.4	
2-Butanone	8.97	5.0	10	0	89.7	60.5	123	8.27	8.12	15	
4-Methyl-2-pentanone	7.64	5.0	10	0	76.4	52.8	133	6.96	9.32	11.9	
Acetone	9.09	5.0	10	0	90.9	56.3	135	8.57	5.89	10.6	
Benzene	8.03	1.0	10	0	80.3	70.2	127	8.2	2.09	18.4	
Carbon disulfide	4.42	1.0	5	0	88.4	62.2	130	4.53	2.46	13.1	
Carbon tetrachloride	9.23	1.0	10	0	92.3	56.4	137	10.01	8.11	20.3	
Chlorobenzene	8.68	1.0	10	1.29	73.9	72.7	128	8.54	1.63	19.6	
Chloroethane	7.69	1.0	10	0	76.9	71.3	135	7.77	1.03	27.8	
Chloroform	7.86	1.0	10	0	78.6	70.2	125	8.2	4.23	20.3	
Dibromochloromethane	8.88	1.0	10	0	88.8	69.5	123	8.81	0.791	18.8	
Ethylbenzene	7.63	1.0	10	0	76.3	71.9	129	7.87	3.10	16.3	
Methylene chloride	7.23	1.0	10	0	72.3	65.3	123	7.19	0.555	21.4	
Tetrachloroethene	9.3	1.0	10	0	93	74.5	121	9.6	3.17	20.9	
Toluene	8.29	1.0	10	0	82.9	73	122	8.27	0.242	19.4	
trans-1,2-Dichloroethene	9.02	1.0	10	0	90.2	69.1	133	9.5	5.18	16.1	
Trichloroethene	8.62	1.0	10	0	86.2	71.1	126	9.03	4.65	16.6	
Vinyl chloride	8.21	1.0	10	0	82.1	65	137	8.75	6.37	20.5	
Xylenes, Total	23.2	1.0	30	0	77.3	72	130	23.14	0.259	16.1	
Surr: 1,2-Dichloroethane-d4	49.28	5.0	50	0	98.6	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	44.79	5.0	50	0	89.6	76.5	125	0	0	0	
Surr: Toluene-d8	47.22	5.0	50	0	94.4	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191029051

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehen
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	102919-01-SW-U-A-1	10/29/19	1345	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	102919-02-SW-A-B-1	10/29/19	1420	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	102919-03-SW-D-B-1	10/29/19	1435	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	102919-04-SW-B-B-1	10/29/19	1330	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	102919-05-SW-B-B-1	10/29/19	1450	A/P	W		✓	1	TSS
006	102919-01-SW-U-A-2	10/29/19	1400	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
007	102919-01-SW-U-A-3	10/29/19	1515	A/P	W		✓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
008	102919-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:
Lot # F47.1

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 10/29/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 10/29/19 415pm

Temperature
Ambient or (Chilled)
Notes: 6°C

AES Bottles
Y (☒) N (☐)

Properly Preserved
(Y) N
Notes:_____

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

191029051

Adirondack Environmental Services, Inc

191029051

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 10/31/2019

10/29/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191029051-001	102919-01-SW-U-A-1	Water	10/29/2019	10/31/2019	B	A					
191029051-002	102919-02-SW-A-B-1	Water	10/29/2019	10/31/2019	B	A					
191029051-003	102919-03-SW-D-B-1	Water	10/29/2019	10/31/2019	B	A					
191029051-004	102919-04-SW-B-B-1	Water	10/29/2019	10/31/2019	B	A					
191029051-005	102919-05-SW-B-B-1	Water	10/29/2019	10/31/2019		A					
191029051-006	102919-04-SW-U-A-2	Water	10/29/2019	10/31/2019	B	A					
191029051-007	102919-01-SW-U-A-3	Water	10/29/2019	10/31/2019	B	A					
191029051-008	102919-TB01	Trip Blank	10/29/2019	10/31/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 01, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191030059
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/30/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*01-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	191030059		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-01-SW-U-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
PCB, Total	**ND**	0.065		µg/L	1	10/30/2019 7:34:10 PM
Surr: Decachlorobiphenyl	**96.8**	57.1-135		%REC	1	10/30/2019 7:34:10 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 10:47:00 AM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	11/1/2019 10:47:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Chloroform	**0.8**	1.0	J	µg/L	1	11/1/2019 10:47:00 AM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	11/1/2019 10:47:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 10:47:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Carbon tetrachloride	**0.2**	1.0	J	µg/L	1	11/1/2019 10:47:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 10:47:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-01-SW-U-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/1/2019 10:47:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 10:47:00 AM
Surr: 1,2-Dichloroethane-d4	**98.1**	80.9-122		%REC	1	11/1/2019 10:47:00 AM
Surr: 4-Bromofluorobenzene	**94.6**	76.5-125		%REC	1	11/1/2019 10:47:00 AM
Surr: Toluene-d8	**98.4**	80.4-121		%REC	1	11/1/2019 10:47:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/31/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.5**	1.3		mg/L	1	10/31/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-02-SW-A-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
PCB, Total	**ND**	0.065		µg/L	1	10/30/2019 7:47:30 PM
Surr: Decachlorobiphenyl	**73.8**	57.1-135		%REC	1	10/30/2019 7:47:30 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Methylene chloride	**0.5**	1.0	J	µg/L	1	11/1/2019 11:09:00 AM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 11:09:00 AM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	11/1/2019 11:09:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Chloroform	**0.8**	1.0	J	µg/L	1	11/1/2019 11:09:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 11:09:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Carbon tetrachloride	**0.1**	1.0	J	µg/L	1	11/1/2019 11:09:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 11:09:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-02-SW-A-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 11:09:00 AM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	11/1/2019 11:09:00 AM
Surr: 4-Bromofluorobenzene	**92.5**	76.5-125		%REC	1	11/1/2019 11:09:00 AM
Surr: Toluene-d8	**99.6**	80.4-121		%REC	1	11/1/2019 11:09:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/31/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.9**	1.3		mg/L	1	10/31/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-03-SW-D-B-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
PCB, Total	**ND**	0.065		µg/L	1	10/30/2019 10:14:04 PM
Surr: Decachlorobiphenyl	**65.6**	57.1-135		%REC	1	10/30/2019 10:14:04 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 11:30:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Chloroform	**0.7**	1.0	J	µg/L	1	11/1/2019 11:30:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 11:30:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 11:30:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-03-SW-D-B-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/1/2019 11:30:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 11:30:00 AM
Surr: 1,2-Dichloroethane-d4	**93.8**	80.9-122		%REC	1	11/1/2019 11:30:00 AM
Surr: 4-Bromofluorobenzene	**93.3**	76.5-125		%REC	1	11/1/2019 11:30:00 AM
Surr: Toluene-d8	**96.4**	80.4-121		%REC	1	11/1/2019 11:30:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/31/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**22.1**	1.3		mg/L	1	10/31/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-04-SW-B-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 10/30/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1221	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1232	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1242	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1248	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1254	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1260	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1262	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Aroclor 1268	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
PCB, Total	**ND**	0.065		µg/L	1	10/30/2019 8:14:08 PM
Surr: Decachlorobiphenyl	**93.6**	57.1-135		%REC	1	10/30/2019 8:14:08 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 11:52:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Chloroform	**0.6**	1.0	J	µg/L	1	11/1/2019 11:52:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 11:52:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 11:52:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-04-SW-B-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 11:52:00 AM
Surr: 1,2-Dichloroethane-d4	**99.5**	80.9-122		%REC	1	11/1/2019 11:52:00 AM
Surr: 4-Bromofluorobenzene	**93.1**	76.5-125		%REC	1	11/1/2019 11:52:00 AM
Surr: Toluene-d8	**97.1**	80.4-121		%REC	1	11/1/2019 11:52:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 10/31/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**23.2**	1.3		mg/L	1	10/31/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-05-SW-B-A-1
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 10/31/2019)						
TSS (Residue, Non-Filterable)	**20.4**	1.3		mg/L	1	10/31/2019

Adirondack Environmental Services, Inc

Date: *01-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103019-TB01
Work Order:	**191030059**	**Collection Date:**	10/30/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191030059-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 12:13:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Chloroform	**0.7**	1.0	J	µg/L	1	11/1/2019 12:13:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	11/1/2019 12:13:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 12:13:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 12:13:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 12:13:00 PM
Surr: 1,2-Dichloroethane-d4	**97.5**	80.9-122		%REC	1	11/1/2019 12:13:00 PM
Surr: 4-Bromofluorobenzene	**96.0**	76.5-125		%REC	1	11/1/2019 12:13:00 PM
Surr: Toluene-d8	**99.8**	80.4-121		%REC	1	11/1/2019 12:13:00 PM

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76369

mblk SeqNo: **2731376** PrepDate:**10/30/2019** TestNo: **E608** RunNo: **176910**
Samp ID: **mb-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.11	0	0.1	0	110	51.5	144	0	0		

lcs SeqNo: **2731381** PrepDate:**10/30/2019** TestNo: **E608** RunNo: **176910**
Samp ID: **lcs-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.018	0	0.1	0	18	51.5	144	0	0		S

lcsd SeqNo: **2731382** PrepDate:**10/30/2019** TestNo: **E608** RunNo: **176910**
Samp ID: **LCSD-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.02	0	0.1	0	20	51.5	144	0	0	0	S

mblk SeqNo: **2730441** PrepDate:**10/30/2019** TestNo: **SW8082A** RunNo: **176863**
Samp ID: **mb-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.1048	0	0.1	0	105	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76369

lcs

SeqNo: **2730442** PrepDate:**10/30/2019** TestNo: **SW8082A** RunNo: **176863**
Samp ID: **lcs-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5106	0.0650	0.5	0	102	60	140	0	0		
PCB, Total	0.5106	0.0650	0.5	0	102	60	140	0	0		
Surr: Decachlorobiphenyl	0.099	0	0.1	0	99	57.1	135	0	0		

lcsd

SeqNo: **2730443** PrepDate:**10/30/2019** TestNo: **SW8082A** RunNo: **176863**
Samp ID: **lcsd-76369** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **10/30/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.411	0.0650	0.5	0	82.2	60	140	0.5106	21.6	30	
PCB, Total	0.411	0.0650	0.5	0	82.2	60	140	0.5106	21.6	30	
Surr: Decachlorobiphenyl	0.0788	0	0.1	0	78.8	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76412

LCS

SeqNo: **2731834** **PrepDate:10/31/2019** TestNo: **SM2540D** RunNo: **176935**
Samp ID: **LCS-76412** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **10/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	444	40.0	489	0	90.8	86.5	114	0	0		

DUP

SeqNo: **2731841** **PrepDate:10/31/2019** TestNo: **SM2540D** RunNo: **176935**
Samp ID: **191030007-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	286	20.0	0	0	0	0	0	272	5.02	10	

DUP

SeqNo: **2731846** **PrepDate:10/31/2019** TestNo: **SM2540D** RunNo: **176935**
Samp ID: **191030016-001** **PrepRef:** Units: **mg/L** Analysis Date: **10/31/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	13.33	3.30	0	0	0	0	0	14	4.88	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176941

mblk

SeqNo: **2731913** TestNo: **SW8260C** RunNo: **176941**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.25	1.0									J
1,2-Dichloroethane	0.13	1.0									J
1,3-Dichlorobenzene	0.15	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.28	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.13	1.0									J
Carbon tetrachloride	0.18	1.0									J
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	0.9	1.0									J
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.5	5.0	50	0	97	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.93	5.0	50	0	95.9	76.5	125	0	0		
Surr: Toluene-d8	49.31	5.0	50	0	98.6	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176941

lcs

SeqNo: **2731912** TestNo: **SW8260C** RunNo: **176941**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.77	1.0	10	0	97.7	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	10.82	1.0	10	0	108	72.3	118	0	0		
1,1,2-Trichloroethane	12.08	1.0	10	0	121	73.1	123	0	0		
1,1-Dichloroethane	9.61	1.0	10	0	96.1	73.2	127	0	0		
1,1-Dichloroethene	9.07	1.0	10	0	90.7	70.3	128	0	0		
1,2,3-Trichloropropane	5.01	1.0	5	0	100	68.4	115	0	0		
1,2-Dichlorobenzene	11.77	1.0	10	0	118	71	124	0	0		
1,2-Dichloroethane	9.9	1.0	10	0	99	72.5	127	0	0		
1,3-Dichlorobenzene	11.32	1.0	10	0	113	72.2	121	0	0		
1,3-Dichloropropane	5.9	1.0	5	0	118	76	122	0	0		
1,4-Dichlorobenzene	11.21	1.0	10	0	112	71.7	127	0	0		
2-Butanone	10.86	5.0	10	0	109	65.1	132	0	0		
4-Methyl-2-pentanone	13.16	5.0	10	0	132	68.7	118	0	0		S
Acetone	13.64	5.0	10	0	136	69.2	133	0	0		S
Benzene	9.39	1.0	10	0	93.9	71.2	122	0	0		
Carbon disulfide	4.68	1.0	5	0	93.6	67.8	134	0	0		
Carbon tetrachloride	11.17	1.0	10	0	112	74.5	122	0	0		
Chlorobenzene	10.3	1.0	10	0	103	72.7	124	0	0		
Chloroethane	8.52	1.0	10	0	85.2	72.3	136	0	0		
Chloroform	10.76	1.0	10	0	108	71.6	133	0	0		
Dibromochloromethane	12.65	1.0	10	0	126	70.6	124	0	0		S
Ethylbenzene	9.56	1.0	10	0	95.6	70.9	126	0	0		
Methylene chloride	8.91	1.0	10	0	89.1	66.3	130	0	0		
Tetrachloroethene	10.59	1.0	10	0	106	72.4	119	0	0		
Toluene	9.87	1.0	10	0	98.7	71.8	116	0	0		
trans-1,2-Dichloroethene	9.27	1.0	10	0	92.7	70.3	120	0	0		
Trichloroethene	10.06	1.0	10	0	101	73	127	0	0		
Vinyl chloride	6.38	1.0	10	0	63.8	65.2	134	0	0		S
Xylenes, Total	16.81	1.0	30	0	56	72.1	124	0	0		S
Surr: 1,2-Dichloroethane-d4	49.98	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	45.12	5.0	50	0	90.2	76.5	125	0	0		
Surr: Toluene-d8	48.45	5.0	50	0	96.9	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176941

lcsd

SeqNo: **2731922** TestNo: **SW8260C** RunNo: **176941**
Samp ID: **lcsd** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.17	1.0	10	0	91.7	72.3	121	9.77	6.34	25	
1,1,2,2-Tetrachloroethane	6.85	1.0	10	0	68.5	72.3	118	10.82	44.9	25	SZ
1,1,2-Trichloroethane	10.13	1.0	10	0	101	73.1	123	12.08	17.6	25	
1,1-Dichloroethane	8.78	1.0	10	0	87.8	73.2	127	9.61	9.03	25	
1,1-Dichloroethene	8.61	1.0	10	0	86.1	70.3	128	9.07	5.20	25	
1,2,3-Trichloropropane	3.33	1.0	5	0	66.6	68.4	115	5.01	40.3	25	SZ
1,2-Dichlorobenzene	9.08	1.0	10	0	90.8	71	124	11.77	25.8	25	Z
1,2-Dichloroethane	8.85	1.0	10	0	88.5	72.5	127	9.9	11.2	25	
1,3-Dichlorobenzene	8.96	1.0	10	0	89.6	72.2	121	11.32	23.3	25	
1,3-Dichloropropane	5.03	1.0	5	0	101	76	122	5.9	15.9	0	
1,4-Dichlorobenzene	8.94	1.0	10	0	89.4	71.7	127	11.21	22.5	25	
2-Butanone	7.91	5.0	10	0	79.1	65.1	132	10.86	31.4	25	Z
4-Methyl-2-pentanone	8.2	5.0	10	0	82	68.7	118	13.16	46.4	25	Z
Acetone	7.87	5.0	10	0	78.7	69.2	133	13.64	53.6	25	Z
Benzene	9.15	1.0	10	0	91.5	71.2	122	9.39	2.59	25	
Carbon disulfide	4.46	1.0	5	0	89.2	67.8	134	4.68	4.81	25	
Carbon tetrachloride	9.37	1.0	10	0	93.7	74.5	122	11.17	17.5	25	
Chlorobenzene	8.07	1.0	10	0	80.7	72.7	124	10.3	24.3	25	
Chloroethane	8.33	1.0	10	0	83.3	72.3	136	8.52	2.26	25	
Chloroform	8.54	1.0	10	0	85.4	71.6	133	10.76	23.0	25	
Dibromochloromethane	10.56	1.0	10	0	106	70.6	124	12.65	18.0	25	
Ethylbenzene	7.73	1.0	10	0	77.3	70.9	126	9.56	21.2	25	
Methylene chloride	8.99	1.0	10	0	89.9	66.3	130	8.91	0.894	25	
Tetrachloroethene	10.12	1.0	10	0	101	72.4	119	10.59	4.54	25	
Toluene	8.89	1.0	10	0	88.9	71.8	116	9.87	10.4	25	
trans-1,2-Dichloroethene	9.86	1.0	10	0	98.6	70.3	120	9.27	6.17	25	
Trichloroethene	9.63	1.0	10	0	96.3	73	127	10.06	4.37	25	
Vinyl chloride	7.49	1.0	10	0	74.9	65.2	134	6.38	16.0	25	
Xylenes, Total	24.89	1.0	30	0	83	72.1	124	16.81	38.8	25	Z
Surr: 1,2-Dichloroethane-d4	52.33	5.0	50	0	105	80.9	122	0	0	25	
Surr: 4-Bromofluorobenzene	44.45	5.0	50	0	88.9	76.5	125	0	0	25	
Surr: Toluene-d8	51.27	5.0	50	0	103	80.4	121	0	0	25	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176941

ms	SeqNo: **2731920**	TestNo: **SW8260C**	RunNo: **176941**
	Samp ID: **191031065-004b**	Units: **µg/L**	Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.17	1.0	10	0	102	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.41	1.0	10	0	64.1	70.1	123	0	0		S
1,1,2-Trichloroethane	9.98	1.0	10	0	99.8	72.1	119	0	0		
1,1-Dichloroethane	7.82	1.0	10	0	78.2	70.4	126	0	0		
1,1-Dichloroethene	8.73	1.0	10	0	87.3	70.2	125	0	0		
1,2,3-Trichloropropane	3.09	1.0	5	0	61.8	53.7	101	0	0		
1,2-Dichlorobenzene	9	1.0	10	0	90	70.2	123	0	0		
1,2-Dichloroethane	8.31	1.0	10	0	83.1	73.5	126	0	0		
1,3-Dichlorobenzene	8.66	1.0	10	0	86.6	70.4	124	0	0		
1,3-Dichloropropane	4.93	1.0	5	0	98.6	64	125	0	0		
1,4-Dichlorobenzene	9.13	1.0	10	0	91.3	70.8	127	0	0		
2-Butanone	6.09	5.0	10	0	60.9	60.5	123	0	0		
4-Methyl-2-pentanone	9.61	5.0	10	0	96.1	52.8	133	0	0		
Acetone	11.84	5.0	10	0	118	56.3	135	0	0		
Benzene	13.51	1.0	10	2.27	112	70.2	127	0	0		
Carbon disulfide	4.36	1.0	5	0	87.2	62.2	130	0	0		
Carbon tetrachloride	12.83	1.0	10	0	128	56.4	137	0	0		
Chlorobenzene	7.25	1.0	10	0	72.5	72.7	128	0	0		S
Chloroethane	7.32	1.0	10	0	73.2	71.3	135	0	0		
Chloroform	8.53	1.0	10	0	85.3	70.2	125	0	0		
Dibromochloromethane	10.47	1.0	10	0	105	69.5	123	0	0		
Ethylbenzene	10.77	1.0	10	3.55	72.2	71.9	129	0	0		
Methylene chloride	7.03	1.0	10	0	70.3	65.3	123	0	0		
Tetrachloroethene	11.42	1.0	10	0	114	74.5	121	0	0		
Toluene	10.44	1.0	10	0	104	73	122	0	0		
trans-1,2-Dichloroethene	9.33	1.0	10	0	93.3	69.1	133	0	0		
Trichloroethene	11.32	1.0	10	0	113	71.1	126	0	0		
Vinyl chloride	6.74	1.0	10	0	67.4	65	137	0	0		
Xylenes, Total	32.16	1.0	30	0	107	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.7	5.0	50	0	99.4	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	42.4	5.0	50	0	84.8	76.5	125	0	0		
Surr: Toluene-d8	55.43	5.0	50	0	111	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191030059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176941

msd

SeqNo: **2731921** TestNo: **SW8260C** RunNo: **176941**
Samp ID: **191031065-004b** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.81	1.0	10	0	98.1	71.6	126	10.17	3.60	20.4	
1,1,2,2-Tetrachloroethane	7.35	1.0	10	0	73.5	70.1	123	6.41	13.7	18.6	
1,1,2-Trichloroethane	9.48	1.0	10	0	94.8	72.1	119	9.98	5.14	20	
1,1-Dichloroethane	9.49	1.0	10	0	94.9	70.4	126	7.82	19.3	19.2	Z
1,1-Dichloroethene	8.71	1.0	10	0	87.1	70.2	125	8.73	0.229	16.1	
1,2,3-Trichloropropane	3.28	1.0	5	0	65.6	53.7	101	3.09	5.97	20	
1,2-Dichlorobenzene	8.78	1.0	10	0	87.8	70.2	123	9	2.47	17.9	
1,2-Dichloroethane	8.6	1.0	10	0	86	73.5	126	8.31	3.43	15.6	
1,3-Dichlorobenzene	8.95	1.0	10	0	89.5	70.4	124	8.66	3.29	14.3	
1,3-Dichloropropane	4.45	1.0	5	0	89	64	125	4.93	10.2	0	
1,4-Dichlorobenzene	8.87	1.0	10	0	88.7	70.8	127	9.13	2.89	14.4	
2-Butanone	8.57	5.0	10	0	85.7	60.5	123	6.09	33.8	15	Z
4-Methyl-2-pentanone	8.44	5.0	10	0	84.4	52.8	133	9.61	13.0	11.9	Z
Acetone	11.43	5.0	10	0	114	56.3	135	11.84	3.52	10.6	
Benzene	11.63	1.0	10	2.27	93.6	70.2	127	13.51	15.0	18.4	
Carbon disulfide	4.3	1.0	5	0	86	62.2	130	4.36	1.39	13.1	
Carbon tetrachloride	11.01	1.0	10	0	110	56.4	137	12.83	15.3	20.3	
Chlorobenzene	7.93	1.0	10	0	79.3	72.7	128	7.25	8.96	19.6	
Chloroethane	7.72	1.0	10	0	77.2	71.3	135	7.32	5.32	27.8	
Chloroform	9.44	1.0	10	0	94.4	70.2	125	8.53	10.1	20.3	
Dibromochloromethane	9.79	1.0	10	0	97.9	69.5	123	10.47	6.71	18.8	
Ethylbenzene	12.75	1.0	10	3.55	92	71.9	129	10.77	16.8	16.3	Z
Methylene chloride	7.15	1.0	10	0	71.5	65.3	123	7.03	1.69	21.4	
Tetrachloroethene	10.59	1.0	10	0	106	74.5	121	11.42	7.54	20.9	
Toluene	10.05	1.0	10	0	100	73	122	10.44	3.81	19.4	
trans-1,2-Dichloroethene	9.11	1.0	10	0	91.1	69.1	133	9.33	2.39	16.1	
Trichloroethene	8.9	1.0	10	0	89	71.1	126	11.32	23.9	16.6	Z
Vinyl chloride	7.05	1.0	10	0	70.5	65	137	6.74	4.50	20.5	
Xylenes, Total	36.37	1.0	30	0	121	72	130	32.16	12.3	16.1	
Surr: 1,2-Dichloroethane-d4	52.43	5.0	50	0	105	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	46.97	5.0	50	0	93.9	76.5	125	0	0	0	
Surr: Toluene-d8	55.73	5.0	50	0	111	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191030059

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	103019-01-SW-U-A-1	10/30/19	1205	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	103019-02-SW-A-A-1	10/30/19	1220	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	103019-03-SW-D-B-1	10/30/19	1240	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	103019-04-SW-B-A-1	10/30/19	1145	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	103019-05-SW-B-A-1	10/30/19	1250	A/P	W		✓	1	TSS
006	103019-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:
Trip Blank VOA- F47.1

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 10/30/19 16:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: Kraz	Date/Time 10/30/19 4:20pm

Temperature Ambient or Chilled Notes: 6°C

AES Bottles Y ☑ N ☐

Properly Preserved (Y) N Notes:

Received Within Holding Times (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

191030059

Adirondack Environmental Services, Inc

191030059

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 11/1/2019

10/31/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191030059-001	103019-01-SW-U-A-1	Water	10/30/2019	11/1/2019	C	B	A				
191030059-002	103019-02-SW-A-A-1	Water	10/30/2019	11/1/2019	C	B	A				
191030059-003	103019-03-SW-D-B-1	Water	10/30/2019	11/1/2019	C	B	A				
191030059-004	103019-04-SW-B-A-1	Water	10/30/2019	11/1/2019	C	B	A				
191030059-005	103019-05-SW-B-A-1	Water	10/30/2019	11/1/2019			A				
191030059-006	103019-TB01	Trip Blank	10/30/2019	11/1/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by kam 10/30 updated 10/31 by MOH

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 06, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191031059

Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 10/31/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Director

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *06-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191031059	

Sample containers were supplied by Adirondack Environmental Services.

This report has been revised to report carbon disulfide in the QC samples.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-01-SW-U-B-1
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-001
PO#:		**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/1/2019 11:28:00 PM
Chloroethane	**ND**	1.0	S	µg/L	1	11/1/2019 11:28:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 11:28:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 11:28:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 11:28:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 11:28:00 PM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	11/1/2019 11:28:00 PM
Surr: 4-Bromofluorobenzene	**90.1**	76.5-125		%REC	1	11/1/2019 11:28:00 PM
Surr: Toluene-d8	**96.3**	80.4-121		%REC	1	11/1/2019 11:28:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**16.5**	1.3		mg/L	1	11/1/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-02-SW-A-A-1
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-002
PO#:		**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/1/2019 11:50:00 PM
Chloroethane	**ND**	1.0	S	µg/L	1	11/1/2019 11:50:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Acetone	**ND**	5.0		µg/L	1	11/1/2019 11:50:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/1/2019 11:50:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Benzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/1/2019 11:50:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Toluene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/1/2019 11:50:00 PM
Surr: 1,2-Dichloroethane-d4	**97.0**	80.9-122		%REC	1	11/1/2019 11:50:00 PM
Surr: 4-Bromofluorobenzene	**95.4**	76.5-125		%REC	1	11/1/2019 11:50:00 PM
Surr: Toluene-d8	**97.2**	80.4-121		%REC	1	11/1/2019 11:50:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**19.3**	1.3		mg/L	1	11/1/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-03-SW-D-A-1
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-003
PO#:		**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 12:11:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 12:11:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 12:11:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 12:11:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 12:11:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 12:11:00 AM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	11/2/2019 12:11:00 AM
Surr: 4-Bromofluorobenzene	**91.6**	76.5-125		%REC	1	11/2/2019 12:11:00 AM
Surr: Toluene-d8	**95.6**	80.4-121		%REC	1	11/2/2019 12:11:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.9**	1.3		mg/L	1	11/1/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-04-SW-B-A-1
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-004
PO#:		**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 12:33:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 12:33:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 12:33:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 12:33:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 12:33:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 12:33:00 AM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	11/2/2019 12:33:00 AM
Surr: 4-Bromofluorobenzene	**92.7**	76.5-125		%REC	1	11/2/2019 12:33:00 AM
Surr: Toluene-d8	**98.5**	80.4-121		%REC	1	11/2/2019 12:33:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/1/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**19.5**	1.3		mg/L	1	11/1/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-05-SW-B-A-1
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-005
PO#:		**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/1/2019)						
TSS (Residue, Non-Filterable)	**19.7**	1.3		mg/L	1	11/1/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	103119-TB01
Work Order:	**191031059**	**Collection Date:**	10/31/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191031059-006
PO#:		**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 12:54:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 12:54:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 12:54:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 12:54:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 12:54:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 12:54:00 AM
Surr: 1,2-Dichloroethane-d4	**96.5**	80.9-122		%REC	1	11/2/2019 12:54:00 AM
Surr: 4-Bromofluorobenzene	**87.9**	76.5-125		%REC	1	11/2/2019 12:54:00 AM
Surr: Toluene-d8	**97.9**	80.4-121		%REC	1	11/2/2019 12:54:00 AM

CLIENT: AECOM Environment
Work Order: 191031059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76446

LCS

SeqNo: **2732676** **PrepDate:11/1/2019** TestNo: **SM2540D** RunNo: **176979**
Samp ID: **LCS-76446** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	460	40.0	489	0	94.1	86.5	114	0	0		

DUP

SeqNo: **2732678** **PrepDate:11/1/2019** TestNo: **SM2540D** RunNo: **176979**
Samp ID: **191029008-005** **PrepRef:** Units: **mg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	542	20.0	0	0	0	0	0	502	7.66	10	

DUP

SeqNo: **2732689** **PrepDate:11/1/2019** TestNo: **SM2540D** RunNo: **176979**
Samp ID: **191031008-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	46.67	6.70	0	0	0	0	0	52	10.8	10	Z

CLIENT: AECOM Environment
Work Order: 191031059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

mblk

SeqNo: **2732422** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	0.50									
Carbon disulfide	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Dibromochloromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Methylene chloride	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	10									
Surr: 1,2-Dichloroethane-d4	47.66	5.0	50	0	95.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.16	5.0	50	0	96.3	76.5	125	0	0		
Surr: Toluene-d8	48.83	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191031059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

lcs

SeqNo: **2732420** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.39	0.50	10	0	83.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.29	0.50	10	0	72.9	72.3	118	0	0		
1,1,2-Trichloroethane	8.43	0.50	10	0	84.3	73.1	123	0	0		
1,1-Dichloroethane	8.05	0.50	10	0	80.5	73.2	127	0	0		
1,1-Dichloroethene	8.03	0.50	10	0	80.3	70.3	128	0	0		
1,2,3-Trichloropropane	3.7	0.50	5	0	74	68.4	115	0	0		
1,2-Dichlorobenzene	8.03	0.50	10	0	80.3	71	124	0	0		
1,2-Dichloroethane	7.63	0.50	10	0	76.3	72.5	127	0	0		
1,3-Dichlorobenzene	7.94	0.50	10	0	79.4	72.2	121	0	0		
1,3-Dichloropropane	4.03	0.50	5	0	80.6	76	122	0	0		
1,4-Dichlorobenzene	7.9	0.50	10	0	79	71.7	127	0	0		
2-Butanone	8.51	10	10	0	85.1	65.1	132	0	0		J
4-Methyl-2-pentanone	7.47	10	10	0	74.7	68.7	118	0	0		J
Acetone	7.5	10	10	0	75	69.2	133	0	0		J
Benzene	8.16	0.50	10	0	81.6	71.2	122	0	0		
Carbon disulfide	3.81	0.50	5	0	76.2	67.8	134	0	0		
Carbon tetrachloride	8.75	0.50	10	0	87.5	74.5	122	0	0		
Chlorobenzene	7.96	0.50	10	0	79.6	72.7	124	0	0		
Chloroethane	6.5	0.50	10	0	65	72.3	136	0	0		S
Chloroform	7.85	0.50	10	0	78.5	71.6	133	0	0		
Dibromochloromethane	8.87	0.50	10	0	88.7	70.6	124	0	0		
Ethylbenzene	8.15	0.50	10	0	81.5	70.9	126	0	0		
Methylene chloride	8.32	0.50	10	0	83.2	66.3	130	0	0		
Tetrachloroethene	8.75	0.50	10	0	87.5	72.4	119	0	0		
Toluene	8.31	0.50	10	0	83.1	71.8	116	0	0		
trans-1,2-Dichloroethene	8.16	0.50	10	0	81.6	70.3	120	0	0		
Trichloroethene	8.33	0.50	10	0	83.3	73	127	0	0		
Vinyl chloride	5.9	0.50	10	0	59	65.2	134	0	0		S
Xylenes, Total	24.53	10	30	0	81.8	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.82	5.0	50	0	93.6	76.5	125	0	0		
Surr: Toluene-d8	50.02	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191031059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

ms	SeqNo: **2732438**	TestNo: **SW8260C**	RunNo: **176969**
	Samp ID: **191101066-001b**	Units: **µg/L**	Analysis Date: **11/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.75	1.0	10	0	77.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.75	1.0	10	0	67.5	70.1	123	0	0		S
1,1,2-Trichloroethane	7.82	1.0	10	0	78.2	72.1	119	0	0		
1,1-Dichloroethane	8.1	1.0	10	0	81	70.4	126	0	0		
1,1-Dichloroethene	8.74	1.0	10	0	87.4	70.2	125	0	0		
1,2,3-Trichloropropane	3.06	1.0	5	0	61.2	53.7	101	0	0		
1,2-Dichlorobenzene	7.96	1.0	10	0.2	77.6	70.2	123	0	0		
1,2-Dichloroethane	7.07	1.0	10	0	70.7	73.5	126	0	0		S
1,3-Dichlorobenzene	7.42	1.0	10	0	74.2	70.4	124	0	0		
1,3-Dichloropropane	3.91	1.0	5	0	78.2	64	125	0	0		
1,4-Dichlorobenzene	7.58	1.0	10	0	75.8	70.8	127	0	0		
2-Butanone	7.47	5.0	10	0	74.7	60.5	123	0	0		
4-Methyl-2-pentanone	6.64	5.0	10	0	66.4	52.8	133	0	0		
Acetone	7.27	5.0	10	0	72.7	56.3	135	0	0		
Benzene	7.41	1.0	10	0	74.1	70.2	127	0	0		
Carbon disulfide	4.01	1.0	5	0	80.2	62.2	130	0	0		
Carbon tetrachloride	8.43	1.0	10	0	84.3	56.4	137	0	0		
Chlorobenzene	8.74	1.0	10	0	87.4	72.7	128	0	0		
Chloroethane	6.38	1.0	10	0	63.8	71.3	135	0	0		S
Chloroform	7.77	1.0	10	0	77.7	70.2	125	0	0		
Dibromochloromethane	8.34	1.0	10	0	83.4	69.5	123	0	0		
Ethylbenzene	8.47	1.0	10	0	84.7	71.9	129	0	0		
Methylene chloride	7.45	1.0	10	0	74.5	65.3	123	0	0		
Tetrachloroethene	8.44	1.0	10	0	84.4	74.5	121	0	0		
Toluene	8.1	1.0	10	0	81	73	122	0	0		
trans-1,2-Dichloroethene	8.79	1.0	10	0	87.9	69.1	133	0	0		
Trichloroethene	8.05	1.0	10	0	80.5	71.1	126	0	0		
Vinyl chloride	6.16	1.0	10	0	61.6	65	137	0	0		S
Xylenes, Total	25.01	1.0	30	0	83.4	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.07	5.0	50	0	96.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.93	5.0	50	0	93.9	76.5	125	0	0		
Surr: Toluene-d8	49.2	5.0	50	0	98.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191031059
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

msd

SeqNo: **2732439** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **191101066-001b** Units: **µg/L** Analysis Date: **11/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.26	1.0	10	0	72.6	71.6	126	7.75	6.53	20.4	
1,1,2,2-Tetrachloroethane	6.5	1.0	10	0	65	70.1	123	6.75	3.77	18.6	S
1,1,2-Trichloroethane	7.52	1.0	10	0	75.2	72.1	119	7.82	3.91	20	
1,1-Dichloroethane	8.01	1.0	10	0	80.1	70.4	126	8.1	1.12	19.2	
1,1-Dichloroethene	8.14	1.0	10	0	81.4	70.2	125	8.74	7.11	16.1	
1,2,3-Trichloropropane	3	1.0	5	0	60	53.7	101	3.06	1.98	20	
1,2-Dichlorobenzene	7.7	1.0	10	0.2	75	70.2	123	7.96	3.32	17.9	
1,2-Dichloroethane	6.69	1.0	10	0	66.9	73.5	126	7.07	5.52	15.6	S
1,3-Dichlorobenzene	7.44	1.0	10	0	74.4	70.4	124	7.42	0.269	14.3	
1,3-Dichloropropane	3.55	1.0	5	0	71	64	125	3.91	9.65	0	
1,4-Dichlorobenzene	7.67	1.0	10	0	76.7	70.8	127	7.58	1.18	14.4	
2-Butanone	5.09	5.0	10	0	50.9	60.5	123	7.47	37.9	15	SZ
4-Methyl-2-pentanone	6.83	5.0	10	0	68.3	52.8	133	6.64	2.82	11.9	
Acetone	7.72	5.0	10	0	77.2	56.3	135	7.27	6.00	10.6	
Benzene	6.91	1.0	10	0	69.1	70.2	127	7.41	6.98	18.4	S
Carbon disulfide	3.9	1.0	5	0	78	62.2	130	4.01	2.78	13.1	
Carbon tetrachloride	7.97	1.0	10	0	79.7	56.4	137	8.43	5.61	20.3	
Chlorobenzene	8.29	1.0	10	0	82.9	72.7	128	8.74	5.28	19.6	
Chloroethane	6.92	1.0	10	0	69.2	71.3	135	6.38	8.12	27.8	S
Chloroform	7.3	1.0	10	0	73	70.2	125	7.77	6.24	20.3	
Dibromochloromethane	7.86	1.0	10	0	78.6	69.5	123	8.34	5.93	18.8	
Ethylbenzene	7.97	1.0	10	0	79.7	71.9	129	8.47	6.08	16.3	
Methylene chloride	6.83	1.0	10	0	68.3	65.3	123	7.45	8.68	21.4	
Tetrachloroethene	8.11	1.0	10	0	81.1	74.5	121	8.44	3.99	20.9	
Toluene	7.64	1.0	10	0	76.4	73	122	8.1	5.84	19.4	
trans-1,2-Dichloroethene	8.13	1.0	10	0	81.3	69.1	133	8.79	7.80	16.1	
Trichloroethene	7.41	1.0	10	0	74.1	71.1	126	8.05	8.28	16.6	
Vinyl chloride	6.71	1.0	10	0	67.1	65	137	6.16	8.55	20.5	
Xylenes, Total	23.04	1.0	30	0	76.8	72	130	25.01	8.20	16.1	
Surr: 1,2-Dichloroethane-d4	49.07	5.0	50	0	98.1	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.69	5.0	50	0	99.4	76.5	125	0	0	0	
Surr: Toluene-d8	49.49	5.0	50	0	99	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191031059

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	103119-01-SW-U-B-1	10/31/19	0945	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	103119-02-SW-A-A-1	10/31/19	0955	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	103119-03-SW-D-A-1	10/31/19	1010	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	103119-04-SW-B-A-1	10/31/19	0915	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	103119-05-SW-B-A-1	10/31/19	1025	A	W		✓	1	TSS
006	103119-TB01			A	TB			1	trip blank
				A					
				A					
				A					
				A					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

TB lot 47.1

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		10/31/19 4:06pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	K. Miller	10/31/19 4:24p

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled) 6°C	Y ☑ N ☐	(Y) N	(Y) N
Notes:		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Se

Demo
191031059

Adirondack Environmental Services, Inc

191031059

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO



191031059

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project#
ClientReferenceNo: 60323713

DateDue: 11/4/2019

QClevel: STD+

☐ Hard Copy

10/31/2019

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191031059-001	103119-01-SW-U-B-1	Water	10/31/2019	11/4/2019	B	A					
191031059-002	103119-02-SW-A-A-1	Water	10/31/2019	11/4/2019	B	A					
191031059-003	103119-03-SW-D-A-1	Water	10/31/2019	11/4/2019	B	A					
191031059-004	103119-04-SW-B-A-1	Water	10/31/2019	11/4/2019	B	A					
191031059-005	103119-05-SW-B-A-1	Water	10/31/2019	11/4/2019		A					
191031059-006	102919-TB01	Trip Blank	10/31/2019	11/4/2019	A						

Comments:

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 06, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191101066
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 11/1/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *06-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191101066	

Sample containers were supplied by Adirondack Environmental Services.

This report has been revised to report carbon disulfide in the QC results.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-01-SW-U-A-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 2:07:31 PM
Surr: Decachlorobiphenyl	**90.2**	57.1-135		%REC	1	11/4/2019 2:07:31 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 1:37:00 AM
Chloroethane	**ND**	1.0	SN	µg/L	1	11/2/2019 1:37:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 1:37:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,2-Dichloroethane	**ND**	1.0	N	µg/L	1	11/2/2019 1:37:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 1:37:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 1:37:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0	N	µg/L	1	11/2/2019 1:37:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-01-SW-U-A-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/2/2019 1:37:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 1:37:00 AM
Surr: 1,2-Dichloroethane-d4	**97.0**	80.9-122		%REC	1	11/2/2019 1:37:00 AM
Surr: 4-Bromofluorobenzene	**91.9**	76.5-125		%REC	1	11/2/2019 1:37:00 AM
Surr: Toluene-d8	**95.7**	80.4-121		%REC	1	11/2/2019 1:37:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/4/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**93.2**	4.0		mg/L	1	11/4/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-02-SW-A-B-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1242	**0.034**	0.065	J	µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 2:20:54 PM
PCB, Total	**0.034**	0.065	J	µg/L	1	11/4/2019 2:20:54 PM
Surr: Decachlorobiphenyl	**80.0**	57.1-135		%REC	1	11/4/2019 2:20:54 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 1:59:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 1:59:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 1:59:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 1:59:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 1:59:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-02-SW-A-B-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 1:59:00 AM
Surr: 1,2-Dichloroethane-d4	**96.4**	80.9-122		%REC	1	11/2/2019 1:59:00 AM
Surr: 4-Bromofluorobenzene	**96.8**	76.5-125		%REC	1	11/2/2019 1:59:00 AM
Surr: Toluene-d8	**101**	80.4-121		%REC	1	11/2/2019 1:59:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/4/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**85.4**	2.9		mg/L	1	11/4/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-03-SW-D-B-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 2:34:13 PM
Surr: Decachlorobiphenyl	**79.0**	57.1-135		%REC	1	11/4/2019 2:34:13 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 2:20:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 2:20:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 2:20:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 2:20:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 2:20:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-03-SW-D-B-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 2:20:00 AM
Surr: 1,2-Dichloroethane-d4	**97.7**	80.9-122		%REC	1	11/2/2019 2:20:00 AM
Surr: 4-Bromofluorobenzene	**95.4**	76.5-125		%REC	1	11/2/2019 2:20:00 AM
Surr: Toluene-d8	**98.6**	80.4-121		%REC	1	11/2/2019 2:20:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/4/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**82.6**	2.9		mg/L	1	11/4/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-04-SW-B-A-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 2:47:36 PM
Surr: Decachlorobiphenyl	**81.2**	57.1-135		%REC	1	11/4/2019 2:47:36 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 2:42:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 2:42:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 2:42:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 2:42:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 2:42:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-04-SW-B-A-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 2:42:00 AM
Surr: 1,2-Dichloroethane-d4	**96.8**	80.9-122		%REC	1	11/2/2019 2:42:00 AM
Surr: 4-Bromofluorobenzene	**91.0**	76.5-125		%REC	1	11/2/2019 2:42:00 AM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	11/2/2019 2:42:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/4/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**111**	4.0		mg/L	1	11/4/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-05-SW-B-C-1
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/4/2019)						
TSS (Residue, Non-Filterable)	**103**	4.0		mg/L	1	11/4/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-TB01
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 3:03:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 3:03:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 3:03:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 3:03:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 3:03:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 3:03:00 AM
Surr: 1,2-Dichloroethane-d4	**98.0**	80.9-122		%REC	1	11/2/2019 3:03:00 AM
Surr: 4-Bromofluorobenzene	**88.1**	76.5-125		%REC	1	11/2/2019 3:03:00 AM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	11/2/2019 3:03:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110119-TB02
Work Order:	**191101066**	**Collection Date:**	11/1/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191101066-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Vinyl chloride	**ND**	1.0	S	µg/L	1	11/2/2019 3:25:00 AM
Chloroethane	**ND**	1.0	S	µg/L	1	11/2/2019 3:25:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Acetone	**ND**	5.0		µg/L	1	11/2/2019 3:25:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/2/2019 3:25:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Benzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/2/2019 3:25:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Toluene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/2/2019 3:25:00 AM
Surr: 1,2-Dichloroethane-d4	**97.6**	80.9-122		%REC	1	11/2/2019 3:25:00 AM
Surr: 4-Bromofluorobenzene	**94.3**	76.5-125		%REC	1	11/2/2019 3:25:00 AM
Surr: Toluene-d8	**90.4**	80.4-121		%REC	1	11/2/2019 3:25:00 AM

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76465

LCS

SeqNo: **2733525** **PrepDate:11/4/2019** TestNo: **SM2540D** RunNo: **177023**
Samp ID: **LCS-76465** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	452	40.0	489	0	92.4	86.5	114	0	0		

DUP

SeqNo: **2733531** **PrepDate:11/4/2019** TestNo: **SM2540D** RunNo: **177023**
Samp ID: **191101001-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	160	20.0	0	0	0	0	0	172	7.23	10	

DUP

SeqNo: **2733542** **PrepDate:11/4/2019** TestNo: **SM2540D** RunNo: **177023**
Samp ID: **191101066-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	95.2	4.00	0	0	0	0	0	93.2	2.12	10	

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76471

mblk

SeqNo: **2733054** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **mb-76471** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.081	0.0100	0.1	0	81	57.1	135	0	0		

lcs

SeqNo: **2733055** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **lcs-76471** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.564	0.0650	0.5	0	113	60	140	0	0		
PCB, Total	0.564	0.0650	0.5	0	113	60	140	0	0		
Surr: Decachlorobiphenyl	0.1146	0.0100	0.1	0	115	57.1	135	0	0		

ms

SeqNo: **2733011** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **191101066-001c (110119-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5026	0.0650	0.5	0	101	46.7	130	0	0		
PCB, Total	0.5026	0.0650	0.5	0	101	51	150	0	0		
Surr: Decachlorobiphenyl	0.1064	0.0100	0.1	0	106	57.1	135	0	0		

msd

SeqNo: **2733012** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **191101066-001c (110119-01-SW-U-** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4448	0.0650	0.5	0	89	46.7	130	0.5026	12.2	30	
PCB, Total	0.4448	0.0650	0.5	0	89	51	150	0.5026	12.2	30	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76471

msd						
SeqNo: **2733012**	**PrepDate:11/4/2019**	TestNo: **SW8082A**	RunNo: **176975**
Samp ID: **191101066-001c (110119-01-SW-U-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.086	0.0100	0.1	0	86	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

mblk

SeqNo: **2732422** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,3-Dichloropropane	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
2-Butanone	ND	10									
4-Methyl-2-pentanone	ND	10									
Acetone	ND	10									
Benzene	ND	0.50									
Carbon disulfide	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Dibromochloromethane	ND	0.50									
Ethylbenzene	ND	0.50									
Methylene chloride	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
Trichloroethene	ND	0.50									
Vinyl chloride	ND	0.50									
Xylenes, Total	ND	10									
Surr: 1,2-Dichloroethane-d4	47.66	5.0	50	0	95.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	48.16	5.0	50	0	96.3	76.5	125	0	0		
Surr: Toluene-d8	48.83	5.0	50	0	97.7	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

lcs

SeqNo: **2732420** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/1/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.39	0.50	10	0	83.9	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.29	0.50	10	0	72.9	72.3	118	0	0		
1,1,2-Trichloroethane	8.43	0.50	10	0	84.3	73.1	123	0	0		
1,1-Dichloroethane	8.05	0.50	10	0	80.5	73.2	127	0	0		
1,1-Dichloroethene	8.03	0.50	10	0	80.3	70.3	128	0	0		
1,2,3-Trichloropropane	3.7	0.50	5	0	74	68.4	115	0	0		
1,2-Dichlorobenzene	8.03	0.50	10	0	80.3	71	124	0	0		
1,2-Dichloroethane	7.63	0.50	10	0	76.3	72.5	127	0	0		
1,3-Dichlorobenzene	7.94	0.50	10	0	79.4	72.2	121	0	0		
1,3-Dichloropropane	4.03	0.50	5	0	80.6	76	122	0	0		
1,4-Dichlorobenzene	7.9	0.50	10	0	79	71.7	127	0	0		
2-Butanone	8.51	10	10	0	85.1	65.1	132	0	0		J
4-Methyl-2-pentanone	7.47	10	10	0	74.7	68.7	118	0	0		J
Acetone	7.5	10	10	0	75	69.2	133	0	0		J
Benzene	8.16	0.50	10	0	81.6	71.2	122	0	0		
Carbon disulfide	3.81	0.50	5	0	76.2	67.8	134	0	0		
Carbon tetrachloride	8.75	0.50	10	0	87.5	74.5	122	0	0		
Chlorobenzene	7.96	0.50	10	0	79.6	72.7	124	0	0		
Chloroethane	6.5	0.50	10	0	65	72.3	136	0	0		S
Chloroform	7.85	0.50	10	0	78.5	71.6	133	0	0		
Dibromochloromethane	8.87	0.50	10	0	88.7	70.6	124	0	0		
Ethylbenzene	8.15	0.50	10	0	81.5	70.9	126	0	0		
Methylene chloride	8.32	0.50	10	0	83.2	66.3	130	0	0		
Tetrachloroethene	8.75	0.50	10	0	87.5	72.4	119	0	0		
Toluene	8.31	0.50	10	0	83.1	71.8	116	0	0		
trans-1,2-Dichloroethene	8.16	0.50	10	0	81.6	70.3	120	0	0		
Trichloroethene	8.33	0.50	10	0	83.3	73	127	0	0		
Vinyl chloride	5.9	0.50	10	0	59	65.2	134	0	0		S
Xylenes, Total	24.53	10	30	0	81.8	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.13	5.0	50	0	98.3	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.82	5.0	50	0	93.6	76.5	125	0	0		
Surr: Toluene-d8	50.02	5.0	50	0	100	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

ms	SeqNo: **2732438**	TestNo: **SW8260C**	RunNo: **176969**
	Samp ID: **191101066-001b (110119-01-SW-U-**	Units: **µg/L**	Analysis Date: **11/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.75	1.0	10	0	77.5	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	6.75	1.0	10	0	67.5	70.1	123	0	0		S
1,1,2-Trichloroethane	7.82	1.0	10	0	78.2	72.1	119	0	0		
1,1-Dichloroethane	8.1	1.0	10	0	81	70.4	126	0	0		
1,1-Dichloroethene	8.74	1.0	10	0	87.4	70.2	125	0	0		
1,2,3-Trichloropropane	3.06	1.0	5	0	61.2	53.7	101	0	0		
1,2-Dichlorobenzene	7.96	1.0	10	0.2	77.6	70.2	123	0	0		
1,2-Dichloroethane	7.07	1.0	10	0	70.7	73.5	126	0	0		S
1,3-Dichlorobenzene	7.42	1.0	10	0	74.2	70.4	124	0	0		
1,3-Dichloropropane	3.91	1.0	5	0	78.2	64	125	0	0		
1,4-Dichlorobenzene	7.58	1.0	10	0	75.8	70.8	127	0	0		
2-Butanone	7.47	5.0	10	0	74.7	60.5	123	0	0		
4-Methyl-2-pentanone	6.64	5.0	10	0	66.4	52.8	133	0	0		
Acetone	7.27	5.0	10	0	72.7	56.3	135	0	0		
Benzene	7.41	1.0	10	0	74.1	70.2	127	0	0		
Carbon disulfide	4.01	1.0	5	0	80.2	62.2	130	0	0		
Carbon tetrachloride	8.43	1.0	10	0	84.3	56.4	137	0	0		
Chlorobenzene	8.74	1.0	10	0	87.4	72.7	128	0	0		
Chloroethane	6.38	1.0	10	0	63.8	71.3	135	0	0		S
Chloroform	7.77	1.0	10	0	77.7	70.2	125	0	0		
Dibromochloromethane	8.34	1.0	10	0	83.4	69.5	123	0	0		
Ethylbenzene	8.47	1.0	10	0	84.7	71.9	129	0	0		
Methylene chloride	7.45	1.0	10	0	74.5	65.3	123	0	0		
Tetrachloroethene	8.44	1.0	10	0	84.4	74.5	121	0	0		
Toluene	8.1	1.0	10	0	81	73	122	0	0		
trans-1,2-Dichloroethene	8.79	1.0	10	0	87.9	69.1	133	0	0		
Trichloroethene	8.05	1.0	10	0	80.5	71.1	126	0	0		
Vinyl chloride	6.16	1.0	10	0	61.6	65	137	0	0		S
Xylenes, Total	25.01	1.0	30	0	83.4	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	48.07	5.0	50	0	96.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.93	5.0	50	0	93.9	76.5	125	0	0		
Surr: Toluene-d8	49.2	5.0	50	0	98.4	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191101066
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R176969

msd

SeqNo: **2732439** TestNo: **SW8260C** RunNo: **176969**
Samp ID: **191101066-001b (110119-01-SW-U-** Units: **µg/L** Analysis Date: **11/2/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	7.26	1.0	10	0	72.6	71.6	126	7.75	6.53	20.4	
1,1,2,2-Tetrachloroethane	6.5	1.0	10	0	65	70.1	123	6.75	3.77	18.6	S
1,1,2-Trichloroethane	7.52	1.0	10	0	75.2	72.1	119	7.82	3.91	20	
1,1-Dichloroethane	8.01	1.0	10	0	80.1	70.4	126	8.1	1.12	19.2	
1,1-Dichloroethene	8.14	1.0	10	0	81.4	70.2	125	8.74	7.11	16.1	
1,2,3-Trichloropropane	3	1.0	5	0	60	53.7	101	3.06	1.98	20	
1,2-Dichlorobenzene	7.7	1.0	10	0.2	75	70.2	123	7.96	3.32	17.9	
1,2-Dichloroethane	6.69	1.0	10	0	66.9	73.5	126	7.07	5.52	15.6	S
1,3-Dichlorobenzene	7.44	1.0	10	0	74.4	70.4	124	7.42	0.269	14.3	
1,3-Dichloropropane	3.55	1.0	5	0	71	64	125	3.91	9.65	0	
1,4-Dichlorobenzene	7.67	1.0	10	0	76.7	70.8	127	7.58	1.18	14.4	
2-Butanone	5.09	5.0	10	0	50.9	60.5	123	7.47	37.9	15	SZ
4-Methyl-2-pentanone	6.83	5.0	10	0	68.3	52.8	133	6.64	2.82	11.9	
Acetone	7.72	5.0	10	0	77.2	56.3	135	7.27	6.00	10.6	
Benzene	6.91	1.0	10	0	69.1	70.2	127	7.41	6.98	18.4	S
Carbon disulfide	3.9	1.0	5	0	78	62.2	130	4.01	2.78	13.1	
Carbon tetrachloride	7.97	1.0	10	0	79.7	56.4	137	8.43	5.61	20.3	
Chlorobenzene	8.29	1.0	10	0	82.9	72.7	128	8.74	5.28	19.6	
Chloroethane	6.92	1.0	10	0	69.2	71.3	135	6.38	8.12	27.8	S
Chloroform	7.3	1.0	10	0	73	70.2	125	7.77	6.24	20.3	
Dibromochloromethane	7.86	1.0	10	0	78.6	69.5	123	8.34	5.93	18.8	
Ethylbenzene	7.97	1.0	10	0	79.7	71.9	129	8.47	6.08	16.3	
Methylene chloride	6.83	1.0	10	0	68.3	65.3	123	7.45	8.68	21.4	
Tetrachloroethene	8.11	1.0	10	0	81.1	74.5	121	8.44	3.99	20.9	
Toluene	7.64	1.0	10	0	76.4	73	122	8.1	5.84	19.4	
trans-1,2-Dichloroethene	8.13	1.0	10	0	81.3	69.1	133	8.79	7.80	16.1	
Trichloroethene	7.41	1.0	10	0	74.1	71.1	126	8.05	8.28	16.6	
Vinyl chloride	6.71	1.0	10	0	67.1	65	137	6.16	8.55	20.5	
Xylenes, Total	23.04	1.0	30	0	76.8	72	130	25.01	8.20	16.1	
Surr: 1,2-Dichloroethane-d4	49.07	5.0	50	0	98.1	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	49.69	5.0	50	0	99.4	76.5	125	0	0	0	
Surr: Toluene-d8	49.49	5.0	50	0	99	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191101066

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110119-01-SW-U-A-1	11/1/19	1045	A	W		✓	6	PCBs
	↓	↓	↓	A	↓		↓	6	VOCs
	↓	↓	↓	A	↓		↓	3	TSS
002	110119-02-SW-A-B-1	11/1/19	1115	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
003	110119-03-SW-D-B-1	11/1/19	1130	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
004	110119-04-SW-B-A-1	11/1/19	1015	A	W		✓	2	PCBs
	↓	↓	↓	A	↓		↓	2	VOCs
	↓	↓	↓	A	↓		↓	1	TSS
005	110119-05-SW-B-C-1	11/1/19	1150	A	W		✓	1	TSS
006	110119-TB01 VOA-F 42.1	11/1/19		A	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11/1/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
		11/1/19 4:45pm

Temperature: Ambient or (Chilled) Notes: 7°C

AES Bottles: (Y) ☐ N ☐

Properly Preserved: (Y) N Notes:

Received Within Holding Times: (Y) N Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Servi



Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19110106

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Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Geban
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
07	110119-TB02		A / P	TB			1	trip blank
	10/A-F47.1 J.m 11/1/19		A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					
			A / P					

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Patrick Geban		11/1/19 4:00p
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	J. Mi	11/1/19 4:42p

Temperature Ambient or (Chilled) 4°C
Notes:_____

AES Bottles Y ☑ N ☐

Properly Preserved (Y) N
Notes:_____

Received Within Holding Times (Y) N
Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc

191101066

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo

191101066

TAT: **2**

DateDue: 11/5/2019

11/1/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT

☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191101066-001	110119-01-SW-U-A-1	Water	11/1/2019	11/5/2019	C	B	A				
191101066-002	110119-02-SW-A-B-1	Water	11/1/2019	11/5/2019	C	B	A				
191101066-003	110119-03-SW-D-B-1	Water	11/1/2019	11/5/2019	C	B	A				
191101066-004	110119-04-SW-B-A-1	Water	11/1/2019	11/5/2019	C	B	A				
191101066-005	110119-05-SW-B-C-1	Water	11/1/2019	11/5/2019			A				
191101066-006	110119-TB01	Trip Blank	11/1/2019	11/5/2019		A					
191101066-007	110119-TB02	Trip Blank	11/1/2019	11/5/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by_____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 06, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191104050
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 11/4/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *06-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191104050	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-01-SW-U-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 7:17:02 PM
Surr: Decachlorobiphenyl	**55.6**	57.1-135	S	%REC	1	11/4/2019 7:17:02 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 12:11:00 AM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	11/6/2019 12:11:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 12:11:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 12:11:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
1,3-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	11/6/2019 12:11:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-01-SW-U-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 12:11:00 AM
1,4-Dichlorobenzene	**0.4**	1.0	J	µg/L	1	11/6/2019 12:11:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 12:11:00 AM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	11/6/2019 12:11:00 AM
Surr: 4-Bromofluorobenzene	**91.4**	76.5-125		%REC	1	11/6/2019 12:11:00 AM
Surr: Toluene-d8	**130**	80.4-121	S	%REC	1	11/6/2019 12:11:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**65.6**	2.0		mg/L	1	11/5/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-02-SW-A-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 7:30:19 PM
Surr: Decachlorobiphenyl	**71.2**	57.1-135		%REC	1	11/4/2019 7:30:19 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 12:33:00 AM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	11/6/2019 12:33:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 12:33:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 12:33:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 12:33:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-02-SW-A-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	11/6/2019 12:33:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	11/6/2019 12:33:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 12:33:00 AM
Surr: 1,2-Dichloroethane-d4	**98.7**	80.9-122		%REC	1	11/6/2019 12:33:00 AM
Surr: 4-Bromofluorobenzene	**92.9**	76.5-125		%REC	1	11/6/2019 12:33:00 AM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	11/6/2019 12:33:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**66.8**	4.0		mg/L	1	11/5/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-03-SW-D-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 7:43:41 PM
Surr: Decachlorobiphenyl	**65.8**	57.1-135		%REC	1	11/4/2019 7:43:41 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 12:54:00 AM
Carbon disulfide	**0.2**	1.0	J	µg/L	1	11/6/2019 12:54:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 12:54:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 12:54:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 12:54:00 AM

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-03-SW-D-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	11/6/2019 12:54:00 AM
1,4-Dichlorobenzene	**0.3**	1.0	J	µg/L	1	11/6/2019 12:54:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 12:54:00 AM
Surr: 1,2-Dichloroethane-d4	**92.5**	80.9-122		%REC	1	11/6/2019 12:54:00 AM
Surr: 4-Bromofluorobenzene	**93.5**	76.5-125		%REC	1	11/6/2019 12:54:00 AM
Surr: Toluene-d8	**146**	80.4-121	S	%REC	1	11/6/2019 12:54:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**70.4**	4.0		mg/L	1	11/5/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-04-SW-B-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/4/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
PCB, Total	**ND**	0.065		µg/L	1	11/4/2019 7:56:58 PM
Surr: Decachlorobiphenyl	**67.4**	57.1-135		%REC	1	11/4/2019 7:56:58 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 1:16:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 1:16:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 1:16:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 1:16:00 AM

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-04-SW-B-A-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 1:16:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 1:16:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 1:16:00 AM
Surr: 1,2-Dichloroethane-d4	**98.5**	80.9-122		%REC	1	11/6/2019 1:16:00 AM
Surr: 4-Bromofluorobenzene	**93.7**	76.5-125		%REC	1	11/6/2019 1:16:00 AM
Surr: Toluene-d8	**132**	80.4-121	S	%REC	1	11/6/2019 1:16:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/5/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**65.6**	4.0		mg/L	1	11/5/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-05-SW-B-B-1
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/5/2019)						
TSS (Residue, Non-Filterable)	**75.2**	4.0		mg/L	1	11/5/2019

Adirondack Environmental Services, Inc

Date: *06-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110419-TB01
Work Order:	**191104050**	**Collection Date:**	11/4/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191104050-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Methylene chloride	**0.4**	1.0	J	µg/L	1	11/6/2019 1:37:00 AM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 1:37:00 AM
Carbon disulfide	**0.1**	1.0	J	µg/L	1	11/6/2019 1:37:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 1:37:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 1:37:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,3-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 1:37:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
1,4-Dichlorobenzene	**0.2**	1.0	J	µg/L	1	11/6/2019 1:37:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 1:37:00 AM
Surr: 1,2-Dichloroethane-d4	**99.4**	80.9-122		%REC	1	11/6/2019 1:37:00 AM
Surr: 4-Bromofluorobenzene	**97.0**	76.5-125		%REC	1	11/6/2019 1:37:00 AM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	11/6/2019 1:37:00 AM

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76471

mblk

SeqNo: **2733054** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **mb-76471** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.081	0.0100	0.1	0	81	57.1	135	0	0		

lcs

SeqNo: **2733055** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **lcs-76471** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.564	0.0650	0.5	0	113	60	140	0	0		
PCB, Total	0.564	0.0650	0.5	0	113	60	140	0	0		
Surr: Decachlorobiphenyl	0.1146	0.0100	0.1	0	115	57.1	135	0	0		

ms

SeqNo: **2733011** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **191101066-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5026	0.0650	0.5	0	101	46.7	130	0	0		
PCB, Total	0.5026	0.0650	0.5	0	101	51	150	0	0		
Surr: Decachlorobiphenyl	0.1064	0.0100	0.1	0	106	57.1	135	0	0		

msd

SeqNo: **2733012** PrepDate:**11/4/2019** TestNo: **SW8082A** RunNo: **176975**
Samp ID: **191101066-001c** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76471

msd	SeqNo: **2733012**	**PrepDate:11/4/2019**	TestNo: **SW8082A**	RunNo: **176975**
	Samp ID: **191101066-001c**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **11/4/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.4448	0.0650	0.5	0	89	46.7	130	0.5026	12.2	30	
PCB, Total	0.4448	0.0650	0.5	0	89	51	150	0.5026	12.2	30	
Surr: Decachlorobiphenyl	0.086	0.0100	0.1	0	86	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76493

LCS

SeqNo: **2734377** **PrepDate:11/5/2019** TestNo: **SM2540D** RunNo: **177068**
Samp ID: **LCS-76493** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	476	40.0	489	0	97.3	86.5	114	0	0		

DUP

SeqNo: **2734388** **PrepDate:11/5/2019** TestNo: **SM2540D** RunNo: **177068**
Samp ID: **191104028-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	3050	50.0	0	0	0	0	0	2960	3.00	10	

DUP

SeqNo: **2734390** **PrepDate:11/5/2019** TestNo: **SM2540D** RunNo: **177068**
Samp ID: **191104028-002** **PrepRef:** Units: **mg/L** Analysis Date: **11/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	3960	100	0	0	0	0	0	4090	3.23	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177056

mblk

SeqNo: **2734195** TestNo: **SW8260C** RunNo: **177056**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	0.34	1.0									J
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	0.33	1.0									J
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	0.45	1.0									J
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.22	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.51	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	48.54	5.0	50	0	97.1	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.95	5.0	50	0	93.9	76.5	125	0	0		
Surr: Toluene-d8	60.97	5.0	50	0	122	80.4	121	0	0		S

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177056

lcs

SeqNo: **2734193** TestNo: **SW8260C** RunNo: **177056**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/5/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	57.91	1.0	50	0	116	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	50.72	1.0	50	0	101	72.3	118	0	0		
1,1,2-Trichloroethane	59.64	1.0	50	0	119	73.1	123	0	0		
1,1-Dichloroethane	45.8	1.0	50	0	91.6	73.2	127	0	0		
1,1-Dichloroethene	49.97	1.0	50	0	99.9	70.3	128	0	0		
1,2,3-Trichloropropane	26	1.0	25	0	104	68.4	115	0	0		
1,2-Dichlorobenzene	42.1	1.0	50	0	84.2	71	124	0	0		
1,2-Dichloroethane	43.75	1.0	50	0	87.5	72.5	127	0	0		
1,3-Dichlorobenzene	51.16	1.0	50	0	102	72.2	121	0	0		
1,3-Dichloropropane	28.64	1.0	25	0	115	76	122	0	0		
1,4-Dichlorobenzene	48.33	1.0	50	0	96.7	71.7	127	0	0		
2-Butanone	44.91	5.0	50	0	89.8	65.1	132	0	0		
4-Methyl-2-pentanone	64.76	5.0	50	0	130	68.7	118	0	0		S
Acetone	44.61	5.0	50	0	89.2	69.2	133	0	0		
Benzene	51.6	1.0	50	0	103	71.2	122	0	0		
Carbon disulfide	28.29	1.0	25	0	113	67.8	134	0	0		
Carbon tetrachloride	56.2	1.0	50	0	112	74.5	122	0	0		
Chlorobenzene	55.11	1.0	50	0	110	72.7	124	0	0		
Chloroethane	49.6	1.0	50	0	99.2	72.3	136	0	0		
Chloroform	49.51	1.0	50	0	99	71.6	133	0	0		
Dibromochloromethane	64.46	1.0	50	0	129	70.6	124	0	0		S
Ethylbenzene	52.19	1.0	50	0	104	70.9	126	0	0		
Methylene chloride	39.48	1.0	50	0	79	66.3	130	0	0		
Tetrachloroethene	57.02	1.0	50	0	114	72.4	119	0	0		
Toluene	61.13	1.0	50	0	122	71.8	116	0	0		S
trans-1,2-Dichloroethene	48.21	1.0	50	0	96.4	70.3	120	0	0		
Trichloroethene	57.18	1.0	50	0	114	73	127	0	0		
Vinyl chloride	58.88	1.0	50	0	118	65.2	134	0	0		
Xylenes, Total	151.6	1.0	150	0	101	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	40.46	5.0	50	0	80.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	53.26	5.0	50	0	107	76.5	125	0	0		
Surr: Toluene-d8	56.66	5.0	50	0	113	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177056

ms	SeqNo: **2734222**	TestNo: **SW8260C**	RunNo: **177056**
	Samp ID: **191105006-001b**	Units: **µg/L**	Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	9.63	1.0	10	0	96.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.77	1.0	10	0	87.7	70.1	123	0	0		
1,1,2-Trichloroethane	10.68	1.0	10	0	107	72.1	119	0	0		
1,1-Dichloroethane	9.72	1.0	10	0	97.2	70.4	126	0	0		
1,1-Dichloroethene	13.9	1.0	10	0	139	70.2	125	0	0		S
1,2,3-Trichloropropane	4.56	1.0	5	0	91.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.43	1.0	10	0	84.3	70.2	123	0	0		
1,2-Dichloroethane	9.39	1.0	10	0	93.9	73.5	126	0	0		
1,3-Dichlorobenzene	9.54	1.0	10	0	95.4	70.4	124	0	0		
1,3-Dichloropropane	4.69	1.0	5	0	93.8	64	125	0	0		
1,4-Dichlorobenzene	9.31	1.0	10	0	93.1	70.8	127	0	0		
2-Butanone	6.7	5.0	10	0	67	60.5	123	0	0		
4-Methyl-2-pentanone	8.73	5.0	10	0	87.3	52.8	133	0	0		
Acetone	11.73	5.0	10	0	117	56.3	135	0	0		
Benzene	8.91	1.0	10	0	89.1	70.2	127	0	0		
Carbon disulfide	7.02	1.0	5	0	140	62.2	130	0	0		S
Carbon tetrachloride	9.92	1.0	10	0	99.2	56.4	137	0	0		
Chlorobenzene	11.19	1.0	10	0	112	72.7	128	0	0		
Chloroethane	10	1.0	10	0	100	71.3	135	0	0		
Chloroform	10.52	1.0	10	0	105	70.2	125	0	0		
Dibromochloromethane	9.96	1.0	10	0	99.6	69.5	123	0	0		
Ethylbenzene	10.56	1.0	10	0	106	71.9	129	0	0		
Methylene chloride	8.21	1.0	10	0	82.1	65.3	123	0	0		
Tetrachloroethene	10.64	1.0	10	0	106	74.5	121	0	0		
Toluene	9.93	1.0	10	0	99.3	73	122	0	0		
trans-1,2-Dichloroethene	10.8	1.0	10	0	108	69.1	133	0	0		
Trichloroethene	10.05	1.0	10	0	100	71.1	126	0	0		
Vinyl chloride	10.98	1.0	10	0	110	65	137	0	0		
Xylenes, Total	32.29	1.0	30	0	108	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.43	5.0	50	0	98.9	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.32	5.0	50	0	94.6	76.5	125	0	0		
Surr: Toluene-d8	47.05	5.0	50	0	94.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191104050
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177056

msd	SeqNo: **2734223**	TestNo: **SW8260C**	RunNo: **177056**
	Samp ID: **191105006-001b**	Units: **µg/L**	Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	15.31	1.0	10	0	153	71.6	126	9.63	45.5	20.4	SZ
1,1,2,2-Tetrachloroethane	8.35	1.0	10	0	83.5	70.1	123	8.77	4.91	18.6	
1,1,2-Trichloroethane	10.67	1.0	10	0	107	72.1	119	10.68	0.0937	20	
1,1-Dichloroethane	14.17	1.0	10	0	142	70.4	126	9.72	37.3	19.2	SZ
1,1-Dichloroethene	12.85	1.0	10	0	128	70.2	125	13.9	7.85	16.1	S
1,2,3-Trichloropropane	4.18	1.0	5	0	83.6	53.7	101	4.56	8.70	20	
1,2-Dichlorobenzene	9.22	1.0	10	0	92.2	70.2	123	8.43	8.95	17.9	
1,2-Dichloroethane	10.76	1.0	10	0	108	73.5	126	9.39	13.6	15.6	
1,3-Dichlorobenzene	10.22	1.0	10	0	102	70.4	124	9.54	6.88	14.3	
1,3-Dichloropropane	5.51	1.0	5	0	110	64	125	4.69	16.1	0	
1,4-Dichlorobenzene	9.88	1.0	10	0	98.8	70.8	127	9.31	5.94	14.4	
2-Butanone	9.85	5.0	10	0	98.5	60.5	123	6.7	38.1	15	Z
4-Methyl-2-pentanone	8.87	5.0	10	0	88.7	52.8	133	8.73	1.59	11.9	
Acetone	10.69	5.0	10	0	107	56.3	135	11.73	9.28	10.6	
Benzene	12.68	1.0	10	0	127	70.2	127	8.91	34.9	18.4	Z
Carbon disulfide	6.69	1.0	5	0	134	62.2	130	7.02	4.81	13.1	S
Carbon tetrachloride	15.73	1.0	10	0	157	56.4	137	9.92	45.3	20.3	SZ
Chlorobenzene	9.67	1.0	10	0	96.7	72.7	128	11.19	14.6	19.6	
Chloroethane	9.7	1.0	10	0	97	71.3	135	10	3.05	27.8	
Chloroform	13.14	1.0	10	0	131	70.2	125	10.52	22.1	20.3	SZ
Dibromochloromethane	11.25	1.0	10	0	112	69.5	123	9.96	12.2	18.8	
Ethylbenzene	10.11	1.0	10	0	101	71.9	129	10.56	4.35	16.3	
Methylene chloride	10.67	1.0	10	0	107	65.3	123	8.21	26.1	21.4	Z
Tetrachloroethene	11.51	1.0	10	0	115	74.5	121	10.64	7.86	20.9	
Toluene	10.91	1.0	10	0	109	73	122	9.93	9.40	19.4	
trans-1,2-Dichloroethene	14.34	1.0	10	0	143	69.1	133	10.8	28.2	16.1	SZ
Trichloroethene	11.26	1.0	10	0	113	71.1	126	10.05	11.4	16.6	
Vinyl chloride	10.78	1.0	10	0	108	65	137	10.98	1.84	20.5	
Xylenes, Total	30.34	1.0	30	0	101	72	130	32.29	6.23	16.1	
Surr: 1,2-Dichloroethane-d4	53.75	5.0	50	0	108	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	42.55	5.0	50	0	85.1	76.5	125	0	0	0	
Surr: Toluene-d8	49.02	5.0	50	0	98	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191104050

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:**
978-905-2124	john.bleiler@aecom.com	229608

Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110419-01-SW-U-A-1	11/4/19	1140	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
002	110419-02-SW-A-A-1	11/4/19	1155	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
003	110419-03-SW-D-A-1	11/4/19	1215	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
004	110419-04-SW-B-A-1	11/4/19	1115	A	W		✓	2	PCBs
				P				2	VOCs
				A/P				1	TSS
005	110419-05-SW-B-B-1	11/4/19	1235	A/P	W		✓	1	TSS
006	110419-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Lot# F47.1

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11/4/19 4:15 pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time**
	Knez	11/4/19 443pm

Temperature
Ambient or (Chilled)
Notes: 10°C

AES Bottles
Y ☒ N ☐

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services, Inc.

191104050

Adirondack Environmental Services, Inc

191104050

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 11/6/2019

11/4/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191104050-001	110419-01-SW-U-A-1	Water	11/4/2019	11/6/2019	C	B	A				
191104050-002	110419-02-SW-A-A-1	Water	11/4/2019	11/6/2019	C	B	A				
191104050-003	110419-03-SW-D-A-1	Water	11/4/2019	11/6/2019	C	B	A				
191104050-004	110419-04-SW-B-A-1	Water	11/4/2019	11/6/2019	C	B	A				
191104050-005	110419-05-SW-B-B-1	Water	11/4/2019	11/6/2019			A				
191104050-006	110419-TB01	Trip Blank	11/4/2019	11/6/2019		A					

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/05/19 – 11/08/19 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan prepared by AECOM (2019).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (4 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) Total Suspended Solids (TSS) samples collected from each monitoring buoy (from near bottom in the water column, unless the worst case turbidity is observed at another depth, in which case that depth will be sampled). These samples will allow for comparison with the real-time/ field collected turbidity measurements;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs;
- Three times per week samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for PCB Aroclors;
- Daily (Monday through Friday) TSS samples collected from the 600 ft downstream location (based on tidal stage) as a compliance check.

While not summarized in this memo, the following monitoring is also being conducted:

- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at four fixed autonomous water quality buoys positioned up-river, adjacent to, downriver, and up-river off-Site (background) of the active work area (24 hours per day, 7 days per week[1]);

The sampling/ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging installation over the period 11/5/19 through 11/8/19. In accordance with the July 2019 Surface Water Remedial

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany.

Action Monitoring Plan, whole water samples were collected for VOCs, PCB Aroclors, and TSS (4 locations, one depth based on maximum observed in-situ turbidity readings). TSS was collected from one additional location.

A Geotech Geopump™ peristaltic pump was used to collect the water column samples. While the samples was being collected the turbidity reading from the paired YSI EXO2 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Adirondack laboratory in Albany, NY. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). The chemical sampling/ monitoring lab reports are presented in Attachment A. Over the reporting period, there were no exceedances of the water quality criteria.

Typically, field turbidity readings from the YSI EXO2 sonde were observed to be less than 25 NTU. The associated buoy turbidity mirrored the field readings with a few spikes, but relatively low overall. Overall, the turbidity readings continued to be in the near-bottom horizon. All laboratory measured TSS values during the reporting period were less than 35 mg/L.

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1
BASF Rensselaer - OU2
COC Detections

SAMPLE ID	TIME	ANALYTE	FRACTION (DISSOLVED/ TOTAL)	UNIT	GUIDANCE VALUE	RESULT	LAB QUALIFIER	EXCEEDANCE?	Based on tidal stage, is buoy U/D/A/B??	DEPTH (FT)	FIELD TURBIDITY	TIDAL ELEVATION (FT, NGVD29)	TIDAL STAGE	TSS (mg/L)	CONTAINMENT	TIME DREDGING COMMNECED
110519-01-SW-U-A-1	14:10	BENZENE	N	ug/l	10	0.2	J		U	17	24.84	3.44	Outgoing tide (ebb)	31.4	Moon Pool, Double Silt Curtain, Bubble Curtain	8:00
110819-03-SW-D-A-1	12:50	AROCLOR-1242	N	ug/l	0.2	0.049	J		D	29	6.04	3.72	Incoming tide (flood)	9.8	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30
110819-04-SW-B-A-1	11:40	AROCLOR-1242	N	ug/l	0.2	0.038	J		B	16	6.38	3.19	Incoming tide (flood)	9.6	Moon Pool, Double Silt Curtain, Bubble Curtain	8:30

J - Analyte detected below quantitation limit

ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 07, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191105065
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 11/5/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Christopher Hess
QA Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*07-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	191105065		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-01-SW-U-A-1
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 8:00:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 8:00:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Benzene	**0.2**	1.0	J	µg/L	1	11/6/2019 8:00:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 8:00:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Toluene	**0.4**	1.0	J	µg/L	1	11/6/2019 8:00:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 8:00:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	11/6/2019 8:00:00 PM
Surr: 4-Bromofluorobenzene	**89.1**	76.5-125		%REC	1	11/6/2019 8:00:00 PM
Surr: Toluene-d8	**122**	80.4-121	S	%REC	1	11/6/2019 8:00:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**31.4**	2.0		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-02-SW-A-A-1
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 4:26:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,2-Dichloroethane	**0.1**	1.0	J	µg/L	1	11/6/2019 4:26:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 4:26:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 4:26:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 4:26:00 PM
Surr: 1,2-Dichloroethane-d4	**107**	80.9-122		%REC	1	11/6/2019 4:26:00 PM
Surr: 4-Bromofluorobenzene	**98.9**	76.5-125		%REC	1	11/6/2019 4:26:00 PM
Surr: Toluene-d8	**117**	80.4-121		%REC	1	11/6/2019 4:26:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**32.8**	2.0		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-03-SW-D-A-1
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 4:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 4:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 4:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 4:48:00 PM
Surr: 1,2-Dichloroethane-d4	**104**	80.9-122		%REC	1	11/6/2019 4:48:00 PM
Surr: 4-Bromofluorobenzene	**100**	76.5-125		%REC	1	11/6/2019 4:48:00 PM
Surr: Toluene-d8	**99.1**	80.4-121		%REC	1	11/6/2019 4:48:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**33.2**	2.0		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-04-SW-B-A-1
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 5:09:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 5:09:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 5:09:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 5:09:00 PM
Surr: 1,2-Dichloroethane-d4	**96.2**	80.9-122		%REC	1	11/6/2019 5:09:00 PM
Surr: 4-Bromofluorobenzene	**95.4**	76.5-125		%REC	1	11/6/2019 5:09:00 PM
Surr: Toluene-d8	**91.8**	80.4-121		%REC	1	11/6/2019 5:09:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**31.6**	2.0		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-05-SW-B-C-1
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/6/2019)						
TSS (Residue, Non-Filterable)	**34.3**	1.3		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-01-SW-U-A-2
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 5:30:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 5:30:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 5:30:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 5:30:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	11/6/2019 5:30:00 PM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	11/6/2019 5:30:00 PM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	11/6/2019 5:30:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/6/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**31.0**	2.0		mg/L	1	11/6/2019

Adirondack Environmental Services, Inc

Date: *07-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110519-TB01
Work Order:	**191105065**	**Collection Date:**	11/5/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191105065-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	11/6/2019 5:52:00 PM
Acetone	**ND**	5.0		µg/L	1	11/6/2019 5:52:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/6/2019 5:52:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Benzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/6/2019 5:52:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Toluene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/6/2019 5:52:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	11/6/2019 5:52:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	11/6/2019 5:52:00 PM
Surr: Toluene-d8	**110**	80.4-121		%REC	1	11/6/2019 5:52:00 PM

CLIENT: AECOM Environment
Work Order: 191105065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76527

LCS

SeqNo: **2735798** **PrepDate:11/6/2019** TestNo: **SM2540D** RunNo: **177126**
Samp ID: **LCS-76527** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	472	40.0	489	0	96.5	86.5	114	0	0		

DUP

SeqNo: **2735806** **PrepDate:11/6/2019** TestNo: **SM2540D** RunNo: **177126**
Samp ID: **191106042-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	432	20.0	0	0	0	0	0	420	2.82	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191105065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177111

mblk

SeqNo: **2735554** TestNo: **SW8260C** RunNo: **177111**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	51.92	5.0	50	0	104	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	46.03	5.0	50	0	92.1	76.5	125	0	0		
Surr: Toluene-d8	48.56	5.0	50	0	97.1	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191105065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177111

lcs

SeqNo: **2735553** TestNo: **SW8260C** RunNo: **177111**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.34	1.0	10	0	113	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	9.9	1.0	10	0	99	72.3	118	0	0		
1,1,2-Trichloroethane	11.7	1.0	10	0	117	73.1	123	0	0		
1,1-Dichloroethane	11.17	1.0	10	0	112	73.2	127	0	0		
1,1-Dichloroethene	10.95	1.0	10	0	110	70.3	128	0	0		
1,2,3-Trichloropropane	4.83	1.0	5	0	96.6	68.4	115	0	0		
1,2-Dichlorobenzene	9.29	1.0	10	0	92.9	71	124	0	0		
1,2-Dichloroethane	10.19	1.0	10	0	102	72.5	127	0	0		
1,3-Dichlorobenzene	10.4	1.0	10	0	104	72.2	121	0	0		
1,3-Dichloropropane	5.59	1.0	5	0	112	76	122	0	0		
1,4-Dichlorobenzene	9.97	1.0	10	0	99.7	71.7	127	0	0		
2-Butanone	7.03	5.0	10	0	70.3	65.1	132	0	0		
4-Methyl-2-pentanone	9.76	5.0	10	0	97.6	68.7	118	0	0		
Acetone	10.43	5.0	10	0	104	69.2	133	0	0		
Benzene	11.35	1.0	10	0	114	71.2	122	0	0		
Carbon disulfide	5.35	1.0	5	0	107	67.8	134	0	0		
Carbon tetrachloride	11.22	1.0	10	0	112	74.5	122	0	0		
Chlorobenzene	10.02	1.0	10	0	100	72.7	124	0	0		
Chloroethane	9.84	1.0	10	0	98.4	72.3	136	0	0		
Chloroform	11.03	1.0	10	0	110	71.6	133	0	0		
Dibromochloromethane	10.43	1.0	10	0	104	70.6	124	0	0		
Ethylbenzene	10.46	1.0	10	0	105	70.9	126	0	0		
Methylene chloride	9.09	1.0	10	0	90.9	66.3	130	0	0		
Tetrachloroethene	11.68	1.0	10	0	117	72.4	119	0	0		
Toluene	10.73	1.0	10	0	107	71.8	116	0	0		
trans-1,2-Dichloroethene	11.39	1.0	10	0	114	70.3	120	0	0		
Trichloroethene	11.13	1.0	10	0	111	73	127	0	0		
Vinyl chloride	11.29	1.0	10	0	113	65.2	134	0	0		
Xylenes, Total	31.48	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	52.2	5.0	50	0	104	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.16	5.0	50	0	94.3	76.5	125	0	0		
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191105065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177111

ms	SeqNo: **2735561**	TestNo: **SW8260C**	RunNo: **177111**
	Samp ID: **191105065-002b (110519-02-SW-A-**	Units: **µg/L**	Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.97	1.0	10	0	110	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.97	1.0	10	0	89.7	70.1	123	0	0		
1,1,2-Trichloroethane	10.7	1.0	10	0	107	72.1	119	0	0		
1,1-Dichloroethane	12.2	1.0	10	0	122	70.4	126	0	0		
1,1-Dichloroethene	10.71	1.0	10	0	107	70.2	125	0	0		
1,2,3-Trichloropropane	4.41	1.0	5	0	88.2	53.7	101	0	0		
1,2-Dichlorobenzene	8.19	1.0	10	0	81.9	70.2	123	0	0		
1,2-Dichloroethane	9.73	1.0	10	0.11	96.2	73.5	126	0	0		
1,3-Dichlorobenzene	9.22	1.0	10	0	92.2	70.4	124	0	0		
1,3-Dichloropropane	5.35	1.0	5	0	107	64	125	0	0		
1,4-Dichlorobenzene	8.69	1.0	10	0	86.9	70.8	127	0	0		
2-Butanone	11.36	5.0	10	0	114	60.5	123	0	0		
4-Methyl-2-pentanone	8.12	5.0	10	0	81.2	52.8	133	0	0		
Acetone	9.15	5.0	10	0	91.5	56.3	135	0	0		
Benzene	8.62	1.0	10	0	86.2	70.2	127	0	0		
Carbon disulfide	6.03	1.0	5	0	121	62.2	130	0	0		
Carbon tetrachloride	9.34	1.0	10	0	93.4	56.4	137	0	0		
Chlorobenzene	9.91	1.0	10	0	99.1	72.7	128	0	0		
Chloroethane	11.05	1.0	10	0	110	71.3	135	0	0		
Chloroform	11.92	1.0	10	0	119	70.2	125	0	0		
Dibromochloromethane	10	1.0	10	0	100	69.5	123	0	0		
Ethylbenzene	10.16	1.0	10	0	102	71.9	129	0	0		
Methylene chloride	10.02	1.0	10	0	100	65.3	123	0	0		
Tetrachloroethene	10.77	1.0	10	0	108	74.5	121	0	0		
Toluene	10.75	1.0	10	0	108	73	122	0	0		
trans-1,2-Dichloroethene	12.79	1.0	10	0	128	69.1	133	0	0		
Trichloroethene	8.8	1.0	10	0	88	71.1	126	0	0		
Vinyl chloride	14.05	1.0	10	0	140	65	137	0	0		S
Xylenes, Total	32.88	1.0	30	0	110	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	49.86	5.0	50	0	99.7	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.64	5.0	50	0	99.3	76.5	125	0	0		
Surr: Toluene-d8	45.65	5.0	50	0	91.3	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191105065
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177111

msd

SeqNo: **2735562** TestNo: **SW8260C** RunNo: **177111**
Samp ID: **191105065-002b (110519-02-SW-A-** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.4	1.0	10	0	104	71.6	126	10.97	5.33	20.4	
1,1,2,2-Tetrachloroethane	8.7	1.0	10	0	87	70.1	123	8.97	3.06	18.6	
1,1,2-Trichloroethane	9.99	1.0	10	0	99.9	72.1	119	10.7	6.86	20	
1,1-Dichloroethane	11.89	1.0	10	0	119	70.4	126	12.2	2.57	19.2	
1,1-Dichloroethene	10.15	1.0	10	0	102	70.2	125	10.71	5.37	16.1	
1,2,3-Trichloropropane	4.21	1.0	5	0	84.2	53.7	101	4.41	4.64	20	
1,2-Dichlorobenzene	8.42	1.0	10	0	84.2	70.2	123	8.19	2.77	17.9	
1,2-Dichloroethane	8.75	1.0	10	0.11	86.4	73.5	126	9.73	10.6	15.6	
1,3-Dichlorobenzene	9.06	1.0	10	0	90.6	70.4	124	9.22	1.75	14.3	
1,3-Dichloropropane	5.26	1.0	5	0	105	64	125	5.35	1.70	0	
1,4-Dichlorobenzene	8.58	1.0	10	0	85.8	70.8	127	8.69	1.27	14.4	
2-Butanone	10.62	5.0	10	0	106	60.5	123	11.36	6.73	15	
4-Methyl-2-pentanone	9.13	5.0	10	0	91.3	52.8	133	8.12	11.7	11.9	
Acetone	9.32	5.0	10	0	93.2	56.3	135	9.15	1.84	10.6	
Benzene	8.31	1.0	10	0	83.1	70.2	127	8.62	3.66	18.4	
Carbon disulfide	5.89	1.0	5	0	118	62.2	130	6.03	2.35	13.1	
Carbon tetrachloride	9.14	1.0	10	0	91.4	56.4	137	9.34	2.16	20.3	
Chlorobenzene	9.22	1.0	10	0	92.2	72.7	128	9.91	7.21	19.6	
Chloroethane	10.72	1.0	10	0	107	71.3	135	11.05	3.03	27.8	
Chloroform	11.6	1.0	10	0	116	70.2	125	11.92	2.72	20.3	
Dibromochloromethane	9.56	1.0	10	0	95.6	69.5	123	10	4.50	18.8	
Ethylbenzene	9.43	1.0	10	0	94.3	71.9	129	10.16	7.45	16.3	
Methylene chloride	9.66	1.0	10	0	96.6	65.3	123	10.02	3.66	21.4	
Tetrachloroethene	10.28	1.0	10	0	103	74.5	121	10.77	4.66	20.9	
Toluene	11.97	1.0	10	0	120	73	122	10.75	10.7	19.4	
trans-1,2-Dichloroethene	12	1.0	10	0	120	69.1	133	12.79	6.37	16.1	
Trichloroethene	8.25	1.0	10	0	82.5	71.1	126	8.8	6.45	16.6	
Vinyl chloride	13.79	1.0	10	0	138	65	137	14.05	1.87	20.5	S
Xylenes, Total	29.93	1.0	30	0	99.8	72	130	32.88	9.39	16.1	
Surr: 1,2-Dichloroethane-d4	50.85	5.0	50	0	102	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.7	5.0	50	0	95.4	76.5	125	0	0	0	
Surr: Toluene-d8	53.28	5.0	50	0	107	80.4	121	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

CHAIN OF CUSTODY RECORD

AES Work Order # 191105065

Client Name:	Address:	
AECOM	36 Riverside Ave, Rensselaer, NY 12144	
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**
Lab will post to portal	BASF Rensselaer NY	Patrick Gehan
Client Phone No:	**Client Email:**	**PO Number:** / **Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	B29608

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110519-01-SW-U-A-1	11/5/19	1410	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	110519-02-SW-A-A-1	11/5/19	1430	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	110519-03-SW-D-A-1	11/5/19	1445	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	110519-04-SW-B-A-1	11/5/19	1355	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	110519-05-SW-B-C-1	11/5/19	1510	A	W		✓	1	TSS
006	110519-01-SW-U-A-2	11/5/19	1425	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	110519-TB01			A	TB			1	trip blank
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:
VOA# F47.1

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11/5/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time
	Knaz	11/5/19 446pm

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 6°		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

191105065

Adirondack Environmental Services, Inc

191105065

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

TAT: **2**

DateDue: 11/7/2019

11/5/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191105065-001	110519-01-SW-U-A-1	Water	11/5/2019	11/7/2019	B	A					
191105065-002	110519-02-SW-A-A-1	Water	11/5/2019	11/7/2019	B	A					
191105065-003	110519-03-SW-D-A-1	Water	11/5/2019	11/7/2019	B	A					
191105065-004	110519-04-SW-B-A-1	Water	11/5/2019	11/7/2019	B	A					
191105065-005	110519-05-SW-B-C-1	Water	11/5/2019	11/7/2019		A					
191105065-006	110519-01-SW-U-A-2	Water	11/5/2019	11/7/2019	B	A					
191105065-007	110519-TB01	Trip Blank	11/5/2019	11/7/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
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314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 08, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191106085
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 6 samples on 11/6/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:**	*08-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2		
Lab Order:	191106085		

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:		
	ND : Not Detected at reporting limit	C: CCV below acceptable Limits
	J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
	B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
	X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
	H: Hold time exceeded	Z: Duplication outside acceptable limits
	N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
	N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-01-SW-U-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
PCB, Total	**ND**	0.065		µg/L	1	11/6/2019 6:56:47 PM
Surr: Decachlorobiphenyl	**86.0**	57.1-135		%REC	1	11/6/2019 6:56:47 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 10:57:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 10:57:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 10:57:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-01-SW-U-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 10:57:00 AM
Surr: 1,2-Dichloroethane-d4	**91.7**	80.9-122		%REC	1	11/8/2019 10:57:00 AM
Surr: 4-Bromofluorobenzene	**90.7**	76.5-125		%REC	1	11/8/2019 10:57:00 AM
Surr: Toluene-d8	**120**	80.4-121		%REC	1	11/8/2019 10:57:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**17.5**	1.3		mg/L	1	11/7/2019

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-02-SW-A-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
PCB, Total	**ND**	0.065		µg/L	1	11/6/2019 7:15:20 PM
Surr: Decachlorobiphenyl	**94.0**	57.1-135		%REC	1	11/6/2019 7:15:20 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 11:19:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 11:19:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 11:19:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-02-SW-A-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 11:19:00 AM
Surr: 1,2-Dichloroethane-d4	**88.9**	80.9-122		%REC	1	11/8/2019 11:19:00 AM
Surr: 4-Bromofluorobenzene	**93.1**	76.5-125		%REC	1	11/8/2019 11:19:00 AM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	11/8/2019 11:19:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**18.8**	1.3		mg/L	1	11/7/2019

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-03-SW-D-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/6/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
PCB, Total	**ND**	0.065		µg/L	1	11/6/2019 7:33:50 PM
Surr: Decachlorobiphenyl	**94.0**	57.1-135		%REC	1	11/6/2019 7:33:50 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 11:40:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 11:40:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 11:40:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-03-SW-D-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 11:40:00 AM
Surr: 1,2-Dichloroethane-d4	**93.4**	80.9-122		%REC	1	11/8/2019 11:40:00 AM
Surr: 4-Bromofluorobenzene	**95.0**	76.5-125		%REC	1	11/8/2019 11:40:00 AM
Surr: Toluene-d8	**106**	80.4-121		%REC	1	11/8/2019 11:40:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**17.1**	1.3		mg/L	1	11/7/2019

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-04-SW-B-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/6/2019)						
				Sample aliquot for this test was positive for Residual Chlorine		
Aroclor 1016	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
PCB, Total	**ND**	0.065		µg/L	1	11/6/2019 7:52:27 PM
Surr: Decachlorobiphenyl	**68.0**	57.1-135		%REC	1	11/6/2019 7:52:27 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 12:01:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 12:01:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 12:01:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-04-SW-B-A-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 12:01:00 PM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	11/8/2019 12:01:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	11/8/2019 12:01:00 PM
Surr: Toluene-d8	**109**	80.4-121		%REC	1	11/8/2019 12:01:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/7/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**17.2**	1.3		mg/L	1	11/7/2019

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-05-SW-B-B-1
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/7/2019)						
TSS (Residue, Non-Filterable)	**19.1**	1.3		mg/L	1	11/7/2019

Adirondack Environmental Services, Inc

Date: *08-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110619-TB01
Work Order:	**191106085**	**Collection Date:**	11/6/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191106085-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Methylene chloride	**0.5**	1.0	J	µg/L	1	11/8/2019 12:23:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 12:23:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 12:23:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 12:23:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 12:23:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	11/8/2019 12:23:00 PM
Surr: 4-Bromofluorobenzene	**116**	76.5-125		%REC	1	11/8/2019 12:23:00 PM
Surr: Toluene-d8	**108**	80.4-121		%REC	1	11/8/2019 12:23:00 PM

CLIENT: AECOM Environment
Work Order: 191106085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76506

mblk

SeqNo: **2735424** PrepDate:**11/6/2019** TestNo: **E608** RunNo: **177103**
Samp ID: **mb-76506** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Surr: Decachlorobiphenyl	0.057	0	0.1	0	57	48.8	140	0	0		

lcs

SeqNo: **2735425** PrepDate:**11/6/2019** TestNo: **E608** RunNo: **177103**
Samp ID: **lcs-76506** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5686	0.0650	0.5	0	114	59	141	0	0		
Surr: Decachlorobiphenyl	0.1058	0	0.1	0	106	48.8	140	0	0		

MBLK

SeqNo: **2735407** PrepDate:**11/6/2019** TestNo: **SW8082A** RunNo: **177102**
Samp ID: **MB-76506** PrepRef:**(SW3535A)** Units: **µg/L** Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.082	0	0.1	0	82	57.1	135	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191106085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76506

LCS					
SeqNo: **2735408**	**PrepDate:11/6/2019**	TestNo: **SW8082A**	RunNo: **177102**
Samp ID: **LCS-76506**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **11/6/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.436	0.0650	0.5	0	87.2	60	140	0	0		
PCB, Total	0.436	0.0650	0.5	0	87.2	60	140	0	0		
Surr: Decachlorobiphenyl	0.088	0	0.1	0	88	57.1	135	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191106085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76543

LCS

SeqNo: **2735812** **PrepDate:11/7/2019** TestNo: **SM2540D** RunNo: **177129**
Samp ID: **LCS-76543** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	524	40.0	489	0	107	86.5	114	0	0		

LCS

SeqNo: **2736546** **PrepDate:11/7/2019** TestNo: **SM2540D** RunNo: **177171**
Samp ID: **LCS-76543** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	520	40.0	489	0	106	86.5	114	0	0		

DUP

SeqNo: **2736548** **PrepDate:11/7/2019** TestNo: **SM2540D** RunNo: **177171**
Samp ID: **191105013-003** **PrepRef:** Units: **mg/L** Analysis Date: **11/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	410	10.0	0	0	0	0	0	387	5.77	10	

DUP

SeqNo: **2736553** **PrepDate:11/7/2019** TestNo: **SM2540D** RunNo: **177171**
Samp ID: **191106050-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/7/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	7560	100	0	0	0	0	0	7390	2.27	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191106085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

mblk

SeqNo: **2736564** TestNo: **SW8260C** RunNo: **177172**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.11	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.36	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	51.71	5.0	50	0	103	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.95	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	54.6	5.0	50	0	109	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191106085
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

lcs

SeqNo: **2736562** TestNo: **SW8260C** RunNo: **177172**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.43	1.0	10	0	84.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.52	1.0	10	0	75.2	72.3	118	0	0		
1,1,2-Trichloroethane	9.59	1.0	10	0	95.9	73.1	123	0	0		
1,1-Dichloroethane	9.55	1.0	10	0	95.5	73.2	127	0	0		
1,1-Dichloroethene	9.66	1.0	10	0	96.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.04	1.0	5	0	80.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.68	1.0	10	0	76.8	71	124	0	0		
1,2-Dichloroethane	9.21	1.0	10	0	92.1	72.5	127	0	0		
1,3-Dichlorobenzene	8.49	1.0	10	0	84.9	72.2	121	0	0		
1,3-Dichloropropane	5.14	1.0	5	0	103	76	122	0	0		
1,4-Dichlorobenzene	7.89	1.0	10	0	78.9	71.7	127	0	0		
2-Butanone	6.86	5.0	10	0	68.6	65.1	132	0	0		
4-Methyl-2-pentanone	8.26	5.0	10	0	82.6	68.7	118	0	0		
Acetone	5.16	5.0	10	0	51.6	69.2	133	0	0		S
Benzene	8.14	1.0	10	0	81.4	71.2	122	0	0		
Carbon disulfide	4.77	1.0	5	0	95.4	67.8	134	0	0		
Carbon tetrachloride	8.75	1.0	10	0	87.5	74.5	122	0	0		
Chlorobenzene	8.46	1.0	10	0	84.6	72.7	124	0	0		
Chloroethane	9.7	1.0	10	0	97	72.3	136	0	0		
Chloroform	9.4	1.0	10	0	94	71.6	133	0	0		
Dibromochloromethane	9.73	1.0	10	0	97.3	70.6	124	0	0		
Ethylbenzene	8.77	1.0	10	0	87.7	70.9	126	0	0		
Methylene chloride	7.85	1.0	10	0	78.5	66.3	130	0	0		
Tetrachloroethene	10.22	1.0	10	0	102	72.4	119	0	0		
Toluene	10.14	1.0	10	0	101	71.8	116	0	0		
trans-1,2-Dichloroethene	9.19	1.0	10	0	91.9	70.3	120	0	0		
Trichloroethene	8.13	1.0	10	0	81.3	73	127	0	0		
Vinyl chloride	10.2	1.0	10	0	102	65.2	134	0	0		
Xylenes, Total	27.12	1.0	30	0	90.4	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	51.1	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.97	5.0	50	0	95.9	76.5	125	0	0		
Surr: Toluene-d8	52.61	5.0	50	0	105	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

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CHAIN OF CUSTODY RECORD

AES Work Order # 191106085

Client Name: AECOM	Address: 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	Project Name (Location) BASF Rensselaer NY	Samplers: (Names) Patrick Gehan
Client Phone No: 978-905-2124	Client Email: john.bleiler@aecom.com	PO Number: 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110619-01-SW-U-A-1	11/6/19	1215	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
002	110619-02-SW-A-A-1	11/6/19	1235	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
003	110619-03-SW-D-A-1	11/6/19	1255	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
004	110619-04-SW-B-A-1	11/6/19	1200	A/P	W		✓	2	PCBs
	↓	↓	↓	A/P	↓		↓	2	VOCs
	↓	↓	↓	A/P	↓		↓	1	TSS
005	110619-05-SW-B-B-1	11/6/19	1320	A/P	W		✓	1	TSS
006	110619-TB01 Lot# VOA-F47.1			A/P	TB			1	trip blank

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:
11/6/19

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time 11/6/19 16:05
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 11/6/19 4:23 PM

Temperature: Ambient or Chilled — Notes: 6°C

AES Bottles: Y ☒ N ☐

Properly Preserved: Y N — Notes:

Received Within Holding Times: Y N

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services

Demo 191106085

Adirondack Environmental Services, Inc

191106085

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO



Project: BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

TAT: **2**

JobNumber: Project#
ClientReferenceNo: 60323713

DateDue: 11/8/2019

QClevel: STD+

☐ Hard Copy

11/6/2019

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8082W**	**E8260W**	**TSS_W**				
191106085-001	110619-01-SW-U-A-1	Water	11/6/2019	11/8/2019	C	B	A				
191106085-002	110619-02-SW-A-A-1	Water	11/6/2019	11/8/2019	C	B	A				
191106085-003	110619-03-SW-D-A-1	Water	11/6/2019	11/8/2019	C	B	A				
191106085-004	110619-04-SW-B-A-1	Water	11/6/2019	11/8/2019	C	B	A				
191106085-005	110619-05-SW-B-B-1	Water	11/6/2019	11/8/2019			A				
191106085-006	110619-TB01	Trip Blank	11/6/2019	11/8/2019		A					

Comments:

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 11, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191107089
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 11/7/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *11-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191107089	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-01-SW-U-A-1
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Acetone	**ND**	5.0	S	µg/L	1	11/8/2019 12:44:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 12:44:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 12:44:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 12:44:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	11/8/2019 12:44:00 PM
Surr: 4-Bromofluorobenzene	**102**	76.5-125		%REC	1	11/8/2019 12:44:00 PM
Surr: Toluene-d8	**89.3**	80.4-121		%REC	1	11/8/2019 12:44:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**12.8**	1.3		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-02-SW-A-B-1
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Acetone	**ND**	5.0	S	µg/L	1	11/8/2019 1:05:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 1:05:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 1:05:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 1:05:00 PM
Surr: 1,2-Dichloroethane-d4	**106**	80.9-122		%REC	1	11/8/2019 1:05:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	11/8/2019 1:05:00 PM
Surr: Toluene-d8	**120**	80.4-121		%REC	1	11/8/2019 1:05:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**24.8**	1.3		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-03-SW-D-A-1
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Methylene chloride	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Acetone	**ND**	5.0		µg/L	1	11/9/2019 12:40:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/9/2019 12:40:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Benzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/9/2019 12:40:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Toluene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/9/2019 12:40:00 AM
Surr: 1,2-Dichloroethane-d4	**100**	80.9-122		%REC	1	11/9/2019 12:40:00 AM
Surr: 4-Bromofluorobenzene	**101**	76.5-125		%REC	1	11/9/2019 12:40:00 AM
Surr: Toluene-d8	**112**	80.4-121		%REC	1	11/9/2019 12:40:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**13.7**	1.3		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-04-SW-B-B-1
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Acetone	**ND**	5.0	S	µg/L	1	11/8/2019 1:48:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 1:48:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 1:48:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 1:48:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	11/8/2019 1:48:00 PM
Surr: 4-Bromofluorobenzene	**99.2**	76.5-125		%REC	1	11/8/2019 1:48:00 PM
Surr: Toluene-d8	**116**	80.4-121		%REC	1	11/8/2019 1:48:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**11.6**	1.3		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-05-SW-B-B-1
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/8/2019)						
TSS (Residue, Non-Filterable)	**14.0**	1.3		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-01-SW-U-A-3
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-006
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Acetone	**ND**	5.0	S	µg/L	1	11/8/2019 2:10:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Chloroform	**8.8**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 2:10:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 2:10:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 2:10:00 PM
Surr: 1,2-Dichloroethane-d4	**103**	80.9-122		%REC	1	11/8/2019 2:10:00 PM
Surr: 4-Bromofluorobenzene	**96.4**	76.5-125		%REC	1	11/8/2019 2:10:00 PM
Surr: Toluene-d8	**102**	80.4-121		%REC	1	11/8/2019 2:10:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/8/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**ND**	1.0		mg/L	1	11/8/2019

Adirondack Environmental Services, Inc

Date: *11-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110719-TB01
Work Order:	**191107089**	**Collection Date:**	11/7/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191107089-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Methylene chloride	**0.6**	1.0	J	µg/L	1	11/8/2019 2:31:00 PM
Acetone	**ND**	5.0	S	µg/L	1	11/8/2019 2:31:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 2:31:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 2:31:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 2:31:00 PM
Surr: 1,2-Dichloroethane-d4	**119**	80.9-122		%REC	1	11/8/2019 2:31:00 PM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	11/8/2019 2:31:00 PM
Surr: Toluene-d8	**90.9**	80.4-121		%REC	1	11/8/2019 2:31:00 PM

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76579

LCS

SeqNo: **2737930** **PrepDate:11/8/2019** TestNo: **SM2540D** RunNo: **177236**
Samp ID: **LCS-76579** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	489	0	99.8	86.5	114	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

mblk	SeqNo: **2736564**	TestNo: **SW8260C**	RunNo: **177172**
	Samp ID: **vblk**	Units: **µg/L**	Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	0.11	1.0									J
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.36	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	1.0									
Surr: 1,2-Dichloroethane-d4	51.71	5.0	50	0	103	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	51.95	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	54.6	5.0	50	0	109	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

lcs

SeqNo: **2736562** TestNo: **SW8260C** RunNo: **177172**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.43	1.0	10	0	84.3	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	7.52	1.0	10	0	75.2	72.3	118	0	0		
1,1,2-Trichloroethane	9.59	1.0	10	0	95.9	73.1	123	0	0		
1,1-Dichloroethane	9.55	1.0	10	0	95.5	73.2	127	0	0		
1,1-Dichloroethene	9.66	1.0	10	0	96.6	70.3	128	0	0		
1,2,3-Trichloropropane	4.04	1.0	5	0	80.8	68.4	115	0	0		
1,2-Dichlorobenzene	7.68	1.0	10	0	76.8	71	124	0	0		
1,2-Dichloroethane	9.21	1.0	10	0	92.1	72.5	127	0	0		
1,3-Dichlorobenzene	8.49	1.0	10	0	84.9	72.2	121	0	0		
1,3-Dichloropropane	5.14	1.0	5	0	103	76	122	0	0		
1,4-Dichlorobenzene	7.89	1.0	10	0	78.9	71.7	127	0	0		
2-Butanone	6.86	5.0	10	0	68.6	65.1	132	0	0		
4-Methyl-2-pentanone	8.26	5.0	10	0	82.6	68.7	118	0	0		
Acetone	5.16	5.0	10	0	51.6	69.2	133	0	0		S
Benzene	8.14	1.0	10	0	81.4	71.2	122	0	0		
Carbon disulfide	4.77	1.0	5	0	95.4	67.8	134	0	0		
Carbon tetrachloride	8.75	1.0	10	0	87.5	74.5	122	0	0		
Chlorobenzene	8.46	1.0	10	0	84.6	72.7	124	0	0		
Chloroethane	9.7	1.0	10	0	97	72.3	136	0	0		
Chloroform	9.4	1.0	10	0	94	71.6	133	0	0		
Dibromochloromethane	9.73	1.0	10	0	97.3	70.6	124	0	0		
Ethylbenzene	8.77	1.0	10	0	87.7	70.9	126	0	0		
Methylene chloride	7.85	1.0	10	0	78.5	66.3	130	0	0		
Tetrachloroethene	10.22	1.0	10	0	102	72.4	119	0	0		
Toluene	10.14	1.0	10	0	101	71.8	116	0	0		
trans-1,2-Dichloroethene	9.19	1.0	10	0	91.9	70.3	120	0	0		
Trichloroethene	8.13	1.0	10	0	81.3	73	127	0	0		
Vinyl chloride	10.2	1.0	10	0	102	65.2	134	0	0		
Xylenes, Total	27.12	1.0	30	0	90.4	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	51.1	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	47.97	5.0	50	0	95.9	76.5	125	0	0		
Surr: Toluene-d8	52.61	5.0	50	0	105	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

ms	SeqNo: **2737300**	TestNo: **SW8260C**	RunNo: **177172**
	Samp ID: **191107089-002b (110719-02-SW-A-**	Units: **µg/L**	Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	10.4	1.0	10	0	104	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.65	1.0	10	0	86.5	70.1	123	0	0		
1,1,2-Trichloroethane	9.49	1.0	10	0	94.9	72.1	119	0	0		
1,1-Dichloroethane	9.74	1.0	10	0	97.4	70.4	126	0	0		
1,1-Dichloroethene	9.85	1.0	10	0	98.5	70.2	125	0	0		
1,2,3-Trichloropropane	4.24	1.0	5	0	84.8	53.7	101	0	0		
1,2-Dichlorobenzene	8.11	1.0	10	0	81.1	70.2	123	0	0		
1,2-Dichloroethane	9.69	1.0	10	0	96.9	73.5	126	0	0		
1,3-Dichlorobenzene	9.06	1.0	10	0	90.6	70.4	124	0	0		
1,3-Dichloropropane	4.73	1.0	5	0	94.6	64	125	0	0		
1,4-Dichlorobenzene	8.66	1.0	10	0	86.6	70.8	127	0	0		
2-Butanone	10.24	5.0	10	0	102	60.5	123	0	0		
4-Methyl-2-pentanone	7.73	5.0	10	0	77.3	52.8	133	0	0		
Acetone	7.18	5.0	10	0	71.8	56.3	135	0	0		
Benzene	10.2	1.0	10	0	102	70.2	127	0	0		
Carbon disulfide	4.87	1.0	5	0	97.4	62.2	130	0	0		
Carbon tetrachloride	11.07	1.0	10	0	111	56.4	137	0	0		
Chlorobenzene	11.52	1.0	10	0	115	72.7	128	0	0		
Chloroethane	9.34	1.0	10	0	93.4	71.3	135	0	0		
Chloroform	10.66	1.0	10	0	107	70.2	125	0	0		
Dibromochloromethane	8.85	1.0	10	0	88.5	69.5	123	0	0		
Ethylbenzene	12.06	1.0	10	0	121	71.9	129	0	0		
Methylene chloride	7.69	1.0	10	0	76.9	65.3	123	0	0		
Tetrachloroethene	10.15	1.0	10	0	102	74.5	121	0	0		
Toluene	10.59	1.0	10	0	106	73	122	0	0		
trans-1,2-Dichloroethene	9.17	1.0	10	0	91.7	69.1	133	0	0		
Trichloroethene	9.22	1.0	10	0	92.2	71.1	126	0	0		
Vinyl chloride	9.68	1.0	10	0	96.8	65	137	0	0		
Xylenes, Total	36.28	1.0	30	0	121	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	56.53	5.0	50	0	113	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	47.31	5.0	50	0	94.6	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177172

msd

SeqNo: **2737301** TestNo: **SW8260C** RunNo: **177172**
Samp ID: **191107089-002b (110719-02-SW-A-** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.75	1.0	10	0	87.5	71.6	126	10.4	17.2	20.4	
1,1,2,2-Tetrachloroethane	7.76	1.0	10	0	77.6	70.1	123	8.65	10.8	18.6	
1,1,2-Trichloroethane	9.55	1.0	10	0	95.5	72.1	119	9.49	0.630	20	
1,1-Dichloroethane	10.31	1.0	10	0	103	70.4	126	9.74	5.69	19.2	
1,1-Dichloroethene	11.01	1.0	10	0	110	70.2	125	9.85	11.1	16.1	
1,2,3-Trichloropropane	4.42	1.0	5	0	88.4	53.7	101	4.24	4.16	20	
1,2-Dichlorobenzene	7.88	1.0	10	0	78.8	70.2	123	8.11	2.88	17.9	
1,2-Dichloroethane	9.02	1.0	10	0	90.2	73.5	126	9.69	7.16	15.6	
1,3-Dichlorobenzene	8.41	1.0	10	0	84.1	70.4	124	9.06	7.44	14.3	
1,3-Dichloropropane	4.67	1.0	5	0	93.4	64	125	4.73	1.28	0	
1,4-Dichlorobenzene	8.15	1.0	10	0	81.5	70.8	127	8.66	6.07	14.4	
2-Butanone	6.78	5.0	10	0	67.8	60.5	123	10.24	40.7	15	Z
4-Methyl-2-pentanone	8.2	5.0	10	0	82	52.8	133	7.73	5.90	11.9	
Acetone	8.94	5.0	10	0	89.4	56.3	135	7.18	21.8	10.6	Z
Benzene	8.91	1.0	10	0	89.1	70.2	127	10.2	13.5	18.4	
Carbon disulfide	5.06	1.0	5	0	101	62.2	130	4.87	3.83	13.1	
Carbon tetrachloride	9.16	1.0	10	0	91.6	56.4	137	11.07	18.9	20.3	
Chlorobenzene	8.25	1.0	10	0	82.5	72.7	128	11.52	33.1	19.6	Z
Chloroethane	10.27	1.0	10	0	103	71.3	135	9.34	9.48	27.8	
Chloroform	10.34	1.0	10	0	103	70.2	125	10.66	3.05	20.3	
Dibromochloromethane	9.34	1.0	10	0	93.4	69.5	123	8.85	5.39	18.8	
Ethylbenzene	9.14	1.0	10	0	91.4	71.9	129	12.06	27.5	16.3	Z
Methylene chloride	7.98	1.0	10	0	79.8	65.3	123	7.69	3.70	21.4	
Tetrachloroethene	9.91	1.0	10	0	99.1	74.5	121	10.15	2.39	20.9	
Toluene	10.84	1.0	10	0	108	73	122	10.59	2.33	19.4	
trans-1,2-Dichloroethene	11.63	1.0	10	0	116	69.1	133	9.17	23.7	16.1	Z
Trichloroethene	8.1	1.0	10	0	81	71.1	126	9.22	12.9	16.6	
Vinyl chloride	10.28	1.0	10	0	103	65	137	9.68	6.01	20.5	
Xylenes, Total	27.34	1.0	30	0	91.1	72	130	36.28	28.1	16.1	Z
Surr: 1,2-Dichloroethane-d4	56.38	5.0	50	0	113	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	47.46	5.0	50	0	94.9	76.5	125	0	0	0	
Surr: Toluene-d8	52.58	5.0	50	0	105	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

mblk

SeqNo: **2737329** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.41	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.24	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.44	1.0									J
Surr: 1,2-Dichloroethane-d4	52.32	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.01	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	47.69	5.0	50	0	95.4	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

lcs

SeqNo: **2737327** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.61	1.0	10	0	116	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.55	1.0	10	0	85.5	72.3	118	0	0		
1,1,2-Trichloroethane	11.06	1.0	10	0	111	73.1	123	0	0		
1,1-Dichloroethane	11.4	1.0	10	0	114	73.2	127	0	0		
1,1-Dichloroethene	11	1.0	10	0	110	70.3	128	0	0		
1,2,3-Trichloropropane	3.95	1.0	5	0	79	68.4	115	0	0		
1,2-Dichlorobenzene	7.78	1.0	10	0	77.8	71	124	0	0		
1,2-Dichloroethane	9.5	1.0	10	0	95	72.5	127	0	0		
1,3-Dichlorobenzene	9.17	1.0	10	0	91.7	72.2	121	0	0		
1,3-Dichloropropane	5.21	1.0	5	0	104	76	122	0	0		
1,4-Dichlorobenzene	8.66	1.0	10	0	86.6	71.7	127	0	0		
2-Butanone	9.02	5.0	10	0	90.2	65.1	132	0	0		
4-Methyl-2-pentanone	9.25	5.0	10	0	92.5	68.7	118	0	0		
Acetone	9.07	5.0	10	0	90.7	69.2	133	0	0		
Benzene	10.8	1.0	10	0	108	71.2	122	0	0		
Carbon disulfide	5.74	1.0	5	0	115	67.8	134	0	0		
Carbon tetrachloride	11.09	1.0	10	0	111	74.5	122	0	0		
Chlorobenzene	9.68	1.0	10	0	96.8	72.7	124	0	0		
Chloroethane	10.86	1.0	10	0	109	72.3	136	0	0		
Chloroform	10.46	1.0	10	0	105	71.6	133	0	0		
Dibromochloromethane	10.71	1.0	10	0	107	70.6	124	0	0		
Ethylbenzene	10.31	1.0	10	0	103	70.9	126	0	0		
Methylene chloride	9.26	1.0	10	0	92.6	66.3	130	0	0		
Tetrachloroethene	10.57	1.0	10	0	106	72.4	119	0	0		
Toluene	12.23	1.0	10	0	122	71.8	116	0	0		S
trans-1,2-Dichloroethene	11.19	1.0	10	0	112	70.3	120	0	0		
Trichloroethene	10.75	1.0	10	0	108	73	127	0	0		
Vinyl chloride	11.53	1.0	10	0	115	65.2	134	0	0		
Xylenes, Total	31.58	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.99	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.13	5.0	50	0	98.3	76.5	125	0	0		
Surr: Toluene-d8	58.27	5.0	50	0	117	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

ms	SeqNo: **2737337**	TestNo: **SW8260C**	RunNo: **177218**
	Samp ID: **191108084-001b**	Units: **µg/L**	Analysis Date: **11/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.83	1.0	10	0	88.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.22	1.0	10	0	82.2	70.1	123	0	0		
1,1,2-Trichloroethane	7.96	1.0	10	0	79.6	72.1	119	0	0		
1,1-Dichloroethane	10.06	1.0	10	0	101	70.4	126	0	0		
1,1-Dichloroethene	8.92	1.0	10	0	89.2	70.2	125	0	0		
1,2,3-Trichloropropane	4.1	1.0	5	0	82	53.7	101	0	0		
1,2-Dichlorobenzene	8.39	1.0	10	0	83.9	70.2	123	0	0		
1,2-Dichloroethane	8.53	1.0	10	0	85.3	73.5	126	0	0		
1,3-Dichlorobenzene	9.01	1.0	10	0	90.1	70.4	124	0	0		
1,3-Dichloropropane	4.49	1.0	5	0	89.8	64	125	0	0		
1,4-Dichlorobenzene	8.72	1.0	10	0	87.2	70.8	127	0	0		
2-Butanone	6.83	5.0	10	0	68.3	60.5	123	0	0		
4-Methyl-2-pentanone	6.51	5.0	10	0	65.1	52.8	133	0	0		
Acetone	6.1	5.0	10	0	61	56.3	135	0	0		
Benzene	8.64	1.0	10	0	86.4	70.2	127	0	0		
Carbon disulfide	4.59	1.0	5	0	91.8	62.2	130	0	0		
Carbon tetrachloride	9.12	1.0	10	0	91.2	56.4	137	0	0		
Chlorobenzene	10.47	1.0	10	0	105	72.7	128	0	0		
Chloroethane	9.94	1.0	10	0	99.4	71.3	135	0	0		
Chloroform	9.03	1.0	10	0	90.3	70.2	125	0	0		
Dibromochloromethane	9.06	1.0	10	0	90.6	69.5	123	0	0		
Ethylbenzene	11.14	1.0	10	0	111	71.9	129	0	0		
Methylene chloride	6.75	1.0	10	0	67.5	65.3	123	0	0		
Tetrachloroethene	9.19	1.0	10	0	91.9	74.5	121	0	0		
Toluene	9.52	1.0	10	0.23	92.9	73	122	0	0		
trans-1,2-Dichloroethene	8.71	1.0	10	0	87.1	69.1	133	0	0		
Trichloroethene	8.81	1.0	10	0	88.1	71.1	126	0	0		
Vinyl chloride	10.21	1.0	10	0	102	65	137	0	0		
Xylenes, Total	34.04	1.0	30	0.39	112	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.05	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	56.94	5.0	50	0	114	76.5	125	0	0		
Surr: Toluene-d8	50.48	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191107089
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

msd

SeqNo: **2737338** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **191108084-001b** Units: **µg/L** Analysis Date: **11/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.87	1.0	10	0	88.7	71.6	126	8.83	0.452	20.4	
1,1,2,2-Tetrachloroethane	7.5	1.0	10	0	75	70.1	123	8.22	9.16	18.6	
1,1,2-Trichloroethane	9.31	1.0	10	0	93.1	72.1	119	7.96	15.6	20	
1,1-Dichloroethane	10.34	1.0	10	0	103	70.4	126	10.06	2.75	19.2	
1,1-Dichloroethene	10.3	1.0	10	0	103	70.2	125	8.92	14.4	16.1	
1,2,3-Trichloropropane	3.37	1.0	5	0	67.4	53.7	101	4.1	19.5	20	
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	70.2	123	8.39	2.36	17.9	
1,2-Dichloroethane	8.43	1.0	10	0	84.3	73.5	126	8.53	1.18	15.6	
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	70.4	124	9.01	1.79	14.3	
1,3-Dichloropropane	4.81	1.0	5	0	96.2	64	125	4.49	6.88	0	
1,4-Dichlorobenzene	8.93	1.0	10	0	89.3	70.8	127	8.72	2.38	14.4	
2-Butanone	5.61	5.0	10	0	56.1	60.5	123	6.83	19.6	15	SZ
4-Methyl-2-pentanone	6.08	5.0	10	0	60.8	52.8	133	6.51	6.83	11.9	
Acetone	6.38	5.0	10	0	63.8	56.3	135	6.1	4.49	10.6	
Benzene	8.53	1.0	10	0	85.3	70.2	127	8.64	1.28	18.4	
Carbon disulfide	5.02	1.0	5	0	100	62.2	130	4.59	8.95	13.1	
Carbon tetrachloride	9.47	1.0	10	0	94.7	56.4	137	9.12	3.77	20.3	
Chlorobenzene	9.9	1.0	10	0	99	72.7	128	10.47	5.60	19.6	
Chloroethane	10.47	1.0	10	0	105	71.3	135	9.94	5.19	27.8	
Chloroform	9.03	1.0	10	0	90.3	70.2	125	9.03	0	20.3	
Dibromochloromethane	9.18	1.0	10	0	91.8	69.5	123	9.06	1.32	18.8	
Ethylbenzene	10.62	1.0	10	0	106	71.9	129	11.14	4.78	16.3	
Methylene chloride	8.66	1.0	10	0	86.6	65.3	123	6.75	24.8	21.4	Z
Tetrachloroethene	10.19	1.0	10	0	102	74.5	121	9.19	10.3	20.9	
Toluene	9.4	1.0	10	0.23	91.7	73	122	9.52	1.27	19.4	
trans-1,2-Dichloroethene	10.93	1.0	10	0	109	69.1	133	8.71	22.6	16.1	Z
Trichloroethene	8.3	1.0	10	0	83	71.1	126	8.81	5.96	16.6	
Vinyl chloride	11.29	1.0	10	0	113	65	137	10.21	10.0	20.5	
Xylenes, Total	32.4	1.0	30	0.39	107	72	130	34.04	4.94	16.1	
Surr: 1,2-Dichloroethane-d4	49.38	5.0	50	0	98.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	55.75	5.0	50	0	112	76.5	125	0	0	0	
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191107089

Experience is the solution

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Gehan
Client Phone No: 978-905-2124	**Client Email:** john.hiler@aecom.com	**PO Number:** 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110719-01-SW-U-A-1	11/7/19	0955	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
002	110719-02-SW-A-B-1	11/7/19	1015	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
003	110719-03-SW-D-A-1	11/7/19	1025	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
004	110719-04-SW-B-B-1	11/7/19	0945	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
005	110719-05-SW-B-B-1	11/7/19	1045	A	W		✓	1	TSS
006	110719-01-SW-U-A-3	11/7/19	1320	A	W		✓	2	VOCs
	↓	↓	↓	P	↓		↓	1	TSS
007	110719-TB01 F47.1			A	TB			1	trip blank
				P					
				A					
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	**Received by: (Signature)** EDH	**Date/Time** 11/7/19 16:18
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature) EDH	**Received for Laboratory by:**	**Date/Time** 11/7/19 4:50pm

Temperature Ambient or Chilled
Notes: 5°C

AES Bottles Y ☒ N ☐

Properly Preserved Y N
Notes:

Received Within Holding Times Y N
Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Services,

Demo
191107089

Adirondack Environmental Services, Inc

191107089

REPORTING INFORMATION: Ryan McCarthy

Hard Copy- NO

Client:

AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

PO 115954

Project BASF Rensselaer – Hudson River OU-2
ProjLocation: Water Analysis

JobNumber: Project#
ClientReferenceNo: 60323713

QClevel: STD+

☐ Hard Copy

Demo
191107089

TAT: **2**

DateDue: 11/11/2019

11/7/2019

☑ **RPT** MS/MSD/DUP Report Completed by_____

☑ **EDD** EFW-EQUIS EXCEl-change Res Completed by_____
Kit Cell 978-496-7488 Must Go in 48 Hour TAT
☑ **EDD** Portal-Kit Williams Completed by_____
kit.williams@aecom.com PDF & EFW EQuIS

Page 1 of 1

					Requested Tests						
Sample ID	**ClientSampID**	**Matrix**	**Collection Date**	**TestDue**	**E8260W**	**TSS_W**					
191107089-001	110719-01-SW-U-A-1	Water	11/7/2019	11/11/2019	B	A					
191107089-002	110719-02-SW-A-B-1	Water	11/7/2019	11/11/2019	B	A					
191107089-003	110719-03-SW-D-A-1	Water	11/7/2019	11/11/2019	B	A					
191107089-004	110719-04-SW-B-B-1	Water	11/7/2019	11/11/2019	B	A					
191107089-005	110719-05-SW-B-B-1	Water	11/7/2019	11/11/2019		A					
191107089-006	110719-01-SW-U-A-3	Water	11/7/2019	11/11/2019	B	A					
191107089-007	110719-TB01	Trip Blank	11/7/2019	11/11/2019	A						

Comments: Please attach WO report to COC scan and drop in portal during log review. Done by _____

Adirondack Environmental Services Inc.
Experience is the solution
314 North Pearl Street • Albany, New York 12207 • (518) 434-4546 • Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

November 12, 2019

Ryan McCarthy
AECOM Environment
250 Apollo Drive
Chelmsford, MA 01824

TEL: (978) 905-2100

Work Order No: 191108084
PO#: 115954
Project# 60323713

RE: BASF Rensselaer – Hudson River OU-2
Water Analysis

Dear Ryan McCarthy:

Adirondack Environmental Services, Inc received 7 samples on 11/8/2019 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Monica Higdon
Laboratory Manager

CC:
MS/MSD/DUP Report

Adirondack Environmental Services, Inc CASE NARRATIVE

CLIENT:	AECOM Environment	**Date:** *12-Nov-19*
Project:	BASF Rensselaer – Hudson River OU-2	
Lab Order:	191108084	

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers:

ND : Not Detected at reporting limit	C: CCV below acceptable Limits
J: Analyte detected below quantitation limit	C+: CCV above acceptable Limits
B: Analyte detected in Blank	S: LCS Spike recovery is below acceptable limits
X : Exceeds maximum contamination limit	S+: LCS Spike recovery is above acceptable limits
H: Hold time exceeded	Z: Duplication outside acceptable limits
N: Matrix Spike below acceptable limits	T : Tentatively Identified Compound-Estimated
N+: Matrix Spike is above acceptable limits	E :Above quantitation range-Estimated

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT: AECOM Environment
Work Order: **191108084**
Reference: BASF Rensselaer – Hudson River OU-2 / Wa
PO#: 115954
Project# 60323713

Client Sample ID: 110819-01-SW-U-B-1
Collection Date: 11/8/2019
Lab Sample ID: 191108084-001
Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/8/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
PCB, Total	**ND**	0.065		µg/L	1	11/8/2019 6:11:57 PM
Surr: Decachlorobiphenyl	**97.8**	57.1-135		%REC	1	11/8/2019 6:11:57 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 10:32:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 10:32:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 10:32:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	11/8/2019 10:32:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-01-SW-U-B-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-001
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:32:00 PM
Xylenes, Total	**0.4**	1.0	J	µg/L	1	11/8/2019 10:32:00 PM
Surr: 1,2-Dichloroethane-d4	**101**	80.9-122		%REC	1	11/8/2019 10:32:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	11/8/2019 10:32:00 PM
Surr: Toluene-d8	**103**	80.4-121		%REC	1	11/8/2019 10:32:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 (Prep: Gen Prep - 11/11/2019)						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.5**	1.0		mg/L	1	11/11/2019

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-02-SW-A-C-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/8/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1242	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
PCB, Total	**ND**	0.065		µg/L	1	11/8/2019 7:58:03 PM
Surr: Decachlorobiphenyl	**91.8**	57.1-135		%REC	1	11/8/2019 7:58:03 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 10:53:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 10:53:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 10:53:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	11/8/2019 10:53:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-02-SW-A-C-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-002
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 10:53:00 PM
Surr: 1,2-Dichloroethane-d4	**105**	80.9-122		%REC	1	11/8/2019 10:53:00 PM
Surr: 4-Bromofluorobenzene	**99.5**	76.5-125		%REC	1	11/8/2019 10:53:00 PM
Surr: Toluene-d8	**111**	80.4-121		%REC	1	11/8/2019 10:53:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**8.9**	1.0		mg/L	1	11/11/2019

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-03-SW-D-A-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/8/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1242	**0.049**	0.065	J	µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/8/2019 6:41:59 PM
PCB, Total	**0.049**	0.065	J	µg/L	1	11/8/2019 6:41:59 PM
Surr: Decachlorobiphenyl	**84.4**	57.1-135		%REC	1	11/8/2019 6:41:59 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 11:15:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 11:15:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 11:15:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Toluene	**0.2**	1.0	J	µg/L	1	11/8/2019 11:15:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-03-SW-D-A-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-003
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 11:15:00 PM
Surr: 1,2-Dichloroethane-d4	**104**	80.9-122		%REC	1	11/8/2019 11:15:00 PM
Surr: 4-Bromofluorobenzene	**106**	76.5-125		%REC	1	11/8/2019 11:15:00 PM
Surr: Toluene-d8	**117**	80.4-121		%REC	1	11/8/2019 11:15:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.8**	1.0		mg/L	1	11/11/2019

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-04-SW-B-A-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS - EPA 8082A						Analyst: **KF**
(Prep: SW3535A - 11/8/2019)						
Aroclor 1016	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1221	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1232	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1242	**0.038**	0.065	J	µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1248	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1254	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1260	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1262	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
Aroclor 1268	**ND**	0.065		µg/L	1	11/8/2019 7:13:00 PM
PCB, Total	**0.038**	0.065	J	µg/L	1	11/8/2019 7:13:00 PM
Surr: Decachlorobiphenyl	**92.2**	57.1-135		%REC	1	11/8/2019 7:13:00 PM
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Methylene chloride	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 11:36:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 11:36:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 11:36:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-04-SW-B-A-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-004
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 11:36:00 PM
Surr: 1,2-Dichloroethane-d4	**97.4**	80.9-122		%REC	1	11/8/2019 11:36:00 PM
Surr: 4-Bromofluorobenzene	**91.7**	76.5-125		%REC	1	11/8/2019 11:36:00 PM
Surr: Toluene-d8	**117**	80.4-121		%REC	1	11/8/2019 11:36:00 PM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 **(Prep: Gen Prep - 11/11/2019)**						Analyst: **JW**
TSS (Residue, Non-Filterable)	**9.6**	1.0		mg/L	1	11/11/2019

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-05-SW-B-C-1
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-005
PO#:	115954	**Matrix:**	WATER
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TOTAL SUSPENDED SOLIDS - SM 2540D-2011						Analyst: **JW**
(Prep: Gen Prep - 11/11/2019)						
TSS (Residue, Non-Filterable)	**8.8**	1.0		mg/L	1	11/11/2019

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-TB01
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-006
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Vinyl chloride	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Chloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Methylene chloride	**1.4**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Acetone	**ND**	5.0		µg/L	1	11/8/2019 11:57:00 PM
Carbon disulfide	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Chloroform	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
2-Butanone	**ND**	5.0		µg/L	1	11/8/2019 11:57:00 PM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Trichloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Benzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/8/2019 11:57:00 PM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Toluene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Chlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Ethylbenzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Xylenes, Total	**ND**	1.0		µg/L	1	11/8/2019 11:57:00 PM
Surr: 1,2-Dichloroethane-d4	**90.1**	80.9-122		%REC	1	11/8/2019 11:57:00 PM
Surr: 4-Bromofluorobenzene	**104**	76.5-125		%REC	1	11/8/2019 11:57:00 PM
Surr: Toluene-d8	**95.2**	80.4-121		%REC	1	11/8/2019 11:57:00 PM

Adirondack Environmental Services, Inc

Date: *12-Nov-19*

CLIENT:	AECOM Environment	**Client Sample ID:**	110819-TB02
Work Order:	**191108084**	**Collection Date:**	11/8/2019
Reference:	BASF Rensselaer – Hudson River OU-2 / Wa	**Lab Sample ID:**	191108084-007
PO#:	115954	**Matrix:**	TRIP BLANK
	Project# 60323713		

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS EPA 8260C (SW5030C PREP)						Analyst: **SMD**
1,2,3-Trichloropropane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,3-Dichloropropane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Vinyl chloride	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Chloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Methylene chloride	**2.4**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Acetone	**ND**	5.0		µg/L	1	11/9/2019 12:18:00 AM
Carbon disulfide	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,1-Dichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,1-Dichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
trans-1,2-Dichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Chloroform	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,2-Dichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
2-Butanone	**ND**	5.0		µg/L	1	11/9/2019 12:18:00 AM
1,1,1-Trichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Carbon tetrachloride	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Trichloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Dibromochloromethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,1,2-Trichloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Benzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
4-Methyl-2-pentanone	**ND**	5.0		µg/L	1	11/9/2019 12:18:00 AM
Tetrachloroethene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,1,2,2-Tetrachloroethane	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Toluene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Chlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Ethylbenzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,3-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,2-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
1,4-Dichlorobenzene	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Xylenes, Total	**ND**	1.0		µg/L	1	11/9/2019 12:18:00 AM
Surr: 1,2-Dichloroethane-d4	**102**	80.9-122		%REC	1	11/9/2019 12:18:00 AM
Surr: 4-Bromofluorobenzene	**103**	76.5-125		%REC	1	11/9/2019 12:18:00 AM
Surr: Toluene-d8	**105**	80.4-121		%REC	1	11/9/2019 12:18:00 AM

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76554

mblk

SeqNo: **2737161** **PrepDate:11/8/2019** TestNo: **SW8082A** RunNo: **177210**
Samp ID: **mb-76554** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.0650									
Aroclor 1221	ND	0.0650									
Aroclor 1232	ND	0.0650									
Aroclor 1242	ND	0.0650									
Aroclor 1248	ND	0.0650									
Aroclor 1254	ND	0.0650									
Aroclor 1260	ND	0.0650									
Aroclor 1262	ND	0.0650									
Aroclor 1268	ND	0.0650									
PCB, Total	ND	0.0650									
Surr: Decachlorobiphenyl	0.0884	0.0100	0.1	0	88.4	57.1	135	0	0		

lcs

SeqNo: **2737162** **PrepDate:11/8/2019** TestNo: **SW8082A** RunNo: **177210**
Samp ID: **lcs-76554** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.537	0.0650	0.5	0	107	60	140	0	0		
PCB, Total	0.537	0.0650	0.5	0	107	60	140	0	0		
Surr: Decachlorobiphenyl	0.102	0.0100	0.1	0	102	57.1	135	0	0		

ms

SeqNo: **2737185** **PrepDate:11/8/2019** TestNo: **SW8082A** RunNo: **177210**
Samp ID: **191108084-001c (110819-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.5258	0.0650	0.5	0	105	46.7	130	0	0		
PCB, Total	0.5258	0.0650	0.5	0	105	51	150	0	0		
Surr: Decachlorobiphenyl	0.0856	0.0100	0.1	0	85.6	57.1	135	0	0		

msd

SeqNo: **2737186** **PrepDate:11/8/2019** TestNo: **SW8082A** RunNo: **177210**
Samp ID: **191108084-001c (110819-01-SW-U-** **PrepRef:(SW3535A)** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76554

msd	SeqNo: **2737186**	**PrepDate:11/8/2019**	TestNo: **SW8082A**	RunNo: **177210**
	Samp ID: **191108084-001c (110819-01-SW-U-**	**PrepRef:(SW3535A)**	Units: **µg/L**	Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1242	0.491	0.0650	0.5	0	98.2	46.7	130	0.5258	6.85	30	
PCB, Total	0.491	0.0650	0.5	0	98.2	51	150	0.5258	6.85	30	
Surr: Decachlorobiphenyl	0.0788	0.0100	0.1	0	78.8	57.1	135	0	0	0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: 76612

LCS

SeqNo: **2738643** **PrepDate:11/11/2019** TestNo: **SM2540D** RunNo: **177276**
Samp ID: **LCS-76612** **PrepRef:(Gen Prep)** Units: **mg/L** Analysis Date: **11/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	488	40.0	498	0	98	86.5	114	0	0		

DUP

SeqNo: **2738645** **PrepDate:11/11/2019** TestNo: **SM2540D** RunNo: **177276**
Samp ID: **191108084-001** **PrepRef:** Units: **mg/L** Analysis Date: **11/11/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TSS (Residue, Non-Filterable)	9.8	1.00	0	0	0	0	0	9.5	3.11	10	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

mblk

SeqNo: **2737329** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **vblk** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
1,1-Dichloroethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
1,2,3-Trichloropropane	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
1,2-Dichloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,3-Dichloropropane	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
2-Butanone	ND	5.0									
4-Methyl-2-pentanone	ND	5.0									
Acetone	ND	5.0									
Benzene	ND	1.0									
Carbon disulfide	ND	1.0									
Carbon tetrachloride	ND	1.0									
Chlorobenzene	ND	1.0									
Chloroethane	ND	1.0									
Chloroform	ND	1.0									
Dibromochloromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Methylene chloride	0.41	1.0									J
Tetrachloroethene	ND	1.0									
Toluene	0.24	1.0									J
trans-1,2-Dichloroethene	ND	1.0									
Trichloroethene	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	0.44	1.0									J
Surr: 1,2-Dichloroethane-d4	52.32	5.0	50	0	105	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	52.01	5.0	50	0	104	76.5	125	0	0		
Surr: Toluene-d8	47.69	5.0	50	0	95.4	80.4	121	0	0		

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

lcs

SeqNo: **2737327** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **lcs** Units: **µg/L** Analysis Date: **11/8/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	11.61	1.0	10	0	116	72.3	121	0	0		
1,1,2,2-Tetrachloroethane	8.55	1.0	10	0	85.5	72.3	118	0	0		
1,1,2-Trichloroethane	11.06	1.0	10	0	111	73.1	123	0	0		
1,1-Dichloroethane	11.4	1.0	10	0	114	73.2	127	0	0		
1,1-Dichloroethene	11	1.0	10	0	110	70.3	128	0	0		
1,2,3-Trichloropropane	3.95	1.0	5	0	79	68.4	115	0	0		
1,2-Dichlorobenzene	7.78	1.0	10	0	77.8	71	124	0	0		
1,2-Dichloroethane	9.5	1.0	10	0	95	72.5	127	0	0		
1,3-Dichlorobenzene	9.17	1.0	10	0	91.7	72.2	121	0	0		
1,3-Dichloropropane	5.21	1.0	5	0	104	76	122	0	0		
1,4-Dichlorobenzene	8.66	1.0	10	0	86.6	71.7	127	0	0		
2-Butanone	9.02	5.0	10	0	90.2	65.1	132	0	0		
4-Methyl-2-pentanone	9.25	5.0	10	0	92.5	68.7	118	0	0		
Acetone	9.07	5.0	10	0	90.7	69.2	133	0	0		
Benzene	10.8	1.0	10	0	108	71.2	122	0	0		
Carbon disulfide	5.74	1.0	5	0	115	67.8	134	0	0		
Carbon tetrachloride	11.09	1.0	10	0	111	74.5	122	0	0		
Chlorobenzene	9.68	1.0	10	0	96.8	72.7	124	0	0		
Chloroethane	10.86	1.0	10	0	109	72.3	136	0	0		
Chloroform	10.46	1.0	10	0	105	71.6	133	0	0		
Dibromochloromethane	10.71	1.0	10	0	107	70.6	124	0	0		
Ethylbenzene	10.31	1.0	10	0	103	70.9	126	0	0		
Methylene chloride	9.26	1.0	10	0	92.6	66.3	130	0	0		
Tetrachloroethene	10.57	1.0	10	0	106	72.4	119	0	0		
Toluene	12.23	1.0	10	0	122	71.8	116	0	0		S
trans-1,2-Dichloroethene	11.19	1.0	10	0	112	70.3	120	0	0		
Trichloroethene	10.75	1.0	10	0	108	73	127	0	0		
Vinyl chloride	11.53	1.0	10	0	115	65.2	134	0	0		
Xylenes, Total	31.58	1.0	30	0	105	72.1	124	0	0		
Surr: 1,2-Dichloroethane-d4	49.99	5.0	50	0	100	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	49.13	5.0	50	0	98.3	76.5	125	0	0		
Surr: Toluene-d8	58.27	5.0	50	0	117	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

ms	SeqNo: **2737337**	TestNo: **SW8260C**	RunNo: **177218**
	Samp ID: **191108084-001b (110819-01-SW-U-**	Units: **µg/L**	Analysis Date: **11/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.83	1.0	10	0	88.3	71.6	126	0	0		
1,1,2,2-Tetrachloroethane	8.22	1.0	10	0	82.2	70.1	123	0	0		
1,1,2-Trichloroethane	7.96	1.0	10	0	79.6	72.1	119	0	0		
1,1-Dichloroethane	10.06	1.0	10	0	101	70.4	126	0	0		
1,1-Dichloroethene	8.92	1.0	10	0	89.2	70.2	125	0	0		
1,2,3-Trichloropropane	4.1	1.0	5	0	82	53.7	101	0	0		
1,2-Dichlorobenzene	8.39	1.0	10	0	83.9	70.2	123	0	0		
1,2-Dichloroethane	8.53	1.0	10	0	85.3	73.5	126	0	0		
1,3-Dichlorobenzene	9.01	1.0	10	0	90.1	70.4	124	0	0		
1,3-Dichloropropane	4.49	1.0	5	0	89.8	64	125	0	0		
1,4-Dichlorobenzene	8.72	1.0	10	0	87.2	70.8	127	0	0		
2-Butanone	6.83	5.0	10	0	68.3	60.5	123	0	0		
4-Methyl-2-pentanone	6.51	5.0	10	0	65.1	52.8	133	0	0		
Acetone	6.1	5.0	10	0	61	56.3	135	0	0		
Benzene	8.64	1.0	10	0	86.4	70.2	127	0	0		
Carbon disulfide	4.59	1.0	5	0	91.8	62.2	130	0	0		
Carbon tetrachloride	9.12	1.0	10	0	91.2	56.4	137	0	0		
Chlorobenzene	10.47	1.0	10	0	105	72.7	128	0	0		
Chloroethane	9.94	1.0	10	0	99.4	71.3	135	0	0		
Chloroform	9.03	1.0	10	0	90.3	70.2	125	0	0		
Dibromochloromethane	9.06	1.0	10	0	90.6	69.5	123	0	0		
Ethylbenzene	11.14	1.0	10	0	111	71.9	129	0	0		
Methylene chloride	6.75	1.0	10	0	67.5	65.3	123	0	0		
Tetrachloroethene	9.19	1.0	10	0	91.9	74.5	121	0	0		
Toluene	9.52	1.0	10	0.23	92.9	73	122	0	0		
trans-1,2-Dichloroethene	8.71	1.0	10	0	87.1	69.1	133	0	0		
Trichloroethene	8.81	1.0	10	0	88.1	71.1	126	0	0		
Vinyl chloride	10.21	1.0	10	0	102	65	137	0	0		
Xylenes, Total	34.04	1.0	30	0.39	112	72	130	0	0		
Surr: 1,2-Dichloroethane-d4	51.05	5.0	50	0	102	80.9	122	0	0		
Surr: 4-Bromofluorobenzene	56.94	5.0	50	0	114	76.5	125	0	0		
Surr: Toluene-d8	50.48	5.0	50	0	101	80.4	121	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

CLIENT: AECOM Environment
Work Order: 191108084
Project: BASF Rensselaer – Hudson River OU-2

ANALYTICAL QC SUMMARY REPORT

BatchID: R177218

msd

SeqNo: **2737338** TestNo: **SW8260C** RunNo: **177218**
Samp ID: **191108084-001b (110819-01-SW-U-** Units: **µg/L** Analysis Date: **11/9/2019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	8.87	1.0	10	0	88.7	71.6	126	8.83	0.452	20.4	
1,1,2,2-Tetrachloroethane	7.5	1.0	10	0	75	70.1	123	8.22	9.16	18.6	
1,1,2-Trichloroethane	9.31	1.0	10	0	93.1	72.1	119	7.96	15.6	20	
1,1-Dichloroethane	10.34	1.0	10	0	103	70.4	126	10.06	2.75	19.2	
1,1-Dichloroethene	10.3	1.0	10	0	103	70.2	125	8.92	14.4	16.1	
1,2,3-Trichloropropane	3.37	1.0	5	0	67.4	53.7	101	4.1	19.5	20	
1,2-Dichlorobenzene	8.59	1.0	10	0	85.9	70.2	123	8.39	2.36	17.9	
1,2-Dichloroethane	8.43	1.0	10	0	84.3	73.5	126	8.53	1.18	15.6	
1,3-Dichlorobenzene	8.85	1.0	10	0	88.5	70.4	124	9.01	1.79	14.3	
1,3-Dichloropropane	4.81	1.0	5	0	96.2	64	125	4.49	6.88	0	
1,4-Dichlorobenzene	8.93	1.0	10	0	89.3	70.8	127	8.72	2.38	14.4	
2-Butanone	5.61	5.0	10	0	56.1	60.5	123	6.83	19.6	15	SZ
4-Methyl-2-pentanone	6.08	5.0	10	0	60.8	52.8	133	6.51	6.83	11.9	
Acetone	6.38	5.0	10	0	63.8	56.3	135	6.1	4.49	10.6	
Benzene	8.53	1.0	10	0	85.3	70.2	127	8.64	1.28	18.4	
Carbon disulfide	5.02	1.0	5	0	100	62.2	130	4.59	8.95	13.1	
Carbon tetrachloride	9.47	1.0	10	0	94.7	56.4	137	9.12	3.77	20.3	
Chlorobenzene	9.9	1.0	10	0	99	72.7	128	10.47	5.60	19.6	
Chloroethane	10.47	1.0	10	0	105	71.3	135	9.94	5.19	27.8	
Chloroform	9.03	1.0	10	0	90.3	70.2	125	9.03	0	20.3	
Dibromochloromethane	9.18	1.0	10	0	91.8	69.5	123	9.06	1.32	18.8	
Ethylbenzene	10.62	1.0	10	0	106	71.9	129	11.14	4.78	16.3	
Methylene chloride	8.66	1.0	10	0	86.6	65.3	123	6.75	24.8	21.4	Z
Tetrachloroethene	10.19	1.0	10	0	102	74.5	121	9.19	10.3	20.9	
Toluene	9.4	1.0	10	0.23	91.7	73	122	9.52	1.27	19.4	
trans-1,2-Dichloroethene	10.93	1.0	10	0	109	69.1	133	8.71	22.6	16.1	Z
Trichloroethene	8.3	1.0	10	0	83	71.1	126	8.81	5.96	16.6	
Vinyl chloride	11.29	1.0	10	0	113	65	137	10.21	10.0	20.5	
Xylenes, Total	32.4	1.0	30	0.39	107	72	130	34.04	4.94	16.1	
Surr: 1,2-Dichloroethane-d4	49.38	5.0	50	0	98.8	80.9	122	0	0	0	
Surr: 4-Bromofluorobenzene	55.75	5.0	50	0	112	76.5	125	0	0	0	
Surr: Toluene-d8	48.49	5.0	50	0	97	80.4	121	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

Adirondack Environmental Services Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 191108084

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Client Name:	Address:		
AECOM	36 Riverside Ave, Rensselaer, NY 12144		
Send Report To:	**Project Name (Location)**	**Samplers: (Names)**	
Lab will post to portal	BASF Rensselaer NY	Patrick Geha	
Client Phone No:	**Client Email:**	**PO Number:**	**Samplers: (Signature)**
978-905-2124	john.bleiler@aecom.com	229608	

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
001	110819-01-SW-U-B-1	11/8/19	1205	A/P	W		✓	6	PCBs
				A/P				6	VOCs
				A/P				3	TSS
002	110819-02-SW-A-C-1	11/8/19	1240	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
003	110819-03-SW-D-A-1	11/8/19	1250	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
004	110819-04-SW-B-A-1	11/8/19	1140	A/P	W		✓	2	PCBs
				A/P				2	VOCs
				A/P				1	TSS
005	110819-05-SW-B-C-1	11/8/19	1325	A/P	W		✓	1	TSS
006	110819-TB01			A/P	TB			1	trip blank

Shipment Arrived Via:

FedEx UPS Client (AES) Other:_____

CC Report To / Special Instructions/Remarks:

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day

Note: Samples received after 3:30 pm are considered next business day

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		11/8/19 4pm
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: K. Mellen	Date/Time 11.8.19 4:15p

Temperature	AES Bottles	Properly Preserved	Received Within Holding Times
Ambient or (Chilled)	Y ☑ N ☐	(Y) N	(Y) N
Notes: 4°C		Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy

Adirondack Environmental Service

Demo
191108084

Adirondack Environmental Services Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 19110884

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Client Name: AECOM	**Address:** 36 Riverside Ave, Rensselaer, NY 12144	
Send Report To: Lab will post to portal	**Project Name (Location)** BASF Rensselaer NY	**Samplers: (Names)** Patrick Gehan
Client Phone No: 978-905-2124	**Client Email:** john.bleiler@aecom.com	**PO Number:** 229608
		Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
007	110819-TB02 VOA-1463		A/P	TB		✓	1	trip blank
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					
			A/P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☑ 2 Day ☐ 5 Day
Note: Samples received after 3:30 pm are considered next business day

CC Report To / Special Instructions/Remarks:

Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time** 11/8/19 4pm
Relinquished by: (Signature)	**Received by: (Signature)**	**Date/Time**
Relinquished by: (Signature)	**Received for Laboratory by:**	**Date/Time** 11-8-19 4:15P

TEMPERATURE	AES Bottles	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or (Chilled) 4°	Y ☑ N ☐	(Y) N	(Y) N
Notes:_____		Notes:_____	Notes:_____

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services Inc.
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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

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Chelmsford, MA 01824

978.905.2100 tel
978.905.2101 fax

Bulkhead Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/29/18 – 11/9/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (8 working days) to evaluate conditions within the river during the sheet pile bulkhead installation activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Twice weekly (Monday through Friday[2]) TSS samples collected from each monitoring buoy at approximately shallow, mid-depth, and near bottom in the water column. These samples are also analyzed for turbidity in the laboratory to allow comparison with the real-time measurements and TSS data;
- Twice weekly samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes turbidity/ TSS/ chemistry data collected during the above referenced reporting period

Total Suspended Solids/ Turbidity Sampling

In accordance with the Monitoring Plan, during the sheet pile installation (10/29/18 through 11/2/18), 27 daily TSS/ turbidity water grab samples were collected. Turbidity was analyzed in the field and in the laboratory. A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The TSS and turbidity grab samples were each collected in 500 milliliter (ml) poly bottles. While the

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

[2] This sampling is currently no longer required during bulkhead work.

sample was being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to Eurofins laboratory in Lancaster, PA.

Field turbidity data and laboratory TSS data collected during the reporting period are presented in Table 1.

- Real-time turbidity observations at the Site were typically less than 13 NTU during this period (n=29), with the one remaining observation at 15.2 NTU. The laboratory analyzed turbidity samples ranged from 3.6 to 13 NTU, suggesting all data collected (field and lab) was in the same general range.
- The lower portion of the water column continued to have the highest turbidity (average 8.5 NTU). The middle and surficial horizon consistently had the lowest values (averages 7.6 and 7.7 NTU respectively).
- Although there was some minor variability in the data set, field and laboratory turbidity measurements were generally consistent with one another.

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 sheetpile installation during the period 10/29/18 through 11/9/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings). TSS and turbidity samples were collected from two additional depths.

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (Table 2). The chemical sampling/ monitoring lab reports are presented in Attachment A.

PCBs were undetected (filtered and non-filtered) during the monitoring program. Over the reporting period, there were six low level exceedances of the water quality criteria (Table 3) for zinc (three) and mercury (three) which are not believed to be Site-related. The three mercury exceedances all occurred on the same day (10/29/18) in the surficial portion of the water column at all three locations. The three zinc exceedances all occurred on the same day (11/07/18) in the surficial portion of the water column at all three locations. These low level detections may be representative of ambient Site conditions, is consistent with previous monitoring results, and does not appear related on Site remedial activities.

Summary

Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the remainder of bulkhead installation (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency will be reduced to collection of two samples per week. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the sheetpile installation.

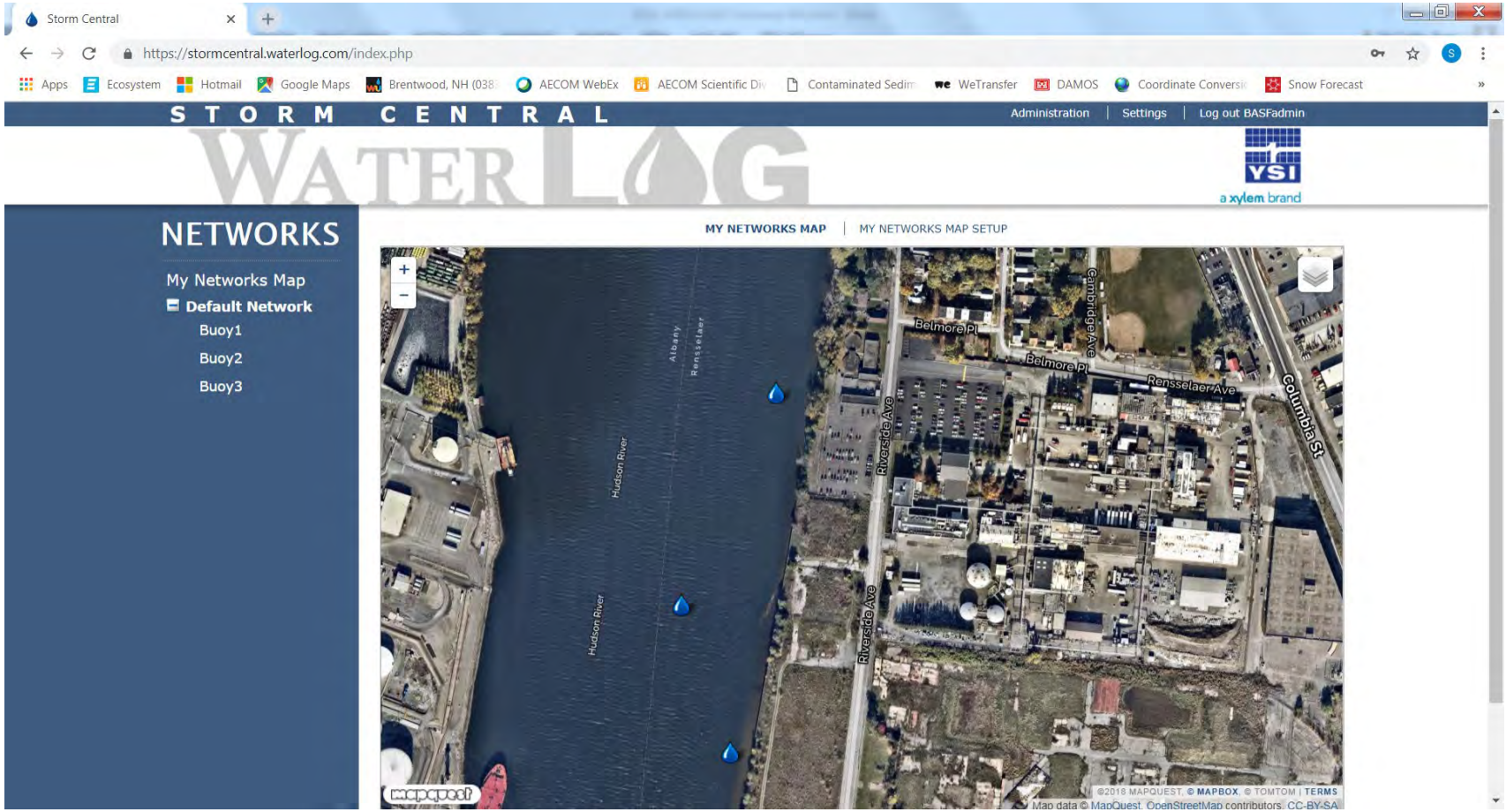
Table 1: Water Quality Detections Summary

Sample ID	Sample Date/ Time	Field Turbidity (NTU)	Lab Turbidity (NTU)	Lab TSS (mg/L)
102918-03-SW-D-A-1	10/29/18 13:30	12.7	9.9	19900
102918-03-SW-D-B-1	10/29/18 13:35	11.8	12	19400
102918-03-SW-D-C-1	10/29/18 13:40	10.3	12	15700
102918-02-SW-A-A-1	10/29/18 14:15	15.2	13	20300
102918-02-SW-A-B-1	10/29/18 14:20	11.5	11	20300
102918-02-SW-A-C-1	10/29/18 14:25	11.1	11	16400
102918-01-SW-U-A-1	10/29/18 14:50	12.7	11	21900
102918-01-SW-U-B-1	10/29/18 1./;w3l';[4:55	11.1	11	20100
102918-01-SW-U-C-1	10/29/18 15:00	12	9.6	16100
110118-03-SW-D-A-1	11/1/18 13:20	7.5	7.1	7760
110118-03-SW-D-B-1	11/1/18 13:25	6.7	7.8	7910
110118-03-SW-D-C-1	11/1/18 13:30	6.4	7.4	6420
110118-02-SW-A-A-1	11/1/18 14:05	7.2	8.7	8510
110118-02-SW-A-B-1	11/1/18 14:10	6.7	8.5	7760
110118-02-SW-A-C-1	11/1/18 14:15	7.5	6.1	6720
110118-01-SW-U-A-1	11/1/18 14:35	7.4	9.4	7160
110118-01-SW-U-B-1	11/1/18 14:40	7.3	7.8	8360
110118-01-SW-U-C-1	11/1/18 14:45	7	7.6	6420
110218-03-SW-D-A-1	11/2/18 8:40	5.7	5.4	7160
110218-03-SW-D-B-1	11/2/18 9:20	4	5.6	6720
110218-03-SW-D-C-1	11/2/18 9:25	5.8	6.4	6420
110218-02-SW-A-A-1	11/2/18 10:00	4.1	4.6	5070
110218-02-SW-A-B-1	11/2/18 10:05	4	4.8	5070
110218-02-SW-A-C-1	11/2/18 10:10	4.7	4.7	5370
110218-01-SW-U-A-1	11/2/18 10:35	3.6	4.9	4780
110218-01-SW-U-B-1	11/2/18 10:40	5.7	5.3	5970
110218-01-SW-U-C-1	11/2/18 10:45	4.4	5.2	4780

Table 2: Water Quality Exceedances Summary

Sample ID	Analyte	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
102918-01-SW-U-A-1	MERCURY	T	µg/l	0.05	0.056	J	x
102918-01-SW-U-A-1	ZINC	D	µg/l	17.36	11.8	J	
102918-02-SW-A-A-1	CHROMIUM, TOTAL	D	µg/l	169.43	1	J	
102918-02-SW-A-A-1	MERCURY	T	µg/l	0.05	0.072	J	x
102918-02-SW-A-A-1	ZINC	D	µg/l	17.96	12.1	J	
102918-03-SW-D-A-1	MERCURY	T	µg/l	0.05	0.063	J	x
110118-02-SW-A-C-1	ZINC	D	µg/l	17.85	11.7	J	
110118-03-SW-D-A-1	ZINC	D	µg/l	17.34	12.1	J	
110518-01-SW-U-A-1	CHROMIUM, TOTAL	D	µg/l	158.16	0.78	J	
110518-02-SW-A-B-1	CHLOROBENZENE	N	µg/l	5.00	0.2	J	
110518-02-SW-A-B-1	CHROMIUM, TOTAL	D	µg/l	155.95	0.74	J	
110518-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	1.8	J	
110518-03-SW-D-A-1	CADMIUM	D	µg/l	3.07	0.28	J	
110518-03-SW-D-A-1	CHROMIUM, TOTAL	D	µg/l	159.59	2.2	J	
110718-01-SW-U-A-1	ZINC	D	µg/l	14.80	16.3		x
110718-02-SW-A-A-1	ZINC	D	µg/l	13.34	15		x
110718-03-SW-D-A-1	ZINC	D	µg/l	15.79	18.7		x
110918-01-SW-U-A-1	CHROMIUM, TOTAL	D	µg/l	156.84	1.1	J	
110918-02-SW-A-A-1	CHROMIUM, TOTAL	D	µg/l	156.40	2.7	J	
110918-03-SW-D-A-1	CHROMIUM, TOTAL	D	µg/l	157.28	1.4	J	

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 02, 2018 11:29

Project: Rensselaer

Account #: 04285
Group Number: 2003472
SDG: RNS37
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
102918-01-SW-U-A-1 Grab Surface Water	10/29/2018 14:50	9873752
102918-01-SW-U-A-1 Filtered Grab Surface Water	10/29/2018 14:50	9873753
102918-01-SW-U-B-1 Grab Surface Water	10/29/2018 14:55	9873754
102918-01-SW-U-C-1 Grab Surface Water	10/29/2018 15:00	9873755
102918-02-SW-A-A-1 Grab Surface Water	10/29/2018 14:15	9873756
102918-02-SW-A-A-1 Filtered Grab Surface Water	10/29/2018 14:15	9873757
102918-02-SW-A-B-1 Grab Surface Water	10/29/2018 14:20	9873758
102918-02-SW-A-C-1 Grab Surface Water	10/29/2018 14:25	9873759
102918-03-SW-D-A-1 Grab Surface Water	10/29/2018 13:30	9873760
102918-03-SW-D-A-1 Filtered Grab Surface Water	10/29/2018 13:30	9873761
102918-03-SW-D-B-1 Grab Surface Water	10/29/2018 13:35	9873762
102918-03-SW-D-C-1 Grab Surface Water	10/29/2018 13:40	9873763
102918-TB01-01 Water	10/29/2018 17:00	9873764

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **102918-01-SW-U-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:50
SDG#: RNS37-01

BASF Corporation
ELLE Sample #: WW 9873752
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.95 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.2	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.056 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	21,900	1,000	3,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-01-SW-U-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:50
SDG#: RNS37-01

BASF Corporation
ELLE Sample #: WW 9873752
ELLE Group #: 2003472
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183051AA	11/01/2018 12:24	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183051AA	11/01/2018 12:24	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 00:08	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 13:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 14:47	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18305001101A	11/01/2018 11:19	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18303121451A	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:50
SDG#: RNS37-02

BASF Corporation
ELLE Sample #: WW 9873753
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D2	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.054 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 00:19	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:04	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 14:57	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102918-01-SW-U-B-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:55
SDG#: RNS37-03

BASF Corporation
ELLE Sample #: WW 9873754
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	20,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451A	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-01-SW-U-C-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 15:00
SDG#: RNS37-04

BASF Corporation
ELLE Sample #: WW 9873755
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451A	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-02-SW-A-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:15
SDG#: RNS37-05

BASF Corporation
ELLE Sample #: WW 9873756
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
	The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.					
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.96 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.072 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	20,300	1,000	3,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-02-SW-A-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:15
SDG#: RNS37-05

BASF Corporation
ELLE Sample #: WW 9873756
ELLE Group #: 2003472
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183051AA	11/01/2018 12:45	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183051AA	11/01/2018 12:45	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 00:30	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:06	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 14:59	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18305001101A	11/01/2018 11:44	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18303121451A	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:15
SDG#: RNS37-06

BASF Corporation
ELLE Sample #: WW 9873757
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D2	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	N.D. D1	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	N.D.	0.0925	0.625	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.055 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 00:41	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:08	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 15:01	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102918-02-SW-A-B-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:20
SDG#: RNS37-07

BASF Corporation
ELLE Sample #: WW 9873758
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	20,300	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451B	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-02-SW-A-C-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 14:25
SDG#: RNS37-08

BASF Corporation
ELLE Sample #: WW 9873759
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451B	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-03-SW-D-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 13:30
SDG#: RNS37-09

BASF Corporation
ELLE Sample #: WW 9873760
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	16.6	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.063 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	89,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.9	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	19,900	1,000	3,000	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-03-SW-D-A-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 13:30
SDG#: RNS37-09

BASF Corporation
ELLE Sample #: WW 9873760
ELLE Group #: 2003472
Matrix: Surface Water

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183051AA	11/01/2018 13:06	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183051AA	11/01/2018 13:06	Jennifer K Howe	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 00:52	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:09	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 15:07	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18305001101A	11/01/2018 11:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18303121451B	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 13:30
SDG#: RNS37-10

BASF Corporation
ELLE Sample #: WW 9873761
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D2	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.059 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183030032A	11/01/2018 01:25	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183030032A	10/31/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183040705001A	11/01/2018 14:11	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183040571401	11/01/2018 15:09	Parker D Lindstrom	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183040705001	11/01/2018 05:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183040571401	11/01/2018 09:25	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **102918-03-SW-D-B-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 13:35
SDG#: RNS37-11

BASF Corporation
ELLE Sample #: WW 9873762
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	19,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451B	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-03-SW-D-C-1 Grab Surface Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 13:40
SDG#: RNS37-12

BASF Corporation
ELLE Sample #: WW 9873763
ELLE Group #: 2003472
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18303121451B	10/30/2018 19:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18304385802A	10/31/2018 11:11	Amy L Hankins	1

*=This limit was used in the evaluation of the final result

Sample Description: **102918-TB01-01 Water**
COC: 568546

Project Name: **Rensselaer**

Submittal Date/Time: 10/30/2018 10:20
Collection Date/Time: 10/29/2018 17:00
SDG#: RNS37-13TB

BASF Corporation
ELLE Sample #: WW 9873764
ELLE Group #: 2003472
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183051AA	11/01/2018 10:59	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183051AA	11/01/2018 10:59	Jennifer K Howe	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2003472
Reported: 11/02/2018 11:29

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183051AA	Sample number(s): 9873752,9873756,9873760,9873764		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183030032A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183040571401	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761		
Mercury	0.053 J	0.050	0.20
Batch number: 183040705001A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18303121451A	Sample number(s): 9873752,9873754-9873756		
Turbidity	0.15 J	0.140	1.00
Batch number: 18303121451B	Sample number(s): 9873758-9873760,9873762-9873763		
Turbidity	0.15 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18304385802A	Sample number(s): 9873752,9873754-9873756,9873758-9873760,9873762-9873763		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18305001101A	Sample number(s): 9873752,9873756,9873760		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/02/2018 11:29

Group Number: 2003472

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5183051AA	Sample number(s): 9873752,9873756,9873760,9873764								
Benzene	20	21.28			106		80-120		
Chlorobenzene	20	21.16			106		80-120		
1,2-Dichlorobenzene	20	20.71			104		80-120		
1,3-Dichlorobenzene	20	20.37			102		80-120		
1,4-Dichlorobenzene	20	20.88			104		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183030032A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761								
PCB-1016	5.01	4.76	5.01	3.59	95	72	50-140	28	36
PCB-1260	5.00	4.40	5.00	2.28	88	46*	50-140	63*	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183040571401	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761								
Mercury	1.00	0.923			92		85-115		
Batch number: 183040705001A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761								
Arsenic	10	9.99			100		85-115		
Cadmium	5.00	5.07			101		85-115		
Chromium	50	49.06			98		85-115		
Copper	50	51.52			103		85-115		
Lead	15	14.83			99		85-115		
Zinc	500	507.94			102		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18303121451A	Sample number(s): 9873752,9873754-9873756								
Turbidity	10	9.30			93		90-104		
Batch number: 18303121451B	Sample number(s): 9873758-9873760,9873762-9873763								
Turbidity	10	9.30			93		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18304385802A	Sample number(s): 9873752,9873754-9873756,9873758-9873760,9873762-9873763								
Total Suspended Solids	150000	151000			101		89-105		
Batch number: 18305001101A	Sample number(s): 9873752,9873756,9873760								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/02/2018 11:29

Group Number: 2003472

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	39970			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183040571401	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761 UNSPK: 9873752									
Mercury	0.0559	1.00	0.969			91		80-120		
Batch number: 183040705001A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761 UNSPK: 9873752									
Arsenic	N.D.	10	10.4			104		70-130		
Cadmium	N.D.	5.00	5.18			104		70-130		
Chromium	0.952	50	53.08			104		70-130		
Copper	N.D.	50	54.82			110		70-130		
Lead	N.D.	15	16.84			112		70-130		
Zinc	15.23	500	538.94			105		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18305001101A	Sample number(s): 9873752,9873756,9873760 UNSPK: 9873752									
Total Hardness	82400	80000	168640			108		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183040571401	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761 BKG: 9873752			
Mercury	0.0559	0.0559	0 (1)	20
Batch number: 183040705001A	Sample number(s): 9873752-9873753,9873756-9873757,9873760-9873761 BKG: 9873752			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.952	0.878	8 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/02/2018 11:29

Group Number: 2003472

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Zinc	15.23	15.12	1 (1)	20
	ug/l	ug/l		
Batch number: 18305001101A	Sample number(s): 9873752,9873756,9873760 BKG: 9873752			
Total Hardness	82400	87160	6 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183051AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9873752	101	101	104	97
9873756	102	101	103	96
9873760	101	100	103	96
9873764	101	101	103	96
Blank	99	100	103	97
LCS	100	100	103	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183030032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9873752	72	77	70	75
9873753	67	79	65	80
9873756	72	80	70	79
9873757	70	84	68	84
9873760	75	84	74	82
9873761	61	72	61	72
Blank	77	54	76	56
LCS	95	71	93	71
LCSD	70	47	69	48
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2003472 Sample # 9873752-64

COC # 568546

Client Information

Client: BASF

Acct. #:

Project Name/#: Hudson River OU-2

PWSID #:

Project Manager: John Bleiler

P.O. #: 229608

Sampler: Patrick Gehan

Quote #:

State where samples were collected: NY

For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (filtered) F	PCBs (unfiltered) F	Metals (filtered) F,N	Metals (unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260C H	Turbidity - SM2130	
102918-01-SW-U-A-1	10/29/18	1450	✓		13	2	2	1	1	1	1	1	3	1	
102918-01-SW-U-B-1	10/29/18	1455	✓		2							1		1	
102918-01-SW-U-C-1	10/29/18	1500	✓		2							1		1	
102918-02-SW-A-A-1	10/29/18	1415	✓		13	2	2	1	1	1	1	1	3	1	
102918-02-SW-A-B-1	10/29/18	1420	✓		2							1		1	
102918-02-SW-A-C-1	10/29/18	1425	✓		2							1		1	
102918-03-SW-D-A-1	10/29/18	1330	✓		13	2	2	1	1	1	1	1	3	1	
102918-03-SW-D-B-1	10/29/18	1335	✓		2							1		1	
102918-03-SW-D-C-1	10/29/18	1340	✓		2							1		1	
102918-TB01-01	10/29/18	1700	✓		1								1		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/31/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/29/18	1730			
			[signature]	10/30/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.9 - 1.2°C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231484

Group Number(s): 2003472

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/30/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kristin Zeigler (2123) at 11:16 on 10/30/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.2	DT	Wet	Y	Bagged	N
2	DT42-01	0.9	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 07, 2018 11:48

Project: Rensselaer

Account #: 04285
Group Number: 2005088
SDG: RNS38
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110118-01-SW-U-A-1 Grab Surface Water	11/01/2018 14:35	9880240
110118-01-SW-U-A-1 Filtered Grab Surface Water	11/01/2018 14:35	9880241
110118-01-SW-U-B-1 Grab Surface Water	11/01/2018 14:40	9880242
110118-01-SW-U-C-1 Grab Surface Water	11/01/2018 14:45	9880243
110118-02-SW-A-A-1 Grab Surface Water	11/01/2018 14:05	9880244
110118-02-SW-A-B-1 Grab Surface Water	11/01/2018 14:10	9880245
110118-02-SW-A-C-1 Grab Surface Water	11/01/2018 14:15	9880246
110118-02-SW-A-C-1 Filtered Grab Surface Water	11/01/2018 14:15	9880247
110118-03-SW-D-A-1 Grab Surface Water	11/01/2018 13:20	9880248
110118-03-SW-D-A-1 Filtered Grab Surface Water	11/01/2018 13:20	9880249
110118-03-SW-D-B-1 Grab Surface Water	11/01/2018 13:25	9880250
110118-03-SW-D-C-1 Grab Surface Water	11/01/2018 13:30	9880251
110118-TB01-01 Water	11/01/2018 16:30	9880252

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **110118-01-SW-U-A-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:35
SDG#: RNS38-01

BASF Corporation
ELLE Sample #: WW 9880240
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	84,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.4	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **110118-01-SW-U-A-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:35
SDG#: RNS38-01

BASF Corporation
ELLE Sample #: WW 9880240
ELLE Group #: 2005088
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183102AA	11/06/2018 08:52	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183102AA	11/06/2018 08:52	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 16:38	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:31	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 07:49	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18306121451A	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:54	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:35
SDG#: RNS38-02

BASF Corporation
ELLE Sample #: WW 9880241
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 17:11	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:42	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1

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Analysis Report

Sample Description: **110118-01-SW-U-B-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:40
SDG#: RNS38-03

BASF Corporation
ELLE Sample #: WW 9880242
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,360	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451A	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:54	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **110118-01-SW-U-C-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:45
SDG#: RNS38-04

BASF Corporation
ELLE Sample #: WW 9880243
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451A	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **110118-02-SW-A-A-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:05
SDG#: RNS38-05

BASF Corporation
ELLE Sample #: WW 9880244
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,510	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451A	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **110118-02-SW-A-B-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:10
SDG#: RNS38-06

BASF Corporation
ELLE Sample #: WW 9880245
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,760	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451B	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-02-SW-A-C-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:15
SDG#: RNS38-07

BASF Corporation
ELLE Sample #: WW 9880246
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.81 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	85,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

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Sample Description: **110118-02-SW-A-C-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:15
SDG#: RNS38-07

BASF Corporation
ELLE Sample #: WW 9880246
ELLE Group #: 2005088
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183102AA	11/06/2018 09:18	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183102AA	11/06/2018 09:18	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 17:22	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:44	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 08:19	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18306121451B	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 14:15
SDG#: RNS38-08

BASF Corporation
ELLE Sample #: WW 9880247
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 17:33	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:46	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-03-SW-D-A-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 13:20
SDG#: RNS38-09

BASF Corporation
ELLE Sample #: WW 9880248
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,760	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

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Sample Description: **110118-03-SW-D-A-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 13:20
SDG#: RNS38-09

BASF Corporation
ELLE Sample #: WW 9880248
ELLE Group #: 2005088
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183102AA	11/06/2018 09:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183102AA	11/06/2018 09:44	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 17:43	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:52	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 08:27	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18306121451B	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 13:20
SDG#: RNS38-10

BASF Corporation
ELLE Sample #: WW 9880249
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.1 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183060025A	11/04/2018 17:54	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183060025A	11/02/2018 16:43	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705001A	11/05/2018 10:55	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571401	11/06/2018 11:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705001	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571401	11/06/2018 07:15	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-03-SW-D-B-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 13:25
SDG#: RNS38-11

BASF Corporation
ELLE Sample #: WW 9880250
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.8	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,910	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451B	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **110118-03-SW-D-C-1 Grab Surface Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 13:30
SDG#: RNS38-12

BASF Corporation
ELLE Sample #: WW 9880251
ELLE Group #: 2005088
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18306121451B	11/02/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18309385801A	11/05/2018 14:55	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **110118-TB01-01 Water**
COC: 568547

Project Name: **Rensselaer**

Submittal Date/Time: 11/02/2018 10:10
Collection Date/Time: 11/01/2018 16:30
SDG#: RNS38-13TB

BASF Corporation
ELLE Sample #: WW 9880252
ELLE Group #: 2005088
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183102AA	11/06/2018 08:26	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183102AA	11/06/2018 08:26	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/07/2018 11:48

Group Number: 2005088

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183102AA	Sample number(s): 9880240,9880246,9880248,9880252		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183060025A	Sample number(s): 9880240-9880241,9880246-9880249		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183080571401	Sample number(s): 9880240-9880241,9880246-9880249		
Mercury	N.D.	0.050	0.20
Batch number: 183080705001A	Sample number(s): 9880240-9880241,9880246-9880249		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18306121451A	Sample number(s): 9880240,9880242-9880244		
Turbidity	0.20 J	0.140	1.00
Batch number: 18306121451B	Sample number(s): 9880245-9880246,9880248,9880250-9880251		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18309385801A	Sample number(s): 9880240,9880242-9880246,9880248,9880250-9880251		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18310001101A	Sample number(s): 9880240,9880246,9880248		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/07/2018 11:48

Group Number: 2005088

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183102AA	Sample number(s): 9880240,9880246,9880248,9880252								
Benzene	20	21.56	20	20.73	108	104	80-120	4	30
Chlorobenzene	20	19.97	20	19.59	100	98	80-120	2	30
1,2-Dichlorobenzene	20	20.32	20	19.95	102	100	80-120	2	30
1,3-Dichlorobenzene	20	19.75	20	19.3	99	96	80-120	2	30
1,4-Dichlorobenzene	20	19.85	20	19.57	99	98	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183060025A	Sample number(s): 9880240-9880241,9880246-9880249								
PCB-1016	5.01	3.14	5.01	4.43	63	88	50-140	34	36
PCB-1260	5.00	3.85	5.00	4.79	77	96	50-140	22	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183080571401	Sample number(s): 9880240-9880241,9880246-9880249								
Mercury	1.00	0.861			86		85-115		
Batch number: 183080705001A	Sample number(s): 9880240-9880241,9880246-9880249								
Arsenic	10	9.32			93		85-115		
Cadmium	5.00	5.15			103		85-115		
Chromium	50	47.54			95		85-115		
Copper	50	45.98			92		85-115		
Lead	15	14.79			99		85-115		
Zinc	500	475.87			95		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18306121451A	Sample number(s): 9880240,9880242-9880244								
Turbidity	10	9.70			97		90-104		
Batch number: 18306121451B	Sample number(s): 9880245-9880246,9880248,9880250-9880251								
Turbidity	10	9.70			97		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18309385801A	Sample number(s): 9880240,9880242-9880246,9880248,9880250-9880251								
Total Suspended Solids	150000	147800			99		89-105		
Batch number: 18310001101A	Sample number(s): 9880240,9880246,9880248								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/07/2018 11:48

Group Number: 2005088

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	39660			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183080571401	Sample number(s): 9880240-9880241,9880246-9880249 UNSPK: 9880240									
Mercury	N.D.	1.00	0.844			84		80-120		
Batch number: 183080705001A	Sample number(s): 9880240-9880241,9880246-9880249 UNSPK: 9880240									
Arsenic	N.D.	10	10.65			107		70-130		
Cadmium	N.D.	5.00	5.04			101		70-130		
Chromium	N.D.	50	49.18			98		70-130		
Copper	N.D.	50	49.19			98		70-130		
Lead	N.D.	15	15.65			104		70-130		
Zinc	13.53	500	513.59			100		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18310001101A	Sample number(s): 9880240,9880246,9880248 UNSPK: 9880240									
Total Hardness	84880	80000	163020			98		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183080571401	Sample number(s): 9880240-9880241,9880246-9880249 BKG: 9880240			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183080705001A	Sample number(s): 9880240-9880241,9880246-9880249 BKG: 9880240			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/07/2018 11:48

Group Number: 2005088

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Zinc	13.53	14.4	6 (1)	20
	N T U	N T U		
Batch number: 18306121451B	Sample number(s): 9880245-9880246,9880248,9880250-9880251 BKG: 9880245			
Turbidity	8.50	8.50	0	8
	ug/l	ug/l		
Batch number: 18310001101A	Sample number(s): 9880240,9880246,9880248 BKG: 9880240			
Total Hardness	84880	83780	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183102AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9880240	93	101	107	107
9880246	94	100	106	105
9880248	95	100	107	107
9880252	95	99	107	106
Blank	95	100	106	106
LCS	95	104	99	103
LCSD	95	101	99	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183060025A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9880240	97	74	95	74
9880241	105	98	104	101
9880246	101	82	95	79
9880247	100	96	100	88
9880248	96	80	96	80
9880249	102	91	101	87
Blank	60	61	58	59
LCS	57	53	54	53
LCSD	88	49	86	50

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2005088
Reported: 11/07/2018 11:48

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183060025A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2005088 Sample # 9880240-52

COC # 568547

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected:	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	FN Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM 2130
110118-01-SW-U-A-1	11/1/18	1435	✓		13	2	2	1	1	1	1	1	3	1
110118-01-SW-U-B-1	11/1/18	1440	✓		2							1		1
110118-01-SW-U-C-1	11/1/18	1445	✓		2							1		1
110118-02-SW-A-A-1	11/1/18	1405	✓		2							1		1
110118-02-SW-A-B-1	11/1/18	1410	✓		2							1		1
110118-02-SW-A-C-1	11/1/18	1415	✓		13	2	2	1	1	1	1	1	3	1
110118-03-SW-D-A-1	11/1/18	1320	✓		13	2	2	1	1	1	1	1	3	1
110118-03-SW-D-B-1	11/1/18	1325	✓		2							1		1
110118-03-SW-D-C-1	11/1/18	1330	✓		2							1		1
110118-TB01-01	11/1/18	1630	✓		1								1	

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/3/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	11/1/18	1730			
			Courtney	11/2/18	1010

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.5-1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 231906

Group Number(s): 2005088

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/02/2018 10:10
Number of Packages:	2	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:45 on 11/02/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.3	DT	Wet	Y	Bagged	N
2	DT42-03	0.5	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 09, 2018 17:00

Project: Rensselaer

Account #: 04285
Group Number: 2005448
SDG: RNS39
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110218-01-SW-U-A-1 Grab Surface Water	11/02/2018 10:35	9882324
110218-01-SW-U-B-1 Grab Surface Water	11/02/2018 10:40	9882325
110218-01-SW-U-B-1 Filtered Grab Surface Water	11/02/2018 10:40	9882326
110218-01-SW-U-C-1 Grab Surface Water	11/02/2018 10:45	9882327
110218-02-SW-A-A-1 Grab Surface Water	11/02/2018 10:00	9882328
110218-02-SW-A-B-1 Grab Surface Water	11/02/2018 10:05	9882329
110218-02-SW-A-C-1 Grab Surface Water	11/02/2018 10:10	9882330
110218-02-SW-A-C-1 Filtered Grab Surface Water	11/02/2018 10:10	9882331
110218-03-SW-D-A-1 Grab Surface Water	11/02/2018 08:40	9882332
110218-03-SW-D-B-1 Grab Surface Water	11/02/2018 09:20	9882333
110218-03-SW-D-C-1 Grab Surface Water	11/02/2018 09:25	9882334
110218-03-SW-D-C-1 Filtered Grab Surface Water	11/02/2018 09:25	9882335
110218-TB01-01 Water	11/02/2018 13:30	9882336

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **110218-01-SW-U-A-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:35
SDG#: RNS39-01

BASF Corporation
ELLE Sample #: WW 9882324
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.9	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,780	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451A	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385801A	11/06/2018 10:16	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-01-SW-U-B-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:40
SDG#: RNS39-02

BASF Corporation
ELLE Sample #: WW 9882325
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	86,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **110218-01-SW-U-B-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:40
SDG#: RNS39-02

BASF Corporation
ELLE Sample #: WW 9882325
ELLE Group #: 2005448
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 09:58	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 09:58	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 13:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:15	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 11:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 08:35	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385801A	11/06/2018 10:16	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:40
SDG#: RNS39-03

BASF Corporation
ELLE Sample #: WW 9882326
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 13:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:17	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 12:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-01-SW-U-C-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:45
SDG#: RNS39-04

BASF Corporation
ELLE Sample #: WW 9882327
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.2	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	4,780	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385801A	11/06/2018 10:17	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Sample Description: **110218-02-SW-A-A-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:00
SDG#: RNS39-05

BASF Corporation
ELLE Sample #: WW 9882328
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,070	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385801A	11/06/2018 10:17	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **110218-02-SW-A-B-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:05
SDG#: RNS39-06

BASF Corporation
ELLE Sample #: WW 9882329
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,070	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385801A	11/06/2018 10:17	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-02-SW-A-C-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:10
SDG#: RNS39-07

BASF Corporation
ELLE Sample #: WW 9882330
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,400	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	4.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,370	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **110218-02-SW-A-C-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:10
SDG#: RNS39-07

BASF Corporation
ELLE Sample #: WW 9882330
ELLE Group #: 2005448
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 10:23	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 10:23	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 13:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 11:51	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 12:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 08:43	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385802A	11/06/2018 10:20	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-02-SW-A-C-1 Filtered Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 10:10
SDG#: RNS39-08

BASF Corporation
ELLE Sample #: WW 9882331
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 13:50	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:19	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 12:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-03-SW-D-A-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 08:40
SDG#: RNS39-09

BASF Corporation
ELLE Sample #: WW 9882332
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,160	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385802A	11/06/2018 10:20	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-03-SW-D-B-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 09:20
SDG#: RNS39-10

BASF Corporation
ELLE Sample #: WW 9882333
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	5.6	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385802A	11/06/2018 10:20	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-03-SW-D-C-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 09:25
SDG#: RNS39-11

BASF Corporation
ELLE Sample #: WW 9882334
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.4	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,420	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

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Sample Description: **110218-03-SW-D-C-1 Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 09:25
SDG#: RNS39-11

BASF Corporation
ELLE Sample #: WW 9882334
ELLE Group #: 2005448
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 10:49	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 10:49	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 14:01	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:21	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 12:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18310001101A	11/06/2018 08:52	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18307121451B	11/03/2018 14:30	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18310385802A	11/06/2018 10:20	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-03-SW-D-C-1 Filtered Grab Surface Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 09:25
SDG#: RNS39-12

BASF Corporation
ELLE Sample #: WW 9882335
ELLE Group #: 2005448
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120001A	11/09/2018 14:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183120001A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183080705002A	11/05/2018 12:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183080571402	11/06/2018 12:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183080705002	11/04/2018 06:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183080571402	11/06/2018 07:15	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **110218-TB01-01 Water**
COC: 568548

Project Name: **Rensselaer**

Submittal Date/Time: 11/03/2018 09:25
Collection Date/Time: 11/02/2018 13:30
SDG#: RNS39-13TB

BASF Corporation
ELLE Sample #: WW 9882336
ELLE Group #: 2005448
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 09:32	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 09:32	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 17:00

Group Number: 2005448

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183121AA	Sample number(s): 9882325,9882330,9882334,9882336		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183120001A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183080571402	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335		
Mercury	N.D.	0.050	0.20
Batch number: 183080705002A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	12.1	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	N T U	N T U	N T U
Batch number: 18307121451A	Sample number(s): 9882324		
Turbidity	0.20 J	0.140	1.00
Batch number: 18307121451B	Sample number(s): 9882325,9882327-9882330,9882332-9882334		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18310001101A	Sample number(s): 9882325,9882330,9882334		
Total Hardness	N.D.	3,000	10,000
Batch number: 18310385801A	Sample number(s): 9882324-9882325,9882327-9882329		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 17:00

Group Number: 2005448

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18310385802A	Sample number(s): 9882330,9882332-9882334		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183121AA	Sample number(s): 9882325,9882330,9882334,9882336								
Benzene	20	19.79			99		80-120		
Chlorobenzene	20	18.71			94		80-120		
1,2-Dichlorobenzene	20	18.92			95		80-120		
1,3-Dichlorobenzene	20	18.23			91		80-120		
1,4-Dichlorobenzene	20	18.92			95		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183120001A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335								
PCB-1016	5.01	3.50	5.01	3.95	70	79	50-140	12	36
PCB-1260	5.00	4.16	5.00	5.07	83	101	50-140	20	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183080571402	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335								
Mercury	1.00	0.892			89		85-115		
Batch number: 183080705002A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335								
Arsenic	10	9.67			97		85-115		
Cadmium	5.00	4.96			99		85-115		
Chromium	50	55.03			110		85-115		
Copper	50	47.36			95		85-115		
Lead	15	14.95			100		85-115		
Zinc	500	485.66			97		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18307121451A	Sample number(s): 9882324								
Turbidity	10	9.60			96		90-104		
Batch number: 18307121451B	Sample number(s): 9882325,9882327-9882330,9882332-9882334								
Turbidity	10	9.60			96		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18310001101A	Sample number(s): 9882325,9882330,9882334								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 17:00

Group Number: 2005448

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	39660			99		85-110		
Batch number: 18310385801A	Sample number(s): 9882324-9882325,9882327-9882329								
Total Suspended Solids	150000	141200			94		89-105		
Batch number: 18310385802A	Sample number(s): 9882330,9882332-9882334								
Total Suspended Solids	150000	144700			96		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183080571402	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335 UNSPK: 9882325									
Mercury	N.D.	1.00	0.876			88		80-120		
Batch number: 183080705002A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335 UNSPK: 9882330									
Arsenic	N.D.	10	10.31			103		70-130		
Cadmium	N.D.	5.00	5.13			103		70-130		
Chromium	N.D.	50	49.82			100		70-130		
Copper	N.D.	50	50.07			100		70-130		
Lead	N.D.	15	15.68			105		70-130		
Zinc	N.D.	500	511.36			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183080571402	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335 BKG: 9882325			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183080705002A	Sample number(s): 9882325-9882326,9882330-9882331,9882334-9882335 BKG: 9882330			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 17:00

Group Number: 2005448

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18307121451B	Sample number(s): 9882325,9882327-9882330,9882332-9882334 BKG: 9882334			
Turbidity	6.40	6.40	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9882325	96	100	103	107
9882330	98	104	101	105
9882334	97	99	103	105
9882336	96	98	103	106
Blank	97	98	103	105
LCS	100	105	95	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183120001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9882325	72	83	71	84
9882326	73	96	71	91
9882330	70	88	70	87
9882331	68	85	67	87
9882334	68	84	64	82
9882335	73	87	72	87
Blank	49	64	47	64
LCS	43	59	40	58
LCSD	41	82	40	83
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 200548 Sample # 9882324-36

COC # 568548

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: ☐ Soil ☐ Sediment ☐ Tissue | ☐ Potable ☐ Ground ☑ Surface Water ☐ NPDES | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	EN Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	H TSS	VOCs - 8260c	Turbidity - SM2130
110218-01-SW-U-A-1	11/2/18	1035	✓		2							1		1
110218-01-SW-U-B-1	11/2/18	1040	✓		13	2	2	1	1	1	1	1	3	1
110218-01-SW-U-C-1	11/2/18	1045	✓		2							1		1
110218-02-SW-A-A-1	11/2/18	1000	✓		2							1		1
110218-02-SW-A-B-1	11/2/18	1005	✓		2							1		1
110218-02-SW-A-C-1	11/2/18	1010	✓		13	2	2	1	1	1	1	1	3	1
110218-03-SW-D-A-1	11/2/18	0840	✓		2							1		1
110218-03-SW-D-B-1	11/2/18	0920	✓		2							1		1
110218-03-SW-D-C-1	11/2/18	0925	✓		13	2	2	1	1	1	1	1	3	1
110218-TB01-01	11/2/18	1330	✓		1								1	

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/4/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/2/18	1530			
				11/3/18	925

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.6°C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232056

Group Number(s): 2005448

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/03/2018 9:25
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:10 on 11/03/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.6	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 09, 2018 16:41

Project: Rensselaer

Account #: 04285
Group Number: 2006078
SDG: RNS40
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110518-01-SW-U-A-1 Grab Surface Water	11/05/2018 15:20	9884738
110518-01-SW-U-A-1 Grab Surface Water Filtered	11/05/2018 15:20	9884739
110518-02-SW-A-B-1 Grab Surface Water	11/05/2018 14:40	9884740
110518-02-SW-A-B-1MS Grab Surface Water	11/05/2018 14:40	9884741
110518-02-SW-A-B-1MSD Grab Surface Water	11/05/2018 14:40	9884742
110518-02-SW-A-B-1DUP Grab Surface Water	11/05/2018 14:40	9884743
110518-02-SW-A-B-1 Grab Surface Water Filtered	11/05/2018 14:40	9884744
110518-02-SW-A-B-1MS Grab Surface Water Filtered	11/05/2018 14:40	9884745
110518-02-SW-A-B-1MSD Grab Surface Water Filtered	11/05/2018 14:40	9884746
110518-02-SW-A-B-1DUP Grab Surface Water Filtered	11/05/2018 14:40	9884747
110518-03-SW-D-A-1 Grab Surface Water	11/05/2018 14:00	9884748
110518-03-SW-D-A-1 Grab Surface Water Filtered	11/05/2018 14:00	9884749
110518-TB01-01 Water	11/05/2018 16:30	9884750

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **110518-01-SW-U-A-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 15:20
SDG#: RNS40-01

BASF Corporation
ELLE Sample #: WW 9884738
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 14:16	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 14:16	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/08/2018 23:52	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-01-SW-U-A-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 15:20
SDG#: RNS40-01

BASF Corporation
ELLE Sample #: WW 9884738
ELLE Group #: 2006078
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:42	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 13:56	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-01-SW-U-A-1 Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 15:20
SDG#: RNS40-02

BASF Corporation
ELLE Sample #: WW 9884739
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.78 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:03	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:20	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 06:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03BKG

BASF Corporation
ELLE Sample #: WW 9884740
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	66,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 11:15	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 11:15	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:14	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03BKG

BASF Corporation
ELLE Sample #: WW 9884740
ELLE Group #: 2006078
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:24	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 14:04	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1MS Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03MS

BASF Corporation
ELLE Sample #: WW 9884741
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	19	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	19	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	19	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	19	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.11 D2	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	5.33 D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	9.44	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	49.5	0.70	4.0	1
06033	Copper	7440-50-8	50.8	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	520	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	149,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 11:41	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 11:41	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:25	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1MS Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03MS

BASF Corporation
ELLE Sample #: WW 9884741
ELLE Group #: 2006078
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 14:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1MSD Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03MSD

BASF Corporation
ELLE Sample #: WW 9884742
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	19	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	19	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	19	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	20	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.66 D2	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	5.22 D2	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	8.88	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.6	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	48.0	0.70	4.0	1
06033	Copper	7440-50-8	50.4	9.9	40.0	1
06035	Lead	7439-92-1	15.9	1.1	3.0	1
06049	Zinc	7440-66-6	509	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	148,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 12:06	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 12:06	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:36	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **110518-02-SW-A-B-1MSD Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03MSD

BASF Corporation
ELLE Sample #: WW 9884742
ELLE Group #: 2006078
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 14:21	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1DUP Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-03DUP

BASF Corporation
ELLE Sample #: WW 9884743
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:29	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 14:29	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1 Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-04BKG

BASF Corporation
ELLE Sample #: WW 9884744
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.74 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 03:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:03	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 06:50	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1MS Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-04MS

BASF Corporation
ELLE Sample #: WW 9884745
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.39 D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	6.18 D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	11.6	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.2	0.68	2.0	1
06028	Cadmium	7440-43-9	5.0	0.15	1.0	1
06031	Chromium	7440-47-3	48.1	0.70	4.0	1
06033	Copper	7440-50-8	48.2	9.9	40.0	1
06035	Lead	7439-92-1	15.3	1.1	3.0	1
06049	Zinc	7440-66-6	488	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.89	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 03:20	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:10	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 06:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1MSD Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-04MSD

BASF Corporation
ELLE Sample #: WW 9884746
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	5.17 D1	0.125	0.625	1
14188	PCB-1221	11104-28-2	N.D. D1	0.125	0.625	1
14188	PCB-1232	11141-16-5	N.D. D1	0.125	0.625	1
14188	PCB-1242	53469-21-9	N.D. D1	0.125	0.625	1
14188	PCB-1248	12672-29-6	N.D. D1	0.125	0.625	1
14188	PCB-1254	11097-69-1	N.D. D1	0.125	0.625	1
14188	PCB-1260	11096-82-5	6.13 D2	0.125	0.625	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0925	0.625	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0925	0.625	1
14188	Total PCBs	1336-36-3	11.3	0.0925	0.625	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.3	0.68	2.0	1
06028	Cadmium	7440-43-9	5.1	0.15	1.0	1
06031	Chromium	7440-47-3	48.2	0.70	4.0	1
06033	Copper	7440-50-8	50.5	9.9	40.0	1
06035	Lead	7439-92-1	15.4	1.1	3.0	1
06049	Zinc	7440-66-6	510	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.89	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 03:53	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:12	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 06:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-02-SW-A-B-1DUP Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:40
SDG#: RNS40-04DUP

BASF Corporation
ELLE Sample #: WW 9884747
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.78 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:08	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 06:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-03-SW-D-A-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:00
SDG#: RNS40-05

BASF Corporation
ELLE Sample #: WW 9884748
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D2	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.76 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.6 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 14:41	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 14:41	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 04:03	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-03-SW-D-A-1 Grab Surface Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:00
SDG#: RNS40-05

BASF Corporation
ELLE Sample #: WW 9884748
ELLE Group #: 2006078
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705001A	11/08/2018 05:44	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571401	11/08/2018 06:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705001	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571401	11/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 14:37	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110518-03-SW-D-A-1 Grab Surface Water Filtered**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 14:00
SDG#: RNS40-06

BASF Corporation
ELLE Sample #: WW 9884749
ELLE Group #: 2006078
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.8 J	0.68	2.0	1
06028	Cadmium	7440-43-9	0.28 J	0.15	1.0	1
06031	Chromium	7440-47-3	2.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 04:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183110705002A	11/08/2018 06:23	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183110571402	11/08/2018 07:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183110705002	11/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183110571402	11/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110518-TB01-01 Water**
COC: 568550

Project Name: **Rensselaer**

Submittal Date/Time: 11/06/2018 10:35
Collection Date/Time: 11/05/2018 16:30
SDG#: RNS40-07TB

BASF Corporation
ELLE Sample #: **WW 9884750**
ELLE Group #: **2006078**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183121AA	11/08/2018 15:07	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183121AA	11/08/2018 15:07	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2006078
Reported: 11/09/2018 16:41

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183121AA	Sample number(s): 9884738,9884740-9884742,9884748,9884750		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183110011A	Sample number(s): 9884738-9884742		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183110012A	Sample number(s): 9884744-9884746,9884748-9884749		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183110571401	Sample number(s): 9884738,9884740-9884743,9884748		
Mercury	N.D.	0.050	0.20
Batch number: 183110571402	Sample number(s): 9884739,9884744-9884747,9884749		
Mercury	N.D.	0.050	0.20
Batch number: 183110705001A	Sample number(s): 9884738,9884740-9884743,9884748		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 16:41

Group Number: 2006078

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183110705002A	Sample number(s): 9884739,9884744-9884747,9884749		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18311001101A	Sample number(s): 9884738,9884740-9884743,9884748		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183121AA	Sample number(s): 9884738,9884740-9884742,9884748,9884750								
Benzene	20	19.79			99		80-120		
Chlorobenzene	20	18.71			94		80-120		
1,2-Dichlorobenzene	20	18.92			95		80-120		
1,3-Dichlorobenzene	20	18.23			91		80-120		
1,4-Dichlorobenzene	20	18.92			95		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183110011A	Sample number(s): 9884738-9884742								
PCB-1016	5.01	2.98			60		50-140		
PCB-1260	5.00	4.07			81		50-140		
Batch number: 183110012A	Sample number(s): 9884744-9884746,9884748-9884749								
PCB-1016	5.01	3.81			76		50-140		
PCB-1260	5.00	5.09			102		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183110571401	Sample number(s): 9884738,9884740-9884743,9884748								
Mercury	1.00	0.886			89		85-115		
Batch number: 183110571402	Sample number(s): 9884739,9884744-9884747,9884749								
Mercury	1.00	0.867			87		85-115		
Batch number: 183110705001A	Sample number(s): 9884738,9884740-9884743,9884748								
Arsenic	10	9.18			92		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 16:41

Group Number: 2006078

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	4.99			100		85-115		
Chromium	50	46.83			94		85-115		
Copper	50	47.71			95		85-115		
Lead	15	14.65			98		85-115		
Zinc	500	491.53			98		85-115		
Batch number: 183110705002A	Sample number(s): 9884739,9884744-9884747,9884749								
Arsenic	10	10.18			102		85-115		
Cadmium	5.00	5.01			100		85-115		
Chromium	50	49.15			98		85-115		
Copper	50	47.84			96		85-115		
Lead	15	14.69			98		85-115		
Zinc	500	492.03			98		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18311001101A	Sample number(s): 9884738,9884740-9884743,9884748								
Total Hardness	40000	39410			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183121AA	Sample number(s): 9884738,9884740-9884742,9884748,9884750 UNSPK: 9884740									
Benzene	N.D.	20	21.01	20	21.52	105	108	80-120	2	30
Chlorobenzene	0.244	20	19.3	20	19.47	95	96	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	18.76	20	19.35	94	97	80-120	3	30
1,3-Dichlorobenzene	N.D.	20	18.98	20	19.13	95	96	80-120	1	30
1,4-Dichlorobenzene	N.D.	20	18.73	20	19.56	94	98	80-120	4	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183110011A	Sample number(s): 9884738-9884742 UNSPK: 9884740									
PCB-1016	N.D.	5.61	4.11	5.47	3.66	73	67	50-140	12	36
PCB-1260	N.D.	5.61	5.33	5.46	5.22	95	96	50-140	2	38
Batch number: 183110012A	Sample number(s): 9884744-9884746,9884748-9884749 UNSPK: 9884744									
PCB-1016	N.D.	5.88	5.39	6.26	5.17	92	83	50-140	4	36
PCB-1260	N.D.	5.87	6.18	6.25	6.13	105	98	50-140	1	38
	ug/l	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 16:41

Group Number: 2006078

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183110571401	Sample number(s): 9884738,9884740-9884743,9884748 UNSPK: 9884740									
Mercury	N.D.	1.00	0.897	1.00	0.901	90	90	80-120	0	20
Batch number: 183110571402	Sample number(s): 9884739,9884744-9884747,9884749 UNSPK: 9884744									
Mercury	N.D.	1.00	0.886	1.00	0.886	89	89	80-120	0	20
Batch number: 183110705001A	Sample number(s): 9884738,9884740-9884743,9884748 UNSPK: 9884740									
Arsenic	0.746	10	10.94	10	10.57	102	98	70-130	3	20
Cadmium	N.D.	5.00	5.08	5.00	4.87	102	97	70-130	4	20
Chromium	1.38	50	49.52	50	48.03	96	93	70-130	3	20
Copper	N.D.	50	50.82	50	50.43	102	101	70-130	1	20
Lead	1.31	15	16.22	15	15.88	99	97	70-130	2	20
Zinc	14.04	500	519.71	500	509.47	101	99	70-130	2	20
Batch number: 183110705002A	Sample number(s): 9884739,9884744-9884747,9884749 UNSPK: 9884744									
Arsenic	N.D.	10	10.25	10	10.31	102	103	70-130	1	20
Cadmium	N.D.	5.00	4.95	5.00	5.15	99	103	70-130	4	20
Chromium	0.738	50	48.12	50	48.21	95	95	70-130	0	20
Copper	N.D.	50	48.22	50	50.5	96	101	70-130	5	20
Lead	N.D.	15	15.25	15	15.44	102	103	70-130	1	20
Zinc	N.D.	500	488	500	510.4	98	102	70-130	4	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18311001101A	Sample number(s): 9884738,9884740-9884743,9884748 UNSPK: 9884740									
Total Hardness	65980	80000	149100	80000	147680	104	102	85-110	1	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183110571401	Sample number(s): 9884738,9884740-9884743,9884748 BKG: 9884740			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183110571402	Sample number(s): 9884739,9884744-9884747,9884749 BKG: 9884744			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183110705001A	Sample number(s): 9884738,9884740-9884743,9884748 BKG: 9884740			
Arsenic	0.746	0.746	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 16:41

Group Number: 2006078

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Chromium	1.38	1.49	8 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	1.31	1.28	3 (1)	20
Zinc	14.04	10.51	29* (1)	20
Batch number: 183110705002A	Sample number(s): 9884739,9884744-9884747,9884749 BKG: 9884744			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.738	0.783	6 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18311001101A	Sample number(s): 9884738,9884740-9884743,9884748 BKG: 9884740			
Total Hardness	65980	69280	5 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9884738	98	104	101	107
9884740	96	101	102	105
9884741	97	100	96	102
9884742	98	105	95	102
9884748	96	100	103	105
9884750	96	97	103	105
Blank	97	98	103	105
LCS	100	105	95	102
MS	97	100	96	102
MSD	98	105	95	102
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183110011A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/09/2018 16:41

Group Number: 2006078

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183110011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9884738	60	74	57	72
9884739	61	81	59	82
9884740	57	78	54	78
9884741	58	80	55	78
9884742	62	76	59	75
Blank	55	90	53	89
LCS	32*	66	30*	65
MS	58	80	55	78
MSD	62	76	59	75
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183110012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9884744	46	63	45	61
9884745	67	95	64	94
9884746	65	89	63	87
9884748	59	79	58	75
9884749	53	94	52	91
Blank	53	84	52	82
LCS	42	84	42	82
MS	67	95	64	94
MSD	65	89	63	87
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2006078 Sample # 9884738-50

COC # 568550

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patricia Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	FN Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130	Remarks
110518-01-SW-U-A-1	11/5/18	1520	✓		11	2	2	1	1	1	1		3		
110518-02-SW-A-B-1	11/5/18	1440	✓		33	6	6	3	3	3	3		9		MS/MSD
110518-03-SW-D-A-1	11/5/18	1400	✓		11	2	2	1	1	1	1		3		
110518-TB01-01	11/5/18	1630	✓		1								1		

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/7/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patti Hahn	11/5/18	1700			
			Mir	11/6/18	1035

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.5 | 1.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232219

Group Number(s): 2006078

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/06/2018 10:35
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 13:08 on 11/06/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.5	DT	Wet	Y	Bagged	N
2	DT146	1.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 13, 2018 13:16

Project: Rensselaer

Account #: 04285
Group Number: 2006492
SDG: RNS41
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110618-01-SW-U-B-1 Grab Surface Water	11/06/2018 14:05	9886720
110618-01-SW-U-B-1 Filtered Grab Surface Water	11/06/2018 14:05	9886721
110618-02-SW-A-A-1 Grab Surface Water	11/06/2018 13:30	9886722
110618-02-SW-A-A-1 Filtered Grab Surface Water	11/06/2018 13:30	9886723
110618-03-SW-D-A-1 Grab Surface Water	11/06/2018 12:25	9886724
110618-03-SW-D-A-1 Filtered Grab Surface Water	11/06/2018 12:25	9886725
110618-03-SW-D-A-2 Grab Surface Water	11/06/2018 12:40	9886726
110618-03-SW-D-A-2 Filtered Grab Surface Water	11/06/2018 12:40	9886727
110618-TB01-01 Water	11/06/2018 16:00	9886728

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **110618-01-SW-U-B-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 14:05
SDG#: RNS41-01

BASF Corporation
ELLE Sample #: WW 9886720
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D2	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	57,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183131AA	11/09/2018 14:04	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183131AA	11/09/2018 14:04	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:47	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-01-SW-U-B-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 14:05
SDG#: RNS41-01

BASF Corporation
ELLE Sample #: WW 9886720
ELLE Group #: 2006492
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:07	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 16:05	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110618-01-SW-U-B-1 Filtered Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 14:05
SDG#: RNS41-02

BASF Corporation
ELLE Sample #: WW 9886721
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 00:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:09	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-02-SW-A-A-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 13:30
SDG#: RNS41-03

BASF Corporation
ELLE Sample #: WW 9886722
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	61,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183131AA	11/09/2018 14:30	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183131AA	11/09/2018 14:30	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 01:09	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-02-SW-A-A-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 13:30
SDG#: RNS41-03

BASF Corporation
ELLE Sample #: WW 9886722
ELLE Group #: 2006492
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 19:54	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 16:14	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110618-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 13:30
SDG#: RNS41-04

BASF Corporation
ELLE Sample #: WW 9886723
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 01:42	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:15	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-03-SW-D-A-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:25
SDG#: RNS41-05

BASF Corporation
ELLE Sample #: WW 9886724
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.638	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.638	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.638	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.638	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.638	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.638	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.638	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0944	0.638	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0944	0.638	1
14188	Total PCBs	1336-36-3	N.D.	0.0944	0.638	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	63,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183131AA	11/09/2018 14:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183131AA	11/09/2018 14:56	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110011A	11/09/2018 01:53	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-03-SW-D-A-1 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:25
SDG#: RNS41-05

BASF Corporation
ELLE Sample #: WW 9886724
ELLE Group #: 2006492
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110011A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:17	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 16:21	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110618-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:25
SDG#: RNS41-06

BASF Corporation
ELLE Sample #: WW 9886725
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 04:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:20	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-03-SW-D-A-2 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:40
SDG#: RNS41-07FD

BASF Corporation
ELLE Sample #: WW 9886726
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	60,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183131AA	11/09/2018 15:22	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183131AA	11/09/2018 15:22	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 04:36	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **110618-03-SW-D-A-2 Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:40
SDG#: RNS41-07FD

BASF Corporation
ELLE Sample #: WW 9886726
ELLE Group #: 2006492
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:22	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18311001101A	11/07/2018 16:51	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110618-03-SW-D-A-2 Filtered Grab Surface Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 12:40
SDG#: RNS41-08FD

BASF Corporation
ELLE Sample #: WW 9886727
ELLE Group #: 2006492
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183110012A	11/09/2018 04:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183110012A	11/07/2018 16:37	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183120705001A	11/09/2018 20:24	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183160571403	11/13/2018 07:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183120705001	11/09/2018 03:49	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183120571401	11/09/2018 16:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183160571403	11/12/2018 16:45	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110618-TB01-01 Water**
COC: 568551

Project Name: **Rensselaer**

Submittal Date/Time: 11/07/2018 10:20
Collection Date/Time: 11/06/2018 16:00
SDG#: RNS41-09TB

BASF Corporation
ELLE Sample #: WW 9886728
ELLE Group #: 2006492
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183131AA	11/09/2018 15:47	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183131AA	11/09/2018 15:47	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:16

Group Number: 2006492

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183131AA	Sample number(s): 9886720,9886722,9886724,9886726,9886728		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183110011A	Sample number(s): 9886720-9886724		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183110012A	Sample number(s): 9886725-9886727		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183120705001A	Sample number(s): 9886720-9886727		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	7.0 J	6.2	15.0
Batch number: 183160571403	Sample number(s): 9886720-9886727		
Mercury	N.D.	0.050	0.20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:16

Group Number: 2006492

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 18311001101A	Sample number(s): 9886720,9886722,9886724,9886726		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183131AA	Sample number(s): 9886720,9886722,9886724,9886726,9886728								
Benzene	20	19.27			96		80-120		
Chlorobenzene	20	18.05			90		80-120		
1,2-Dichlorobenzene	20	18.62			93		80-120		
1,3-Dichlorobenzene	20	18.25			91		80-120		
1,4-Dichlorobenzene	20	18.35			92		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183110011A	Sample number(s): 9886720-9886724								
PCB-1016	5.01	2.98			60		50-140		
PCB-1260	5.00	4.07			81		50-140		
Batch number: 183110012A	Sample number(s): 9886725-9886727								
PCB-1016	5.01	3.81			76		50-140		
PCB-1260	5.00	5.09			102		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183120705001A	Sample number(s): 9886720-9886727								
Arsenic	10	10.26			103		85-115		
Cadmium	5.00	4.81			96		85-115		
Chromium	50	50.75			101		85-115		
Copper	50	51.34			103		85-115		
Lead	15	15.05			100		85-115		
Zinc	500	511.46			102		85-115		
Batch number: 183160571403	Sample number(s): 9886720-9886727								
Mercury	1.00	0.906			91		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18311001101A	Sample number(s): 9886720,9886722,9886724,9886726								
Total Hardness	40000	39410			99		85-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:16

Group Number: 2006492

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183120705001A	Sample number(s): 9886720-9886727 UNSPK: 9886722									
Arsenic	N.D.	10	10.87			109		70-130		
Cadmium	N.D.	5.00	5.12			102		70-130		
Chromium	N.D.	50	50.85			102		70-130		
Copper	N.D.	50	52.84			106		70-130		
Lead	N.D.	15	15.9			106		70-130		
Zinc	N.D.	500	510.65			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183120705001A	Sample number(s): 9886720-9886727 BKG: 9886722			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183131AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9886720	97	99	104	102
9886722	96	98	103	101
9886724	95	99	103	103
9886726	97	99	103	103
9886728	96	101	102	103
Blank	98	102	101	106
LCS	99	106	95	102

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:16

Group Number: 2006492

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183131AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183110011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9886720	57	75	55	74
9886721	56	80	56	78
9886722	56	78	56	81
9886723	62	94	61	88
9886724	62	85	59	84
Blank	55	90	53	89
LCS	32*	66	30*	65
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183110012A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9886725	65	93	62	90
9886726	59	89	58	86
9886727	61	91	58	91
Blank	53	84	52	82
LCS	42	84	42	82
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2006492 Sample # 9886720-28

COC # 568551

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 224608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	FN Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
110618-01-SW-U-B-1	11/6/18	1405	✓		11	2	2	1	1	1	1		3		
110618-02-SW-A-A-1	11/6/18	1330	✓		11	2	2	1	1	1	1		3		
110618-03-SW-D-A-1	11/6/18	1225	✓		11	2	2	1	1	1	1		3		
110618-03-SW-D-A-2	11/6/18	1240	✓		11	2	2	1	1	1	1		3		Duplicate
110618-TB01-01	11/6/18	1600	✓		1								1		

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

For Lab Use Only

FSC: ____

SCR#: ____

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/8/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/6/18	1700			
			[signature]	11/7/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232344

Group Number(s): 2006492

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/07/2018 10:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:11 on 11/07/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 13, 2018 13:18

Project: Rensselaer

Account #: 04285
Group Number: 2007047
SDG: RNS42
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110718-01-SW-U-A-1 Grab Surface Water	11/07/2018 08:45	9888784
110718-01-SW-U-A-1 Filtered Grab Surface Water	11/07/2018 08:45	9888785
110718-02-SW-A-A-1 Grab Surface Water	11/07/2018 08:25	9888786
110718-02-SW-A-A-1 Filtered Grab Surface Water	11/07/2018 08:25	9888787
110718-03-SW-D-A-1 Grab Surface Water	11/07/2018 07:55	9888788
110718-03-SW-D-A-1 Filtered Grab Surface Water	11/07/2018 07:55	9888789
110718-TB01-01 Water	11/07/2018 10:00	9888790

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **110718-01-SW-U-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:45
SDG#: RNS42-01

BASF Corporation
ELLE Sample #: WW 9888784
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.76 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.7 J	1.1	3.0	1
06049	Zinc	7440-66-6	20.8	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183162AA	11/12/2018 13:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183162AA	11/12/2018 13:44	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 17:49	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-01-SW-U-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:45
SDG#: RNS42-01

BASF Corporation
ELLE Sample #: WW 9888784
ELLE Group #: 2007047
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 21:14	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110718-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:45
SDG#: RNS42-02

BASF Corporation
ELLE Sample #: WW 9888785
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	16.3	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 18:00	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-02-SW-A-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:25
SDG#: RNS42-03

BASF Corporation
ELLE Sample #: WW 9888786
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.541	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.541	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.541	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.541	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.541	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.541	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.541	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0801	0.541	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0801	0.541	1
14188	Total PCBs	1336-36-3	N.D.	0.0801	0.541	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.69 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.6 J	1.1	3.0	1
06049	Zinc	7440-66-6	22.8	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	60,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183162AA	11/12/2018 14:10	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183162AA	11/12/2018 14:10	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 18:11	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-02-SW-A-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:25
SDG#: RNS42-03

BASF Corporation
ELLE Sample #: WW 9888786
ELLE Group #: 2007047
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 21:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110718-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 08:25
SDG#: RNS42-04

BASF Corporation
ELLE Sample #: WW 9888787
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.0	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 18:22	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:35	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-03-SW-D-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 07:55
SDG#: RNS42-05

BASF Corporation
ELLE Sample #: WW 9888788
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.6 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.7 J	1.1	3.0	1
06049	Zinc	7440-66-6	21.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183162AA	11/12/2018 14:35	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183162AA	11/12/2018 14:35	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 18:33	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-03-SW-D-A-1 Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 07:55
SDG#: RNS42-05

BASF Corporation
ELLE Sample #: WW 9888788
ELLE Group #: 2007047
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 22:04	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110718-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 07:55
SDG#: RNS42-06

BASF Corporation
ELLE Sample #: WW 9888789
ELLE Group #: 2007047
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	18.7	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183120032A	11/09/2018 18:44	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183120032A	11/08/2018 17:00	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183130705001A	11/12/2018 08:40	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183130571402	11/12/2018 12:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183130705001	11/11/2018 05:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183130571402	11/12/2018 08:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **110718-TB01-01 Water**
COC: 568552

Project Name: **Rensselaer**

Submittal Date/Time: 11/08/2018 10:10
Collection Date/Time: 11/07/2018 10:00
SDG#: RNS42-07TB

BASF Corporation
ELLE Sample #: WW 9888790
ELLE Group #: 2007047
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183162AA	11/12/2018 08:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183162AA	11/12/2018 08:08	Anita M Dale	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2007047
Reported: 11/13/2018 13:18

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183162AA	Sample number(s): 9888784,9888786,9888788,9888790		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183120032A	Sample number(s): 9888784-9888789		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183130571402	Sample number(s): 9888784-9888789		
Mercury	N.D.	0.050	0.20
Batch number: 183130705001A	Sample number(s): 9888784-9888789		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18314001101A	Sample number(s): 9888784,9888786,9888788		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:18

Group Number: 2007047

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183162AA	Sample number(s): 9888784,9888786,9888788,9888790								
Benzene	20	20.1			101		80-120		
Chlorobenzene	20	19.08			95		80-120		
1,2-Dichlorobenzene	20	19.39			97		80-120		
1,3-Dichlorobenzene	20	18.57			93		80-120		
1,4-Dichlorobenzene	20	18.95			95		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183120032A	Sample number(s): 9888784-9888789								
PCB-1016	5.01	4.13	5.01	4.16	82	83	50-140	1	36
PCB-1260	5.00	5.01	5.00	5.17	100	103	50-140	3	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183130571402	Sample number(s): 9888784-9888789								
Mercury	1.00	0.890			89		85-115		
Batch number: 183130705001A	Sample number(s): 9888784-9888789								
Arsenic	10	10.23			102		85-115		
Cadmium	5.00	5.20			104		85-115		
Chromium	50	50.42			101		85-115		
Copper	50	51.3			103		85-115		
Lead	15	15.41			103		85-115		
Zinc	500	509.29			102		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18314001101A	Sample number(s): 9888784,9888786,9888788								
Total Hardness	40000	39860			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183130571402	Sample number(s): 9888784-9888789 UNSPK: 9888786									
Mercury	N.D.	1.00	0.895			90		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18314001101A	Sample number(s): 9888784,9888786,9888788 UNSPK: 9888784									
Total Hardness	68340	80000	143140			94		85-110		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/13/2018 13:18

Group Number: 2007047

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183130571402	Sample number(s): 9888784-9888789 BKG: 9888786			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18314001101A	Sample number(s): 9888784,9888786,9888788 BKG: 9888784			
Total Hardness	68340	69220	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183162AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9888784	95	99	106	103
9888786	96	99	106	103
9888788	95	99	105	101
9888790	96	99	105	101
Blank	96	100	105	101
LCS	97	101	99	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183120032A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9888784	70	82	69	85
9888785	76	81	73	80
9888786	63	80	61	79
9888787	73	89	71	88
9888788	63	70	63	70
9888789	74	90	72	95
Blank	76	39	75	39
LCS	52	82	50	82
LCSD	45	96	45	93
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2007047
Reported: 11/13/2018 13:18

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2007047 Sample # 9888784-90

COC # 568552

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
110718-01-SW-U-A-1	11/7/18	0845	✓		11	2	2	1	1	1	1		3		
110718-02-SW-A-A-1	11/7/18	0825	✓		11	2	2	1	1	1	1		3		
110718-03-SW-D-A-1	11/7/18	0755	✓		11	2	2	1	1	1	1		3		
110718-TB01-01	11/7/18	1000	✓		1								1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/9/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patt Shaw	11/7/18	1200			
			Kristi Zeh	11/8/18	1010

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232518

Group Number(s): 2007047

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/08/2018 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kristin Zeigler (2123) at 11:19 on 11/08/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.9	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 16, 2018 13:34

Project: Rensselaer

Account #: 04285
Group Number: 2007679
SDG: RNS43
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
110818-01-SW-U-A-1 Grab Surface Water	11/08/2018 14:05	9891450
110818-01-SW-U-A-1 Filtered Grab Surface Water	11/08/2018 14:05	9891451
110818-02-SW-A-B-1 Grab Surface Water	11/08/2018 13:10	9891452
110818-02-SW-A-B-1 Filtered Grab Surface Water	11/08/2018 13:10	9891453
110818-03-SW-D-B-1 Grab Surface Water	11/08/2018 11:20	9891454
110818-03-SW-D-B-1 Filtered Grab Surface Water	11/08/2018 11:20	9891455
110818-TB01-01 Water	11/08/2018 17:00	9891456

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **110818-01-SW-U-A-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 14:05
SDG#: RNS43-01

BASF Corporation
ELLE Sample #: WW 9891450
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183171AA	11/13/2018 12:18	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183171AA	11/13/2018 12:18	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 22:15	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-01-SW-U-A-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 14:05
SDG#: RNS43-01

BASF Corporation
ELLE Sample #: WW 9891450
ELLE Group #: 2007679
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:29	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:29	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/16/2018 10:06	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:29	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:29	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:29	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 22:12	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110818-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 14:05
SDG#: RNS43-02

BASF Corporation
ELLE Sample #: WW 9891451
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D. K2	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 22:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/15/2018 14:50	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-02-SW-A-B-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 13:10
SDG#: RNS43-03

BASF Corporation
ELLE Sample #: WW 9891452
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.6 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183171AA	11/13/2018 12:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183171AA	11/13/2018 12:44	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 22:36	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-02-SW-A-B-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 13:10
SDG#: RNS43-03

BASF Corporation
ELLE Sample #: WW 9891452
ELLE Group #: 2007679
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/16/2018 10:09	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 22:19	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110818-02-SW-A-B-1 Filtered Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 13:10
SDG#: RNS43-04

BASF Corporation
ELLE Sample #: WW 9891453
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 23:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:40	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:40	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/15/2018 14:59	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:40	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:40	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-03-SW-D-B-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 11:20
SDG#: RNS43-05

BASF Corporation
ELLE Sample #: WW 9891454
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.9 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183171AA	11/13/2018 13:10	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183171AA	11/13/2018 13:10	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 23:18	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-03-SW-D-B-1 Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 11:20
SDG#: RNS43-05

BASF Corporation
ELLE Sample #: WW 9891454
ELLE Group #: 2007679
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:42	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:42	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/16/2018 10:11	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:42	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:42	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18314001101A	11/10/2018 22:27	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **110818-03-SW-D-B-1 Filtered Grab Surface Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 11:20
SDG#: RNS43-06

BASF Corporation
ELLE Sample #: WW 9891455
ELLE Group #: 2007679
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.539	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.539	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.539	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.539	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.539	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.539	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.539	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0797	0.539	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0797	0.539	1
14188	Total PCBs	1336-36-3	N.D.	0.0797	0.539	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183160008A	11/13/2018 23:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183160008A	11/12/2018 17:00	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:44	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:44	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705002A	11/15/2018 15:03	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:44	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:44	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183150705001A	11/13/2018 04:44	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183150571401	11/13/2018 08:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183150705001	11/12/2018 00:01	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183180705002	11/15/2018 03:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183150571401	11/12/2018 16:50	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **110818-TB01-01 Water**
COC: 568553

Project Name: **Rensselaer**

Submittal Date/Time: 11/09/2018 10:20
Collection Date/Time: 11/08/2018 17:00
SDG#: RNS43-07TB

BASF Corporation
ELLE Sample #: **WW 9891456**
ELLE Group #: **2007679**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183171AA	11/13/2018 08:25	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183171AA	11/13/2018 08:25	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/16/2018 13:34

Group Number: 2007679

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183171AA	Sample number(s): 9891450,9891452,9891454,9891456		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183160008A	Sample number(s): 9891450-9891455		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183150571401	Sample number(s): 9891450-9891455		
Mercury	N.D.	0.050	0.20
Batch number: 183150705001A	Sample number(s): 9891450-9891455		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183180705002A	Sample number(s): 9891450-9891455		
Chromium	N.D.	0.70	4.0
Batch number: 18314001101A	Sample number(s): 9891450,9891452,9891454		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/16/2018 13:34

Group Number: 2007679

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183171AA	Sample number(s): 9891450,9891452,9891454,9891456								
Benzene	20	20.23			101		80-120		
Chlorobenzene	20	18.67			93		80-120		
1,2-Dichlorobenzene	20	19.21			96		80-120		
1,3-Dichlorobenzene	20	18.46			92		80-120		
1,4-Dichlorobenzene	20	18.82			94		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183160008A	Sample number(s): 9891450-9891455								
PCB-1016	5.01	4.22	5.01	3.11	84	62	50-140	30	36
PCB-1260	5.00	4.65	5.00	2.98	93	60	50-140	44*	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183150571401	Sample number(s): 9891450-9891455								
Mercury	1.00	0.887			89		85-115		
Batch number: 183150705001A	Sample number(s): 9891450-9891455								
Arsenic	10	10.48			105		85-115		
Cadmium	5.00	5.31			106		85-115		
Copper	50	53.36			107		85-115		
Lead	15	15.43			103		85-115		
Zinc	500	537.64			108		85-115		
Batch number: 183180705002A	Sample number(s): 9891450-9891455								
Chromium	50	54.58			109		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18314001101A	Sample number(s): 9891450,9891452,9891454								
Total Hardness	40000	39860			100		85-110		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183171AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9891450	97	101	102	103
9891452	97	101	101	104
9891454	98	102	101	104
9891456	99	105	100	103

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/16/2018 13:34

Group Number: 2007679

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183171AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	97	101	102	103
LCS	97	102	95	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183160008A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9891450	66	78	64	84
9891451	75	86	72	91
9891452	71	75	67	86
9891453	77	82	75	86
9891454	75	75	74	80
9891455	73	81	72	89
Blank	76	85	74	91
LCS	72	51	71	53
LCSD	52	31	50	32
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 04285 Group # 2007679 Sample # 9891450-456

COC # 568553

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 22608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Potable	Ground	Surface	NPDES	Other:	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) FN	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
110818-01-SW-U-A-1	11/8/18	1405	✓					✓						11	2	2	1	1	1	1		3		
110818-02-SW-A-B-1	11/8/18	1310	✓					✓						11	2	2	1	1	1	1		3		
110818-03-SW-D-B-1	11/8/18	1126	✓					✓						11	2	2	1	1	1	1		3		
110818-TB01-01	11/8/18	1705	✓					✓						1								1		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/10/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
	11/8/18	1730			
				11/9/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS FedEx Other

Temperature upon receipt 0.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 232702

Group Number(s): 2007679 A: 04785

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/09/2018 10:20
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:14 on 11/09/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/11/19 – 11/19/19 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (7 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 11/11/19 through 11/19/19. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 25 NTU. The recorded values at the Site were comparable to the USGS maintained gage at the Port of Albany (maximum observed value less than 14 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1	0.03	23.7	3.3	1100
Buoy 2	0.0	17.5	2.0	1038
Buoy 3	1.2	12.5	5.5	663

Note:
Negative values (assumed to be erroneous readings) have been removed.

AECOM Imagine it. Delivered.

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978.905.2100 tel
978.905.2101 fax

Bulkhead Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/12/18 – 11/21/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (8 working days) to evaluate conditions within the river during the remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes field turbidity and chemistry data collected during the above referenced reporting period

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging during the period 11/12/18 through 11/21/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings). TSS and turbidity samples are no longer being collected.

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan. The chemical sampling/ monitoring lab reports are presented in Attachment A.

Over the reporting period, there were two low level exceedances of the water quality criteria (Table 1) for mercury and PCB Aroclor 1242 (whole water) which are not believed to be Site-related. Additionally, the paired filtered water sample returned a ND for all PCB Aroclors.

The field turbidity readings from the YSI 6920 sonde used during sampling are summarized below:

- Real-time turbidity observations at the Site were less than 30 NTU during this period (n=74), with an overall average of 9.8 NTU.
- The lower portion of the water column continued to have the highest turbidity (average 10.4 NTU). The middle and surficial horizon consistently had the lowest values (averages 9.6 and 9.5 NTU respectively).

Summary

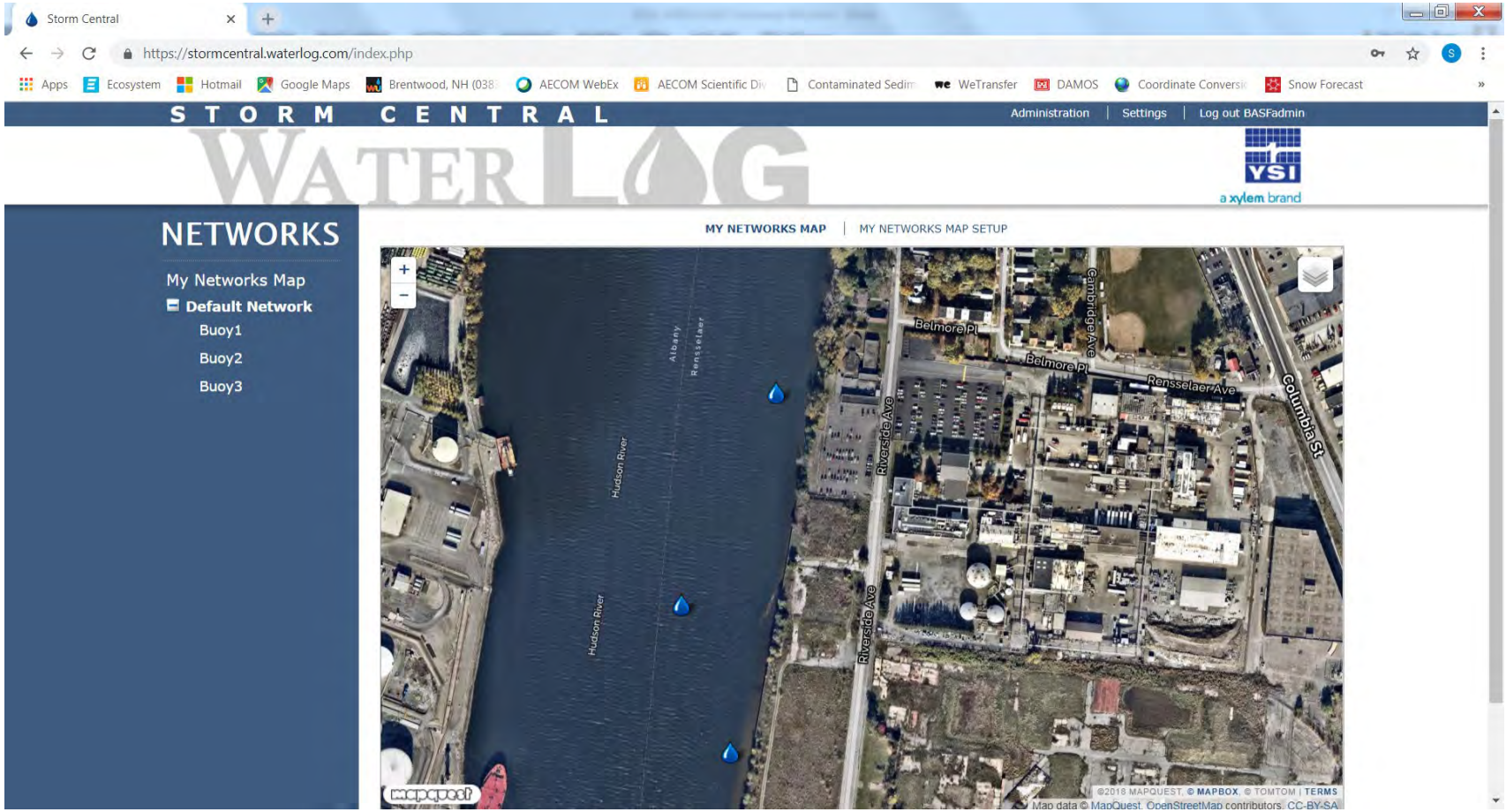
Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the remainder of bulkhead installation (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency will be reduced to collection of two samples per week. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the sheetpile installation.

Table 1: Water Quality Exceedances Summary

Sample ID	Analyte	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
111318-01-SW-U-C-1	AROCLOR-1242	T	µg/l	0.20	0.265	J D1	X
111318-01-SW-U-C-1	CHLOROBENZENE	T	µg/l	5.00	0.4	J	
111418-02-SW-A-C-1	ZINC	D	µg/l	13.77	7	J	
111218-02-SW-A-A-1	MERCURY	T	µg/l	0.05	0.072	J	X
111518-03-SW-D-A-1	ARSENIC	D	µg/l	150.00	0.95	J	
111518-03-SW-D-A-1	CHROMIUM, TOTAL	D	µg/l	158.08	1.2	J	

Notes:
J - Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
D1 - Indicates for dual column analyses that the result is reported from column 1

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 19, 2018 14:53

Project: Rensselaer

Account #: 04285
Group Number: 2008721
SDG: RNS45
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111218-01-SW-U-A-1 Grab Surface Water	11/12/2018 09:05	9896643
111218-01-SW-U-A-1 Grab Filtered Surface Water	11/12/2018 09:05	9896644
111218-02-SW-A-A-1 Grab Surface Water	11/12/2018 10:30	9896645
111218-02-SW-A-A-1 Grab Filtered Surface Water	11/12/2018 10:30	9896646
111218-03-SW-D-A-1 Grab Surface Water	11/12/2018 09:35	9896647
111218-03-SW-D-A-1 Grab Filtered Surface Water	11/12/2018 09:35	9896648
111218-TB01-01 Water	11/12/2018 12:30	9896649

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111218-01-SW-U-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:05
SDG#: RNS45-01

BASF Corporation
ELLE Sample #: WW 9896643
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.532	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.532	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.532	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.532	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.532	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.532	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.532	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0787	0.532	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0787	0.532	1
14188	Total PCBs	1336-36-3	N.D.	0.0787	0.532	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.3 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 07:33	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 07:33	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/14/2018 23:39	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-01-SW-U-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:05
SDG#: RNS45-01

BASF Corporation
ELLE Sample #: WW 9896643
ELLE Group #: 2008721
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:36	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 10:07	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111218-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:05
SDG#: RNS45-02

BASF Corporation
ELLE Sample #: WW 9896644
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.053 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/14/2018 23:50	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:39	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-02-SW-A-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 10:30
SDG#: RNS45-03

BASF Corporation
ELLE Sample #: WW 9896645
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.98 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.072 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 08:51	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 08:51	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/15/2018 00:00	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-02-SW-A-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 10:30
SDG#: RNS45-03

BASF Corporation
ELLE Sample #: WW 9896645
ELLE Group #: 2008721
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:26	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 10:31	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111218-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 10:30
SDG#: RNS45-04

BASF Corporation
ELLE Sample #: WW 9896646
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/15/2018 00:10	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-03-SW-D-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:35
SDG#: RNS45-05

BASF Corporation
ELLE Sample #: WW 9896647
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.104	0.521	1
14188	PCB-1221	11104-28-2	N.D. D1	0.104	0.521	1
14188	PCB-1232	11141-16-5	N.D. D1	0.104	0.521	1
14188	PCB-1242	53469-21-9	N.D. D1	0.104	0.521	1
14188	PCB-1248	12672-29-6	N.D. D1	0.104	0.521	1
14188	PCB-1254	11097-69-1	N.D. D1	0.104	0.521	1
14188	PCB-1260	11096-82-5	N.D. D1	0.104	0.521	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0771	0.521	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0771	0.521	1
14188	Total PCBs	1336-36-3	N.D.	0.0771	0.521	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.72 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 09:16	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 09:16	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/15/2018 00:21	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-03-SW-D-A-1 Grab Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:35
SDG#: RNS45-05

BASF Corporation
ELLE Sample #: WW 9896647
ELLE Group #: 2008721
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:47	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 10:39	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111218-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 09:35
SDG#: RNS45-06

BASF Corporation
ELLE Sample #: WW 9896648
ELLE Group #: 2008721
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183170029A	11/15/2018 00:31	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183170029A	11/13/2018 20:15	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183180705003A	11/15/2018 13:49	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183190571401	11/17/2018 06:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183180705003	11/15/2018 03:27	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571401	11/16/2018 10:35	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111218-TB01-01 Water**
COC: 568555

Project Name: **Rensselaer**

Submittal Date/Time: 11/13/2018 10:50
Collection Date/Time: 11/12/2018 12:30
SDG#: RNS45-07TB

BASF Corporation
ELLE Sample #: WW 9896649
ELLE Group #: 2008721
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 07:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 07:08	Anita M Dale	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation Group Number: 2008721
Reported: 11/19/2018 14:53

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183192AA	Sample number(s): 9896643,9896645,9896647,9896649		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183170029A	Sample number(s): 9896643-9896648		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183180705003A	Sample number(s): 9896643-9896648		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183190571401	Sample number(s): 9896643-9896648		
Mercury	N.D.	0.050	0.20
Batch number: 18319001101A	Sample number(s): 9896643,9896645,9896647		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:53

Group Number: 2008721

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183192AA	Sample number(s): 9896643,9896645,9896647,9896649								
Benzene	20	19.6			98		80-120		
Chlorobenzene	20	19.33			97		80-120		
1,2-Dichlorobenzene	20	19.74			99		80-120		
1,3-Dichlorobenzene	20	18.51			93		80-120		
1,4-Dichlorobenzene	20	19.72			99		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183170029A	Sample number(s): 9896643-9896648								
PCB-1016	5.01	3.41	5.01	3.58	68	71	50-140	5	36
PCB-1260	5.00	3.35	5.00	3.58	67	72	50-140	7	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183180705003A	Sample number(s): 9896643-9896648								
Arsenic	10	10.62			106		85-115		
Cadmium	5.00	5.17			103		85-115		
Chromium	50	52.96			106		85-115		
Copper	50	54.46			109		85-115		
Lead	15	15.34			102		85-115		
Zinc	500	534.03			107		85-115		
Batch number: 183190571401	Sample number(s): 9896643-9896648								
Mercury	1.00	0.995			99		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18319001101A	Sample number(s): 9896643,9896645,9896647								
Total Hardness	40000	40070			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183192AA	Sample number(s): 9896643,9896645,9896647,9896649 UNSPK: 9896643									
Benzene	N.D.	20	21.71	20	21.55	109	108	80-120	1	30
Chlorobenzene	N.D.	20	20.82	20	20.73	104	104	80-120	0	30
1,2-Dichlorobenzene	N.D.	20	20.96	20	21.03	105	105	80-120	0	30
1,3-Dichlorobenzene	N.D.	20	20.28	20	19.16	101	96	80-120	6	30
1,4-Dichlorobenzene	N.D.	20	20.87	20	21.81	104	109	80-120	4	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:53

Group Number: 2008721

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183180705003A	Sample number(s): 9896643-9896648 UNSPK: 9896645									
Arsenic	N.D.	10	10.75			108		70-130		
Cadmium	N.D.	5.00	5.12			102		70-130		
Chromium	0.976	50	54.54			107		70-130		
Copper	N.D.	50	55			110		70-130		
Lead	N.D.	15	16.52			110		70-130		
Zinc	N.D.	500	527.69			106		70-130		
Batch number: 183190571401	Sample number(s): 9896643-9896648 UNSPK: 9896643									
Mercury	N.D.	1.00	1.02			102		80-120		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18319001101A	Sample number(s): 9896643,9896645,9896647 UNSPK: 9896643									
Total Hardness	69880	80000	148480			98		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183180705003A	Sample number(s): 9896643-9896648 BKG: 9896645			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.976	1.16	17 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183190571401	Sample number(s): 9896643-9896648 BKG: 9896643			
Mercury	N.D.	0.0579	200* (1)	20
	ug/l	ug/l		
Batch number: 18319001101A	Sample number(s): 9896643,9896645,9896647 BKG: 9896643			
Total Hardness	69880	72440	4 (1)	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:53

Group Number: 2008721

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183192AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9896643	94	99	106	103
9896645	95	100	105	102
9896647	96	101	105	103
9896649	96	98	105	102
Blank	95	99	106	102
LCS	96	103	98	100
MS	96	99	98	100
MSD	96	101	98	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183170029A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9896643	68	69	68	77
9896644	64	72	64	82
9896645	70	69	69	76
9896646	62	71	62	77
9896647	57	61	56	66
9896648	67	73	66	79
Blank	65	31	66	33
LCS	56	32	55	34
LCSD	55	33	56	37
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 200872 Sample # 989643-49

COC # 568555

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	BN Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
111218-01-SW-U-A-1	11/12/18	0905	✓		11	2	2	1	1	1	1		3	
111218-02-SW-A-A-1	11/12/18	1036	✓		11	2	2	1	1	1	1		3	
111218-03-SW-D-A-1	11/12/18	0935	✓		11	2	2	1	1	1	1		3	
111218-TB01-01	11/12/18	1230	✓		1								1	

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/14/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/12/18	1245			
			[signature]	11/13/18	10:50

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233090

Group Number(s): 2008721

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/13/2018 10:50
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	PA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 12:16 on 11/13/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 19, 2018 14:56

Project: Rensselaer

Account #: 04285
Group Number: 2009193
SDG: RNS46
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111318-01-SW-U-C-1 Grab Surface Water	11/13/2018 13:50	9899017
111318-01-SW-U-C-1 Grab Surface Water	11/13/2018 13:50	9899018
111318-02-SW-A-B-1 Grab Surface Water	11/13/2018 14:30	9899019
111318-02-SW-A-B-1 Grab Surface Water	11/13/2018 14:30	9899020
111318-03-SW-D-A-1 Grab Surface Water	11/13/2018 14:55	9899021
111318-03-SW-D-A-1 Grab Surface Water	11/13/2018 14:55	9899022
111318-03-SW-D-A-2 Grab Surface Water	11/13/2018 15:15	9899023
111318-03-SW-D-A-2 Grab Surface Water	11/13/2018 15:15	9899024
111318-TB01-01 Water	11/13/2018 16:30	9899025

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111318-01-SW-U-C-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 13:50
SDG#: RNS46-01

BASF Corporation
ELLE Sample #: WW 9899017
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	0.265 JD1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	0.265 J	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.9 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.9 J	1.1	3.0	1
06049	Zinc	7440-66-6	7.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 09:42	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 09:42	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:02	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-01-SW-U-C-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 13:50
SDG#: RNS46-01

BASF Corporation
ELLE Sample #: WW 9899017
ELLE Group #: 2009193
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:40	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 06:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 11:07	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111318-01-SW-U-C-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 13:50
SDG#: RNS46-02

BASF Corporation
ELLE Sample #: WW 9899018
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:13	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:42	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 06:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-02-SW-A-B-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:30
SDG#: RNS46-03

BASF Corporation
ELLE Sample #: WW 9899019
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 10:08	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 10:08	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:24	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-02-SW-A-B-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:30
SDG#: RNS46-03

BASF Corporation
ELLE Sample #: WW 9899019
ELLE Group #: 2009193
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:47	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 11:15	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111318-02-SW-A-B-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:30
SDG#: RNS46-04

BASF Corporation
ELLE Sample #: WW 9899020
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:35	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:49	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-03-SW-D-A-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:55
SDG#: RNS46-05

BASF Corporation
ELLE Sample #: WW 9899021
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 10:34	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 10:34	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:46	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111318-03-SW-D-A-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:55
SDG#: RNS46-05

BASF Corporation
ELLE Sample #: WW 9899021
ELLE Group #: 2009193
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 11:23	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111318-03-SW-D-A-1 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 14:55
SDG#: RNS46-06

BASF Corporation
ELLE Sample #: WW 9899022
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 17:57	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-03-SW-D-A-2 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 15:15
SDG#: RNS46-07FD

BASF Corporation
ELLE Sample #: WW 9899023
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.83 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	67,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 10:59	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 10:59	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 18:08	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-03-SW-D-A-2 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 15:15
SDG#: RNS46-07FD

BASF Corporation
ELLE Sample #: WW 9899023
ELLE Group #: 2009193
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18319001101A	11/15/2018 11:30	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111318-03-SW-D-A-2 Grab Surface Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 15:15
SDG#: RNS46-08FD

BASF Corporation
ELLE Sample #: WW 9899024
ELLE Group #: 2009193
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183180039A	11/15/2018 18:40	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183180039A	11/14/2018 17:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183190705002A	11/19/2018 09:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183190571402	11/17/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183190705002	11/16/2018 16:05	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183190571402	11/16/2018 08:10	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **111318-TB01-01 Water**
COC: 568556

Project Name: **Rensselaer**

Submittal Date/Time: 11/14/2018 10:20
Collection Date/Time: 11/13/2018 16:30
SDG#: RNS46-09TB

BASF Corporation
ELLE Sample #: WW 9899025
ELLE Group #: 2009193
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183192AA	11/15/2018 11:25	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183192AA	11/15/2018 11:25	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:56

Group Number: 2009193

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183192AA	Sample number(s): 9899017,9899019,9899021,9899023,9899025		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183180039A	Sample number(s): 9899017-9899024		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183190571402	Sample number(s): 9899017-9899024		
Mercury	N.D.	0.050	0.20
Batch number: 183190705002A	Sample number(s): 9899017-9899024		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	1.1 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18319001101A	Sample number(s): 9899017,9899019,9899021,9899023		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:56

Group Number: 2009193

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183192AA	Sample number(s): 9899017,9899019,9899021,9899023,9899025								
Benzene	20	19.6			98		80-120		
Chlorobenzene	20	19.33			97		80-120		
1,2-Dichlorobenzene	20	19.74			99		80-120		
1,3-Dichlorobenzene	20	18.51			93		80-120		
1,4-Dichlorobenzene	20	19.72			99		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183180039A	Sample number(s): 9899017-9899024								
PCB-1016	5.01	4.25	5.01	4.28	85	85	50-140	1	36
PCB-1260	5.00	4.58	5.00	4.39	92	88	50-140	4	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183190571402	Sample number(s): 9899017-9899024								
Mercury	1.00	0.880			88		85-115		
Batch number: 183190705002A	Sample number(s): 9899017-9899024								
Arsenic	10	10.21			102		85-115		
Cadmium	5.00	5.09			102		85-115		
Chromium	50	53.55			107		85-115		
Copper	50	51.37			103		85-115		
Lead	15	15.34			102		85-115		
Zinc	500	518.46			104		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18319001101A	Sample number(s): 9899017,9899019,9899021,9899023								
Total Hardness	40000	40070			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183190571402	Sample number(s): 9899017-9899024 UNSPK: 9899017									
Mercury	N.D.	1.00	0.891			89		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/19/2018 14:56

Group Number: 2009193

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183190571402	Sample number(s): 9899017-9899024 BKG: 9899017			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183192AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9899017	95	99	105	102
9899019	95	100	104	102
9899021	95	98	105	103
9899023	96	101	105	102
9899025	95	100	106	101
Blank	95	99	106	102
LCS	96	103	98	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183180039A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9899017	68	82	67	82
9899018	67	84	66	89
9899019	60	75	58	75
9899020	65	90	64	89
9899021	65	84	63	78
9899022	74	89	70	92
9899023	64	82	62	81
9899024	67	90	65	90
Blank	60	86	60	87
LCS	52	85	49	85
LCSD	50	85	48	84
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2009193 Sample # 9899017-25

COC # 568556

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Cf:Hand)	F PCBs (Unf:Hand)	F,N Metals (Cf:Hand)	N Metals (Unf:Hand)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130	Remarks
111318-01-SW-U-C-1	11/13/18	1350	✓		11	2	2	1	1	1	1		3		
111318-02-SW-A-B-1	11/13/18	1430	✓		11	2	2	1	1	1	1		3		
111318-03-SW-D-A-1	11/13/18	1455	✓		11	2	2	1	1	1	1		3		
111318-03-SW-D-A-2	11/13/18	1585	✓		11	2	2	1	1	1	1		3		duplicate
111318-TB01-01	11/13/18	1630	✓		1								1		

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/15/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/13/18	1645			
			[signature]	11/14/18	1020

EDD Required? (Yes) No
If yes, format: per contract
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.9-1.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233248

Group Number(s): 2009193

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/14/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:41 on 11/14/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.4	DT	Wet	Y	Bagged	N
2	DT42-03	0.9	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 21, 2018 09:59

Project: Rensselaer

Account #: 04285
Group Number: 2009750
SDG: RNS47
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111418-01-SW-U-A-1 Grab Surface Water	11/14/2018 10:50	9901715
111418-01-SW-U-A-1 Grab Surface Water	11/14/2018 10:50	9901716
111418-02-SW-A-C-1 Grab Surface Water	11/14/2018 09:45	9901717
111418-02-SW-A-C-1 Grab Surface Water	11/14/2018 09:45	9901718
111418-03-SW-D-B-1 Grab Surface Water	11/14/2018 10:05	9901719
111418-03-SW-D-B-1 Grab Surface Water	11/14/2018 10:05	9901720
111418-TB01-01 Water	11/14/2018 14:00	9901721

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111418-01-SW-U-A-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:50
SDG#: RNS47-01

BASF Corporation
ELLE Sample #: WW 9901715
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.92 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	62,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183232AA	11/19/2018 08:01	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183232AA	11/19/2018 08:00	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 14:39	Richard A Shober	1

*=This limit was used in the evaluation of the final result

Sample Description: **111418-01-SW-U-A-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:50
SDG#: RNS47-01

BASF Corporation
ELLE Sample #: WW 9901715
ELLE Group #: 2009750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:13	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 07:36	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111418-01-SW-U-A-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:50
SDG#: RNS47-02

BASF Corporation
ELLE Sample #: WW 9901716
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 14:50	Richard A Shober	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:18	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **111418-02-SW-A-C-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 09:45
SDG#: RNS47-03

BASF Corporation
ELLE Sample #: WW 9901717
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	62,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183232AA	11/19/2018 09:19	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183232AA	11/19/2018 09:18	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 15:01	Richard A Shober	1

*=This limit was used in the evaluation of the final result

Sample Description: **111418-02-SW-A-C-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 09:45
SDG#: RNS47-03

BASF Corporation
ELLE Sample #: WW 9901717
ELLE Group #: 2009750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:20	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 08:00	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111418-02-SW-A-C-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 09:45
SDG#: RNS47-04

BASF Corporation
ELLE Sample #: WW 9901718
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 15:12	Richard A Shober	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:21	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **111418-03-SW-D-B-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:05
SDG#: RNS47-05

BASF Corporation
ELLE Sample #: WW 9901719
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	62,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183232AA	11/19/2018 09:44	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183232AA	11/19/2018 09:43	Anita M Dale	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 15:23	Richard A Shober	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111418-03-SW-D-B-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:05
SDG#: RNS47-05

BASF Corporation
ELLE Sample #: WW 9901719
ELLE Group #: 2009750
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:23	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 08:08	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111418-03-SW-D-B-1 Grab Surface Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 10:05
SDG#: RNS47-06

BASF Corporation
ELLE Sample #: WW 9901720
ELLE Group #: 2009750
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183200003A	11/20/2018 15:34	Richard A Shober	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183200003A	11/16/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183200705001A	11/19/2018 08:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183200571401	11/19/2018 10:39	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183200705001	11/18/2018 05:10	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183200571401	11/19/2018 05:39	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **111418-TB01-01 Water**
COC: 568557

Project Name: **Rensselaer**

Submittal Date/Time: 11/15/2018 11:40
Collection Date/Time: 11/14/2018 14:00
SDG#: RNS47-07TB

BASF Corporation
ELLE Sample #: WW 9901721
ELLE Group #: 2009750
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183232AA	11/19/2018 07:35	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183232AA	11/19/2018 07:34	Anita M Dale	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/21/2018 09:59

Group Number: 2009750

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183232AA	Sample number(s): 9901715,9901717,9901719,9901721		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183200003A	Sample number(s): 9901715-9901720		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183200571401	Sample number(s): 9901715-9901720		
Mercury	N.D.	0.050	0.20
Batch number: 183200705001A	Sample number(s): 9901715-9901720		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18323001101A	Sample number(s): 9901715,9901717,9901719		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/21/2018 09:59

Group Number: 2009750

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183232AA	Sample number(s): 9901715,9901717,9901719,9901721								
Benzene	20	19.81			99		80-120		
Chlorobenzene	20	18.97			95		80-120		
1,2-Dichlorobenzene	20	19.17			96		80-120		
1,3-Dichlorobenzene	20	18.32			92		80-120		
1,4-Dichlorobenzene	20	19.24			96		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183200003A	Sample number(s): 9901715-9901720								
PCB-1016	5.01	5.07	5.01	5.05	101	101	50-140	0	36
PCB-1260	5.00	5.22	5.00	4.97	104	99	50-140	5	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183200571401	Sample number(s): 9901715-9901720								
Mercury	1.00	0.866			87		85-115		
Batch number: 183200705001A	Sample number(s): 9901715-9901720								
Arsenic	10	9.58			96		85-115		
Cadmium	5.00	4.90			98		85-115		
Chromium	50	51.96			104		85-115		
Copper	50	49.76			100		85-115		
Lead	15	15.15			101		85-115		
Zinc	500	488.82			98		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18323001101A	Sample number(s): 9901715,9901717,9901719								
Total Hardness	40000	39930	40000	39800	100	100	85-110	0	3

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183232AA	Sample number(s): 9901715,9901717,9901719,9901721 UNSPK: 9901715									
Benzene	N.D.	20	21.58	20	22	108	110	80-120	2	30
Chlorobenzene	N.D.	20	20.36	20	20.61	102	103	80-120	1	30
1,2-Dichlorobenzene	N.D.	20	20.7	20	20.73	104	104	80-120	0	30
1,3-Dichlorobenzene	N.D.	20	19.55	20	19.97	98	100	80-120	2	30
1,4-Dichlorobenzene	N.D.	20	20.63	20	20.35	103	102	80-120	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/21/2018 09:59

Group Number: 2009750

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183200571401	Sample number(s): 9901715-9901720 UNSPK: 9901715									
Mercury	N.D.	1.00	0.892			89		80-120		
Batch number: 183200705001A	Sample number(s): 9901715-9901720 UNSPK: 9901720									
Arsenic	N.D.	10	10.8			108		70-130		
Cadmium	N.D.	5.00	5.07			101		70-130		
Chromium	N.D.	50	51.74			103		70-130		
Copper	N.D.	50	53.1			106		70-130		
Lead	N.D.	15	15.52			103		70-130		
Zinc	N.D.	500	509.91			102		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18323001101A	Sample number(s): 9901715,9901717,9901719 UNSPK: 9901715									
Total Hardness	62600	80000	139000			96		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183200571401	Sample number(s): 9901715-9901720 BKG: 9901715			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183200705001A	Sample number(s): 9901715-9901720 BKG: 9901720			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18323001101A	Sample number(s): 9901715,9901717,9901719 BKG: 9901715			
Total Hardness	62600	62140	1 (1)	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/21/2018 09:59

Group Number: 2009750

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183232AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9901715	96	98	104	101
9901717	96	99	105	103
9901719	95	99	105	102
9901721	95	97	105	102
Blank	95	100	105	103
LCS	97	102	99	101
MS	96	102	98	101
MSD	96	101	97	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183200003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9901715	74	60	84	59
9901716	77	77	76	75
9901717	73	79	70	77
9901718	73	84	72	80
9901719	63	71	59	69
9901720	73	80	71	80
Blank	71	54	70	52
LCS	81	82	78	82
LCSD	83	64	80	63
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2009750 Sample # 990175-21

COC # 568557

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ___

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
111418-01-SW-U-A-1	11/14/18	1050	✓		11	2	2	1	1	1	1		3	
111418-02-SW-A-C-1	11/14/18	0945	✓		11	2	2	1	1	1	1		3	
111418-03-SW-D-B-1	11/14/18	1005	✓		11	2	2	1	1	1	1		3	
111418-TB01-01	11/14/18	1400	✓		1								1	

For Lab Use Only
FSC: ___
SCR#: ___

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/16/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/14/18	1500			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	11-15-18	1140

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ___ FedEx ___ Other ___

Temperature upon receipt 4.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233421

Group Number(s): 2009750

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/15/2018 11:40
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Christopher Stief (12429) at 13:11 on 11/15/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	4.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 26, 2018 11:38

Project: Rensselaer

Account #: 04285
Group Number: 2010450
SDG: RNS48
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111618-01-SW-U-C-1 Grab Surface Water	11/16/2018 10:50	9904769
111618-01-SW-U-C-1 Grab Filtered Surface Water	11/16/2018 10:50	9904770
111618-02-SW-A-A-1 Grab Surface Water	11/16/2018 10:05	9904771
111618-02-SW-A-A-1 Grab Filtered Surface Water	11/16/2018 10:05	9904772
111618-03-SW-D-C-1 Grab Surface Water	11/16/2018 09:10	9904773
111618-03-SW-D-C-1 Grab Filtered Surface Water	11/16/2018 09:10	9904774
111618-01-SW-U-A-3 Grab Surface Water	11/16/2018 12:00	9904775
111618-01-SW-U-A-3 Grab Filtered Surface Water	11/16/2018 12:00	9904776
111618-TB01-01 Water	11/16/2018 14:00	9904777

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111618-01-SW-U-C-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:50
SDG#: RNS48-01

BASF Corporation
ELLE Sample #: WW 9904769
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D2	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183233AA	11/20/2018 00:55	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183233AA	11/20/2018 00:54	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:26	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-01-SW-U-C-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:50
SDG#: RNS48-01

BASF Corporation
ELLE Sample #: WW 9904769
ELLE Group #: 2010450
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:11	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 09:58	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111618-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:50
SDG#: RNS48-02

BASF Corporation
ELLE Sample #: WW 9904770
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:24	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-02-SW-A-A-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:05
SDG#: RNS48-03

BASF Corporation
ELLE Sample #: WW 9904771
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183233AA	11/20/2018 01:21	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183233AA	11/20/2018 01:20	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:46	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-02-SW-A-A-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:05
SDG#: RNS48-03

BASF Corporation
ELLE Sample #: WW 9904771
ELLE Group #: 2010450
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:29	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 10:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111618-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 10:05
SDG#: RNS48-04

BASF Corporation
ELLE Sample #: WW 9904772
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-03-SW-D-C-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 09:10
SDG#: RNS48-05

BASF Corporation
ELLE Sample #: WW 9904773
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183233AA	11/20/2018 01:47	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183233AA	11/20/2018 01:46	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 18:07	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111618-03-SW-D-C-1 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 09:10
SDG#: RNS48-05

BASF Corporation
ELLE Sample #: WW 9904773
ELLE Group #: 2010450
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 10:15	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111618-03-SW-D-C-1 Grab Filtered Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 09:10
SDG#: RNS48-06

BASF Corporation
ELLE Sample #: WW 9904774
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 18:39	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:34	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-01-SW-U-A-3 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 12:00
SDG#: RNS48-07

BASF Corporation
ELLE Sample #: WW 9904775
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	10,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183233AA	11/20/2018 02:13	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183233AA	11/20/2018 02:12	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 18:50	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111618-01-SW-U-A-3 Grab Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 12:00
SDG#: RNS48-07

BASF Corporation
ELLE Sample #: WW 9904775
ELLE Group #: 2010450
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18323001101A	11/19/2018 10:27	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-01-SW-U-A-3 Grab Filtered Surface Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 12:00
SDG#: RNS48-08

BASF Corporation
ELLE Sample #: WW 9904776
ELLE Group #: 2010450
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.5 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 19:00	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183220705002A	11/20/2018 15:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183220705002	11/19/2018 03:17	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111618-TB01-01 Water**
COC: 568559

Project Name: **Rensselaer**

Submittal Date/Time: 11/17/2018 09:50
Collection Date/Time: 11/16/2018 14:00
SDG#: RNS48-09TB

BASF Corporation
ELLE Sample #: WW 9904777
ELLE Group #: 2010450
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183233AA	11/19/2018 20:36	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183233AA	11/19/2018 20:35	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2010450
Reported: 11/26/2018 11:38

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183233AA	Sample number(s): 9904769,9904771,9904773,9904775,9904777		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183230029A	Sample number(s): 9904769-9904776		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183220705002A	Sample number(s): 9904769-9904776		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183240571402	Sample number(s): 9904769-9904774		
Mercury	N.D.	0.050	0.20
Batch number: 183240571403	Sample number(s): 9904775-9904776		
Mercury	N.D.	0.050	0.20
Batch number: 18323001101A	Sample number(s): 9904769,9904771,9904773,9904775		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:38

Group Number: 2010450

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183233AA	Sample number(s): 9904769,9904771,9904773,9904775,9904777								
Benzene	20	20.18			101		80-120		
Chlorobenzene	20	18.55			93		80-120		
1,2-Dichlorobenzene	20	19.18			96		80-120		
1,3-Dichlorobenzene	20	18.67			93		80-120		
1,4-Dichlorobenzene	20	18.77			94		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183230029A	Sample number(s): 9904769-9904776								
PCB-1016	5.01	3.82			76		50-140		
PCB-1260	5.00	4.80			96		50-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183220705002A	Sample number(s): 9904769-9904776								
Arsenic	10	9.87			99		85-115		
Cadmium	5.00	4.85			97		85-115		
Chromium	50	49.96			100		85-115		
Copper	50	50.65			101		85-115		
Lead	15	15.39			103		85-115		
Zinc	500	506.89			101		85-115		
Batch number: 183240571402	Sample number(s): 9904769-9904774								
Mercury	1.00	0.941			94		85-115		
Batch number: 183240571403	Sample number(s): 9904775-9904776								
Mercury	1.00	0.910			91		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18323001101A	Sample number(s): 9904769,9904771,9904773,9904775								
Total Hardness	40000	39930	40000	39800	100	100	85-110	0	3

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183220705002A	Sample number(s): 9904769-9904776 UNSPK: 9904769									
Arsenic	N.D.	10	10.67			107		70-130		
Cadmium	N.D.	5.00	4.90			98		70-130		
Chromium	N.D.	50	49.43			99		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:38

Group Number: 2010450

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	51.64			103		70-130		
Lead	N.D.	15	15.83			106		70-130		
Zinc	N.D.	500	505.64			101		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183220705002A	Sample number(s): 9904769-9904776 BKG: 9904769			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183233AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9904769	99	101	101	102
9904771	98	99	102	103
9904773	96	100	102	103
9904775	96	98	101	103
9904777	97	101	101	104
Blank	98	101	102	104
LCS	98	98	95	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183230029A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2010450
Reported: 11/26/2018 11:38

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183230029A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9904769	65	82	63	82
9904770	70	94	68	89
9904771	71	84	69	81
9904772	73	90	70	88
9904773	69	83	69	81
9904774	70	92	68	89
9904775	78	99	76	96
9904776	69	98	66	93
Blank	67	87	63	83
LCS	56	90	54	86
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2010452 Sample # 9904769-77

COC # 568559

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Lfiltered) F	PCBs (unfiltered)	Metals (Lfiltered) F	Metals (unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
111618-01-SW-U-C-1	11/16/18	1050	✓		11	2	2	1	1	1	1		3		
111618-02-SW-A-A-1	11/16/18	1005	✓		11	2	2	1	1	1	1		3		
111618-03-SW-D-C-1	11/16/18	0910	✓		11	2	2	1	1	1	1		3		
111618-01-SW-U-A-3	11/16/18	1200	✓		11	2	2	1	1	1	1		3		
111618-TB01-01	11/16/18	1400	✓										1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/18/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	11/16/18	1430			
			Mike	11/17/18	0956

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx X Other ____

Temperature upon receipt 1.9 | 2.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233668

Group Number(s): 2010450

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/17/2018 9:50
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:02 on 11/17/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	1.9	IR	Wet	Y	Bagged	N
2	DT146	2.9	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 26, 2018 11:40

Project: Rensselaer

Account #: 04285
Group Number: 2010638
SDG: RNS49
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111518-01-SW-U-A-1 Grab Surface Water	11/15/2018 09:15	9905690
111518-01-SW-U-A-1 Grab Surface Water Filtered	11/15/2018 09:15	9905691
111518-02-SW-A-A-1 Grab Surface Water	11/15/2018 07:55	9905692
111518-02-SW-A-A-1 Grab Surface Water Filtered	11/15/2018 07:55	9905693
111518-03-SW-D-A-1 Grab Surface Water	11/15/2018 08:25	9905694
111518-03-SW-D-A-1MS Grab Surface Water	11/15/2018 08:25	9905695
111518-03-SW-D-A-1MSD Grab Surface Water	11/15/2018 08:25	9905696
111518-03-SW-D-A-1DUP Grab Surface Water	11/15/2018 08:25	9905697
111518-03-SW-D-A-1 Grab Surface Water Filtered	11/15/2018 08:25	9905698
111518-03-SW-D-A-1MS Grab Surface Water Filtered	11/15/2018 08:25	9905699
111518-03-SW-D-A-1MSD Grab Surface Water Filtered	11/15/2018 08:25	9905700
111518-03-SW-D-A-1DUP Grab Surface Water Filtered	11/15/2018 08:25	9905701
111518-TB01-01 Water	11/15/2018 14:00	9905702

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111518-01-SW-U-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 09:15
SDG#: RNS49-01

BASF Corporation
ELLE Sample #: WW 9905690
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	N.D.	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.71 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 14:03	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 14:02	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 19:11	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-01-SW-U-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 09:15
SDG#: RNS49-01

BASF Corporation
ELLE Sample #: WW 9905690
ELLE Group #: 2010638
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:23	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:17	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-01-SW-U-A-1 Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 09:15
SDG#: RNS49-02

BASF Corporation
ELLE Sample #: WW 9905691
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 21:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-02-SW-A-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 07:55
SDG#: RNS49-03

BASF Corporation
ELLE Sample #: WW 9905692
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.80 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	66,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 14:25	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 14:24	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 21:36	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-02-SW-A-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 07:55
SDG#: RNS49-03

BASF Corporation
ELLE Sample #: WW 9905692
ELLE Group #: 2010638
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:25	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-02-SW-A-A-1 Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 07:55
SDG#: RNS49-04

BASF Corporation
ELLE Sample #: WW 9905693
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 21:47	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:34	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05BKG

BASF Corporation
ELLE Sample #: WW 9905694
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D2	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.92 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 13:00	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 12:59	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 16:54	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111518-03-SW-D-A-1 Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05BKG

BASF Corporation
ELLE Sample #: WW 9905694
ELLE Group #: 2010638
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 12:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705001	11/20/2018 05:06	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:32	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1MS Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05MS

BASF Corporation
ELLE Sample #: WW 9905695
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	23	0.2	1	1
11997	Chlorobenzene	108-90-7	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	21	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	21	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.75 D2	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	5.70 D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	10.4	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.7	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	55.7	0.70	4.0	1
06033	Copper	7440-50-8	56.9	9.9	40.0	1
06035	Lead	7439-92-1	16.4	1.1	3.0	1
06049	Zinc	7440-66-6	557	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.92	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	148,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 13:21	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 13:20	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:04	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111518-03-SW-D-A-1MS Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05MS

BASF Corporation
ELLE Sample #: WW 9905695
ELLE Group #: 2010638
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705001	11/20/2018 05:06	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:41	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1MSD Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05MSD

BASF Corporation
ELLE Sample #: WW 9905696
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	23	0.2	1	1
11997	Chlorobenzene	108-90-7	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	21	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	21	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.93 D2	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	5.53 D2	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	10.5	0.0881	0.595	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.4	0.68	2.0	1
06028	Cadmium	7440-43-9	5.4	0.15	1.0	1
06031	Chromium	7440-47-3	56.1	0.70	4.0	1
06033	Copper	7440-50-8	56.7	9.9	40.0	1
06035	Lead	7439-92-1	16.5	1.1	3.0	1
06049	Zinc	7440-66-6	551	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.93	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	147,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 13:43	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 13:42	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230029A	11/20/2018 17:15	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **111518-03-SW-D-A-1MSD Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05MSD

BASF Corporation
ELLE Sample #: WW 9905696
ELLE Group #: 2010638
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230029A	11/19/2018 20:45	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 13:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705001	11/20/2018 05:06	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:49	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1DUP Grab Surface Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-05DUP

BASF Corporation
ELLE Sample #: WW 9905697
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.76 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705001A	11/20/2018 12:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571402	11/21/2018 13:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705001	11/20/2018 05:06	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571402	11/21/2018 09:05	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18324001101A	11/20/2018 10:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1 Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-06BKG

BASF Corporation
ELLE Sample #: WW 9905698
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.95 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 21:57	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:10	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1MS Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-06MS

BASF Corporation
ELLE Sample #: WW 9905699
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.55 D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	5.95 D2	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	10.5	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.3	0.68	2.0	1
06028	Cadmium	7440-43-9	5.4	0.15	1.0	1
06031	Chromium	7440-47-3	54.7	0.70	4.0	1
06033	Copper	7440-50-8	56.2	9.9	40.0	1
06035	Lead	7439-92-1	16.1	1.1	3.0	1
06049	Zinc	7440-66-6	544	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.93	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 22:08	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:17	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1MSD Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-06MSD

BASF Corporation
ELLE Sample #: WW 9905700
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.43 D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	5.79 D2	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	10.2	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.8	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	56.1	0.70	4.0	1
06033	Copper	7440-50-8	56.3	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	550	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.88	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183230030A	11/20/2018 22:19	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183230030A	11/19/2018 20:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:19	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-03-SW-D-A-1DUP Grab Surface Water Filtered**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 08:25
SDG#: RNS49-06DUP

BASF Corporation
ELLE Sample #: WW 9905701
ELLE Group #: 2010638
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.72 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183240705002A	11/20/2018 12:15	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183240571403	11/21/2018 13:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183240705002	11/20/2018 05:04	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183240571403	11/21/2018 09:05	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **111518-TB01-01 Water**
COC: 568558

Project Name: **Rensselaer**

Submittal Date/Time: 11/19/2018 09:45
Collection Date/Time: 11/15/2018 14:00
SDG#: RNS49-07TB

BASF Corporation
ELLE Sample #: **WW 9905702**
ELLE Group #: **2010638**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		ug/l	ug/l	ug/l	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183241AA	11/20/2018 12:39	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183241AA	11/20/2018 12:38	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2010638
Reported: 11/26/2018 11:40

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183241AA	Sample number(s): 9905690,9905692,9905694-9905696,9905702		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183230029A	Sample number(s): 9905690,9905694-9905696		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183230030A	Sample number(s): 9905691-9905693,9905698-9905700		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183240571402	Sample number(s): 9905694-9905697		
Mercury	N.D.	0.050	0.20
Batch number: 183240571403	Sample number(s): 9905690-9905693,9905698-9905701		
Mercury	N.D.	0.050	0.20
Batch number: 183240705001A	Sample number(s): 9905694-9905697		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:40

Group Number: 2010638

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183240705002A	Sample number(s): 9905690-9905693,9905698-9905701		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18324001101A	Sample number(s): 9905690,9905692,9905694-9905697		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5183241AA	Sample number(s): 9905690,9905692,9905694-9905696,9905702								
Benzene	20	20.87	20	20.97	104	105	80-120	0	30
Chlorobenzene	20	20.39	20	20.29	102	101	80-120	1	30
1,2-Dichlorobenzene	20	20.12	20	19.74	101	99	80-120	2	30
1,3-Dichlorobenzene	20	19.97	20	19.61	100	98	80-120	2	30
1,4-Dichlorobenzene	20	20.29	20	19.8	101	99	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183230029A	Sample number(s): 9905690,9905694-9905696								
PCB-1016	5.01	3.82			76		50-140		
PCB-1260	5.00	4.80			96		50-140		
Batch number: 183230030A	Sample number(s): 9905691-9905693,9905698-9905700								
PCB-1016	5.01	4.21			84		50-140		
PCB-1260	5.00	4.70			94		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183240571402	Sample number(s): 9905694-9905697								
Mercury	1.00	0.941			94		85-115		
Batch number: 183240571403	Sample number(s): 9905690-9905693,9905698-9905701								
Mercury	1.00	0.910			91		85-115		
Batch number: 183240705001A	Sample number(s): 9905694-9905697								
Arsenic	10	11.02			110		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:40

Group Number: 2010638

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.54			111		85-115		
Chromium	50	56.14			112		85-115		
Copper	50	56.71			113		85-115		
Lead	15	16.01			107		85-115		
Zinc	500	557.09			111		85-115		
Batch number: 183240705002A	Sample number(s): 9905690-9905693,9905698-9905701								
Arsenic	10	11.1			111		85-115		
Cadmium	5.00	5.05			101		85-115		
Chromium	50	53			106		85-115		
Copper	50	54.06			108		85-115		
Lead	15	15.16			101		85-115		
Zinc	500	538.97			108		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18324001101A	Sample number(s): 9905690,9905692,9905694-9905697								
Total Hardness	40000	39020			98		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5183241AA	Sample number(s): 9905690,9905692,9905694-9905696,9905702 UNSPK: 9905694									
Benzene	N.D.	20	22.51	20	22.81	113	114	80-120	1	30
Chlorobenzene	N.D.	20	21.85	20	22.22	109	111	80-120	2	30
1,2-Dichlorobenzene	N.D.	20	21.01	20	21.19	105	106	80-120	1	30
1,3-Dichlorobenzene	N.D.	20	20.76	20	21.32	104	107	80-120	3	30
1,4-Dichlorobenzene	N.D.	20	21.09	20	21.33	105	107	80-120	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183230029A	Sample number(s): 9905690,9905694-9905696 UNSPK: 9905694									
PCB-1016	N.D.	5.69	4.75	5.96	4.93	83	83	50-140	4	36
PCB-1260	N.D.	5.68	5.70	5.95	5.53	100	93	50-140	3	38
Batch number: 183230030A	Sample number(s): 9905691-9905693,9905698-9905700 UNSPK: 9905698									
PCB-1016	N.D.	5.77	4.55	5.88	4.43	79	75	50-140	3	36
PCB-1260	N.D.	5.76	5.95	5.87	5.79	103	99	50-140	3	38
	ug/l	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:40

Group Number: 2010638

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183240571402	Sample number(s): 9905694-9905697 UNSPK: 9905694									
Mercury	N.D.	1.00	0.923	1.00	0.930	92	93	80-120	1	20
Batch number: 183240571403	Sample number(s): 9905690-9905693,9905698-9905701 UNSPK: 9905698									
Mercury	N.D.	1.00	0.930	1.00	0.879	93	88	80-120	6	20
Batch number: 183240705001A	Sample number(s): 9905694-9905697 UNSPK: 9905694									
Arsenic	N.D.	10	11.7	10	11.38	117	114	70-130	3	20
Cadmium	N.D.	5.00	5.21	5.00	5.39	104	108	70-130	3	20
Chromium	0.917	50	55.71	50	56.07	110	110	70-130	1	20
Copper	N.D.	50	56.86	50	56.71	114	113	70-130	0	20
Lead	N.D.	15	16.42	15	16.48	109	110	70-130	0	20
Zinc	N.D.	500	557.37	500	550.67	111	110	70-130	1	20
Batch number: 183240705002A	Sample number(s): 9905690-9905693,9905698-9905701 UNSPK: 9905698									
Arsenic	0.949	10	11.27	10	10.82	103	99	70-130	4	20
Cadmium	N.D.	5.00	5.38	5.00	5.25	108	105	70-130	2	20
Chromium	1.22	50	54.7	50	56.13	107	110	70-130	3	20
Copper	N.D.	50	56.15	50	56.29	112	113	70-130	0	20
Lead	N.D.	15	16.1	15	16.16	107	108	70-130	0	20
Zinc	N.D.	500	544.11	500	549.55	109	110	70-130	1	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18324001101A	Sample number(s): 9905690,9905692,9905694-9905697 UNSPK: 9905694									
Total Hardness	68900	80000	148480	80000	146600	99	97	85-110	1	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183240571402	Sample number(s): 9905694-9905697 BKG: 9905694			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183240571403	Sample number(s): 9905690-9905693,9905698-9905701 BKG: 9905698			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183240705001A	Sample number(s): 9905694-9905697 BKG: 9905694			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:40

Group Number: 2010638

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Chromium	0.917	0.762	18 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183240705002A	Sample number(s): 9905690-9905693,9905698-9905701 BKG: 9905698			
Arsenic	0.949	0.715	28* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.22	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18324001101A	Sample number(s): 9905690,9905692,9905694-9905697 BKG: 9905694			
Total Hardness	68900	68900	0 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183241AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9905690	101	99	95	98
9905692	100	101	95	97
9905694	101	103	96	97
9905695	101	103	95	102
9905696	101	100	96	103
9905702	100	100	94	96
Blank	99	101	95	97
LCS	101	100	96	102
LCSD	100	101	95	101
MS	101	103	95	102
MSD	101	100	96	103
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183230029A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/26/2018 11:40

Group Number: 2010638

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183230029A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9905690	66	83	64	80
9905694	64	76	61	71
9905695	61	82	60	79
9905696	53	77	50	74
Blank	67	87	63	83
LCS	56	90	54	86
MS	61	82	60	79
MSD	53	77	50	74
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183230030A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9905691	61	84	59	84
9905692	66	81	65	78
9905693	64	89	62	88
9905698	68	87	66	85
9905699	66	89	64	88
9905700	61	83	60	84
Blank	68	64	66	64
LCS	68	47	67	47
MS	66	89	64	88
MSD	61	83	60	84
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 11285 Group # 2010638 Sample # 9905690-702

COC # 568558

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
111518-01-SW-U-A-1	11/15/18	0915	✓		11	2	2	1	1	1	1		3		
111518-02-SW-A-A-1	11/15/18	0755	✓		11	2	2	1	1	1	1		3		
111518-03-SW-D-A-1	11/15/18	0825	✓		31	6	6	3	3	3	1		9		MS/MSD
111518-TB01-01	11/15/18	1400	✓		1								1		

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/17/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/15/18	1500			

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature upon receipt _____ °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233724

Group Number(s): 2010638

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/19/2018 9:45
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kristin Zeigler (2123) at 10:31 on 11/19/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.4	DT	Wet	Y	Bagged	N
2	DT42-01	1.3	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
111518-02-SW-A-A-1	11/15/2018 08:25	lid says -03
111518-03-SW-D-A-1	11/15/2018 07:55	lid says -02

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 28, 2018 13:05

Project: Rensselaer

Account #: 04285
Group Number: 2011483
SDG: RNS50
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
111918-01-SW-U-B-1 Grab Surface Water	11/19/2018 10:50	9909317
111918-01-SW-U-B-1 Grab Filtered Surface Water	11/19/2018 10:50	9909318
111918-02-SW-A-A-1 Grab Surface Water	11/19/2018 10:20	9909319
111918-02-SW-A-A-1 Grab Filtered Surface Water	11/19/2018 10:20	9909320
111918-03-SW-U-A-1 Grab Surface Water	11/19/2018 09:35	9909321
111918-03-SW-U-A-1 Grab Filtered Surface Water	11/19/2018 09:35	9909322
111918-TB01-01 Water	11/19/2018 13:30	9909323

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **111918-01-SW-U-B-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:50
SDG#: RNS50-01

BASF Corporation
ELLE Sample #: WW 9909317
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.71 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183281AA	11/24/2018 14:52	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183281AA	11/24/2018 14:51	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 16:22	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-01-SW-U-B-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:50
SDG#: RNS50-01

BASF Corporation
ELLE Sample #: WW 9909317
ELLE Group #: 2011483
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:08	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 06:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329001101A	11/25/2018 16:19	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111918-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:50
SDG#: RNS50-02

BASF Corporation
ELLE Sample #: WW 9909318
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 16:33	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:18	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 06:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-02-SW-A-A-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:20
SDG#: RNS50-03

BASF Corporation
ELLE Sample #: WW 9909319
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183281AA	11/24/2018 15:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183281AA	11/24/2018 15:17	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 16:43	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-02-SW-A-A-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:20
SDG#: RNS50-03

BASF Corporation
ELLE Sample #: WW 9909319
ELLE Group #: 2011483
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:21	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 06:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329001101A	11/25/2018 16:27	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111918-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 10:20
SDG#: RNS50-04

BASF Corporation
ELLE Sample #: WW 9909320
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 16:54	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:23	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 07:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-03-SW-U-A-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 09:35
SDG#: RNS50-05

BASF Corporation
ELLE Sample #: WW 9909321
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183281AA	11/24/2018 15:44	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183281AA	11/24/2018 15:43	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 17:04	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-03-SW-U-A-1 Grab Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 09:35
SDG#: RNS50-05

BASF Corporation
ELLE Sample #: WW 9909321
ELLE Group #: 2011483
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:29	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 07:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329001101A	11/25/2018 16:51	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **111918-03-SW-U-A-1 Grab Filtered Surface Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 09:35
SDG#: RNS50-06

BASF Corporation
ELLE Sample #: WW 9909322
ELLE Group #: 2011483
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183250018A	11/26/2018 17:15	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183250018A	11/25/2018 14:28	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705002A	11/28/2018 06:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571401	11/27/2018 07:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705002	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571401	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **111918-TB01-01 Water**
COC: 568560

Project Name: **Rensselaer**

Submittal Date/Time: 11/21/2018 11:00
Collection Date/Time: 11/19/2018 13:30
SDG#: RNS50-07TB

BASF Corporation
ELLE Sample #: **WW 9909323**
ELLE Group #: **2011483**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183281AA	11/24/2018 13:08	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183281AA	11/24/2018 13:07	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/28/2018 13:05

Group Number: 2011483

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183281AA	Sample number(s): 9909317,9909319,9909321,9909323		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183250018A	Sample number(s): 9909317-9909322		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183300571401	Sample number(s): 9909317-9909322		
Mercury	N.D.	0.050	0.20
Batch number: 183300705002A	Sample number(s): 9909317-9909322		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18329001101A	Sample number(s): 9909317,9909319,9909321		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/28/2018 13:05

Group Number: 2011483

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183281AA	Sample number(s): 9909317,9909319,9909321,9909323								
Benzene	20	19.91	20	19.66	100	98	80-120	1	30
Chlorobenzene	20	18.61	20	18.07	93	90	80-120	3	30
1,2-Dichlorobenzene	20	19.31	20	18.73	97	94	80-120	3	30
1,3-Dichlorobenzene	20	18.93	20	18.08	95	90	80-120	5	30
1,4-Dichlorobenzene	20	18.98	20	18.17	95	91	80-120	4	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183250018A	Sample number(s): 9909317-9909322								
PCB-1016	5.01	4.03	5.01	4.38	81	88	50-140	8	36
PCB-1260	5.00	4.38	5.00	4.37	88	87	50-140	0	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183300571401	Sample number(s): 9909317-9909322								
Mercury	1.00	0.915			91		85-115		
Batch number: 183300705002A	Sample number(s): 9909317-9909322								
Arsenic	10	10.47			105		85-115		
Cadmium	5.00	5.13			103		85-115		
Chromium	50	51.74			103		85-115		
Copper	50	52.24			104		85-115		
Lead	15	15.48			103		85-115		
Zinc	500	520.2			104		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18329001101A	Sample number(s): 9909317,9909319,9909321								
Total Hardness	40000	39430			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183300705002A	Sample number(s): 9909317-9909322 UNSPK: 9909317									
Arsenic	0.714	10	11.03			103		70-130		
Cadmium	N.D.	5.00	5.54			111		70-130		
Chromium	N.D.	50	67.16			134*		70-130		
Copper	N.D.	50	57.62			115		70-130		
Lead	N.D.	15	16.31			109		70-130		
Zinc	N.D.	500	552.13			110		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/28/2018 13:05

Group Number: 2011483

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18329001101A	Sample number(s): 9909317,9909319,9909321 UNSPK: 9909319									
Total Hardness	75180	80000	154940			100		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183300705002A	Sample number(s): 9909317-9909322 BKG: 9909317			
Arsenic	0.714	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18329001101A	Sample number(s): 9909317,9909319,9909321 BKG: 9909319			
Total Hardness	75180	72700	3 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183281AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9909317	96	97	104	103
9909319	97	100	103	104
9909321	97	99	103	103
9909323	96	100	103	103
Blank	97	98	103	104
LCS	97	102	96	101

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/28/2018 13:05

Group Number: 2011483

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183281AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCSD	98	101	97	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183250018A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9909317	71	79	71	80
9909318	74	81	75	79
9909319	65	74	66	73
9909320	63	80	64	76
9909321	69	79	71	77
9909322	62	77	60	75
Blank	67	39	70	40
LCS	64	82	66	81
LCSD	69	70	70	70
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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11/21/18 @ CB
12671 48 4285

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 48 4285 Group # 2011483 Sample # 9909317-23

COC # 568560

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	FN Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
111918-01-SW-U-B-1	11/19/18	1050	✓		= 2	2	1	1	1	1		3		
111918-02-SW-A-A-1	11/19/18	1020	✓		11	2	2	1	1	1	1		3		
111918-03-SW-U-A-1	11/19/18	0935	✓		11	2	2	1	1	1	1		3		
111918-TB01-01	11/19/18	1330	✓		1								1	

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/21/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/19/18	1630			
			[signature]	11/21/18	11100

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 233990

Group Number(s): 2011483

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/21/2018 11:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 12:32 on 11/21/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 29, 2018 14:04

Project: Rensselaer

Account #: 04285
Group Number: 2011929
SDG: RNS51
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112018-01-SW-U-A-1 Grab Surface Water	11/20/2018 08:50	9911081
112018-01-SW-U-A-1 Grab Filtered Surface Water	11/20/2018 08:50	9911082
112018-02-SW-A-A-1 Grab Surface Water	11/20/2018 10:00	9911083
112018-02-SW-A-A-1 Grab Filtered Surface Water	11/20/2018 10:00	9911084
112018-03-SW-D-C-1 Grab Surface Water	11/20/2018 11:30	9911085
112018-03-SW-D-C-1 Grab Filtered Surface Water	11/20/2018 11:30	9911086
112018-TB01-01 Water	11/20/2018 13:30	9911087

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112018-01-SW-U-A-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 08:50
SDG#: RNS51-01

BASF Corporation
ELLE Sample #: WW 9911081
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 20:27	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 20:26	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 14:56	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-01-SW-U-A-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 08:50
SDG#: RNS51-01

BASF Corporation
ELLE Sample #: WW 9911081
ELLE Group #: 2011929
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 20:36	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112018-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 08:50
SDG#: RNS51-02

BASF Corporation
ELLE Sample #: WW 9911082
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 15:07	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-02-SW-A-A-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 10:00
SDG#: RNS51-03

BASF Corporation
ELLE Sample #: WW 9911083
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	90,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 20:49	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 20:48	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 15:18	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-02-SW-A-A-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 10:00
SDG#: RNS51-03

BASF Corporation
ELLE Sample #: WW 9911083
ELLE Group #: 2011929
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 20:44	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112018-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 10:00
SDG#: RNS51-04

BASF Corporation
ELLE Sample #: WW 9911084
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 15:28	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:24	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-03-SW-D-C-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 11:30
SDG#: RNS51-05

BASF Corporation
ELLE Sample #: WW 9911085
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 21:11	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 21:10	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 15:38	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-03-SW-D-C-1 Grab Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 11:30
SDG#: RNS51-05

BASF Corporation
ELLE Sample #: WW 9911085
ELLE Group #: 2011929
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 04:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 20:52	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112018-03-SW-D-C-1 Grab Filtered Surface Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 11:30
SDG#: RNS51-06

BASF Corporation
ELLE Sample #: WW 9911086
ELLE Group #: 2011929
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300010A	11/27/2018 16:10	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300010A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705003A	11/28/2018 05:01	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571402	11/27/2018 07:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705003	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571402	11/26/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112018-TB01-01 Water**
COC: 568561

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/20/2018 13:30
SDG#: RNS51-07TB

BASF Corporation
ELLE Sample #: WW 9911087
ELLE Group #: 2011929
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 19:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 19:34	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/29/2018 14:04

Group Number: 2011929

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183311AA	Sample number(s): 9911081,9911083,9911085,9911087		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183300010A	Sample number(s): 9911081-9911086		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183300571402	Sample number(s): 9911081-9911086		
Mercury	N.D.	0.050	0.20
Batch number: 183300705003A	Sample number(s): 9911081-9911086		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	52.9	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18329002102A	Sample number(s): 9911081,9911083,9911085		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/29/2018 14:04

Group Number: 2011929

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183311AA	Sample number(s): 9911081,9911083,9911085,9911087								
Benzene	20	20.11	20	19.7	101	98	80-120	2	30
Chlorobenzene	20	18.83	20	18.67	94	93	80-120	1	30
1,2-Dichlorobenzene	20	19.39	20	19.13	97	96	80-120	1	30
1,3-Dichlorobenzene	20	18.91	20	18.43	95	92	80-120	3	30
1,4-Dichlorobenzene	20	18.68	20	18.54	93	93	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183300010A	Sample number(s): 9911081-9911086								
PCB-1016	5.01	4.17	5.01	4.24	83	85	50-140	2	36
PCB-1260	5.00	4.49	5.00	4.61	90	92	50-140	2	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183300571402	Sample number(s): 9911081-9911086								
Mercury	1.00	0.871			87		85-115		
Batch number: 183300705003A	Sample number(s): 9911081-9911086								
Arsenic	10	9.57			96		85-115		
Cadmium	5.00	5.04			101		85-115		
Chromium	50	52.66			105		85-115		
Copper	50	51.01			102		85-115		
Lead	15	15.36			102		85-115		
Zinc	500	509.17			102		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18329002102A	Sample number(s): 9911081,9911083,9911085								
Total Hardness	40000	39510			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183300705003A	Sample number(s): 9911081-9911086 UNSPK: 9911084									
Arsenic	N.D.	10	10.33			103		70-130		
Cadmium	N.D.	5.00	5.15			103		70-130		
Chromium	N.D.	50	51.43			103		70-130		
Copper	N.D.	50	51.94			104		70-130		
Lead	N.D.	15	15.41			103		70-130		
Zinc	N.D.	500	509.84			102		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/29/2018 14:04

Group Number: 2011929

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18329002102A	Sample number(s): 9911081,9911083,9911085 UNSPK: 9911085									
Total Hardness	75200	80000	157340			103		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183300705003A	Sample number(s): 9911081-9911086 BKG: 9911084			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	4.96	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18329002102A	Sample number(s): 9911081,9911083,9911085 BKG: 9911085			
Total Hardness	75200	76800	2 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9911081	98	103	104	101
9911083	99	103	103	102
9911085	98	102	103	102
9911087	98	101	104	100
Blank	98	104	104	103
LCS	99	104	96	100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/29/2018 14:04

Group Number: 2011929

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCSD	98	103	97	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183300010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9911081	71	78	72	79
9911082	62	74	65	75
9911083	67	82	68	77
9911084	73	85	73	84
9911085	70	78	72	76
9911086	72	85	72	82
Blank	68	82	72	77
LCS	61	71	63	69
LCSD	55	79	57	78
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 201929 Sample # 991081-87

COC # 568561

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water	Potable	Ground	NPDES	Surface	Other:	Total # of Containers	PCBs (Filtered)	PCBs (unfiltered)	Metals (Filtered)	Metals (unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130
															F		F,N	N	N	N		H	
112018-01-SW-U-A-1	11/20/18	0850	✓					✓						11	2	2	1	1	1	1		3	
112018-02-SW-A-A-1	11/20/18	1000	✓					✓						11	2	2	1	1	1	1		3	
112018-03-SW-D-C-1	11/20/18	1130	✓					✓						11	2	2	1	1	1	1		3	
112018-TB01-01	11/20/18	1330	✓					✓						1								1	

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/22/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Date	Time		Date	Time
Relinquished by: Patrick Gehan	11/20/18	1530	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:	11/23/18	0930

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234104

Group Number(s): 201929

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/23/2018 9:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 10:53 on 11/23/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: November 30, 2018 10:39

Project: Rensselaer

Account #: 04285
Group Number: 2011930
SDG: RNS52
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112118-01-SW-U-A-1 Grab Surface Water	11/21/2018 08:45	9911088
112118-01-SW-U-A-1 Grab Filtered Surface Water	11/21/2018 08:45	9911089
112118-02-SW-A-B-1 Grab Surface Water	11/21/2018 09:20	9911090
112118-02-SW-A-B-1 Grab Filtered Surface Water	11/21/2018 09:20	9911091
112118-03-SW-D-B-1 Grab Surface Water	11/21/2018 10:00	9911092
112118-03-SW-D-B-1 Grab Filtered Surface Water	11/21/2018 10:00	9911093
112118-02-SW-A-B-2 Grab Surface Water	11/21/2018 09:35	9911094
112118-02-SW-A-B-2 Grab Filtered Surface Water	11/21/2018 09:35	9911095
112118-TB01-01 Water	11/21/2018 12:30	9911096

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112118-01-SW-U-A-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 08:45
SDG#: RNS52-01

BASF Corporation
ELLE Sample #: WW 9911088
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.97 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 21:33	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 21:32	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 17:13	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-01-SW-U-A-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 08:45
SDG#: RNS52-01

BASF Corporation
ELLE Sample #: WW 9911088
ELLE Group #: 2011930
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:37	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:37	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	2	183320705014A	11/29/2018 12:44	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:37	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:37	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:37	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 21:37	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112118-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 08:45
SDG#: RNS52-02

BASF Corporation
ELLE Sample #: WW 9911089
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 17:34	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 07:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-02-SW-A-B-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:20
SDG#: RNS52-03

BASF Corporation
ELLE Sample #: WW 9911090
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	1	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 21:55	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 21:54	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 17:44	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-02-SW-A-B-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:20
SDG#: RNS52-03

BASF Corporation
ELLE Sample #: WW 9911090
ELLE Group #: 2011930
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 21:45	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112118-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:20
SDG#: RNS52-04

BASF Corporation
ELLE Sample #: WW 9911091
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 17:55	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-03-SW-D-B-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 10:00
SDG#: RNS52-05

BASF Corporation
ELLE Sample #: WW 9911092
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 22:17	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 22:16	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 18:05	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-03-SW-D-B-1 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 10:00
SDG#: RNS52-05

BASF Corporation
ELLE Sample #: WW 9911092
ELLE Group #: 2011930
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:04	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 21:53	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112118-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 10:00
SDG#: RNS52-06

BASF Corporation
ELLE Sample #: WW 9911093
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 18:16	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:07	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-02-SW-A-B-2 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:35
SDG#: RNS52-07

BASF Corporation
ELLE Sample #: WW 9911094
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.6 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 22:39	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 22:38	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 18:26	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **112118-02-SW-A-B-2 Grab Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:35
SDG#: RNS52-07

BASF Corporation
ELLE Sample #: WW 9911094
ELLE Group #: 2011930
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:09	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:09	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:46	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:09	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:09	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:09	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 11:59	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18329002102A	11/25/2018 22:00	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112118-02-SW-A-B-2 Grab Filtered Surface Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 09:35
SDG#: RNS52-08

BASF Corporation
ELLE Sample #: WW 9911095
ELLE Group #: 2011930
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183300011A	11/27/2018 18:37	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183300011A	11/26/2018 16:17	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183300705004A	11/28/2018 08:11	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183300571404	11/27/2018 12:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183300705004	11/27/2018 03:51	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183300571404	11/27/2018 06:45	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112118-TB01-01 Water**
COC: 568562

Project Name: **Rensselaer**

Submittal Date/Time: 11/23/2018 09:30
Collection Date/Time: 11/21/2018 12:30
SDG#: RNS52-09TB

BASF Corporation
ELLE Sample #: **WW 9911096**
ELLE Group #: **2011930**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183311AA	11/27/2018 20:01	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183311AA	11/27/2018 20:00	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2011930
Reported: 11/30/2018 10:39

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183311AA	Sample number(s): 9911088,9911090,9911092,9911094,9911096		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183300011A	Sample number(s): 9911088-9911095		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183300571404	Sample number(s): 9911088-9911095		
Mercury	N.D.	0.050	0.20
Batch number: 183300705004A	Sample number(s): 9911088-9911095		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	2.7 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183320705014A	Sample number(s): 9911088,9911094		
Chromium	N.D.	0.70	4.0
Batch number: 18329002102A	Sample number(s): 9911088,9911090,9911092,9911094		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/30/2018 10:39

Group Number: 2011930

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183311AA	Sample number(s): 9911088,9911090,9911092,9911094,9911096								
Benzene	20	20.11	20	19.7	101	98	80-120	2	30
Chlorobenzene	20	18.83	20	18.67	94	93	80-120	1	30
1,2-Dichlorobenzene	20	19.39	20	19.13	97	96	80-120	1	30
1,3-Dichlorobenzene	20	18.91	20	18.43	95	92	80-120	3	30
1,4-Dichlorobenzene	20	18.68	20	18.54	93	93	80-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183300011A	Sample number(s): 9911088-9911095								
PCB-1016	5.01	4.31	5.01	4.58	86	91	50-140	6	36
PCB-1260	5.00	4.88	5.00	4.93	98	99	50-140	1	38
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183300571404	Sample number(s): 9911088-9911095								
Mercury	1.00	0.936			94		85-115		
Batch number: 183300705004A	Sample number(s): 9911088-9911095								
Arsenic	10	9.97			100		85-115		
Cadmium	5.00	5.13			103		85-115		
Chromium	50	52			104		85-115		
Copper	50	50.82			102		85-115		
Lead	15	14.96			100		85-115		
Zinc	500	511.22			102		85-115		
Batch number: 183320705014A	Sample number(s): 9911088,9911094								
Chromium	50	46.7			93		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18329002102A	Sample number(s): 9911088,9911090,9911092,9911094								
Total Hardness	40000	39510			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183300571404	Sample number(s): 9911088-9911095 UNSPK: 9911088									
Mercury	N.D.	1.00	0.914			91		80-120		
Batch number: 183300705004A	Sample number(s): 9911088-9911095 UNSPK: 9911088									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/30/2018 10:39

Group Number: 2011930

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Arsenic	0.972	10	11.01			100		70-130		
Cadmium	N.D.	5.00	5.19			104		70-130		
Chromium	1.22	50	51.83			101		70-130		
Copper	N.D.	50	52.63			105		70-130		
Lead	N.D.	15	16.08			107		70-130		
Zinc	N.D.	500	514.42			103		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183300571404	Sample number(s): 9911088-9911095 BKG: 9911088			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183300705004A	Sample number(s): 9911088-9911095 BKG: 9911088			
Arsenic	0.972	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.22	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9911088	99	104	103	102
9911090	98	105	104	101
9911092	99	104	103	102
9911094	99	101	103	101
9911096	97	101	104	101
Blank	98	104	104	103

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 11/30/2018 10:39

Group Number: 2011930

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183311AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	99	104	96	100
LCSD	98	103	97	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183300011A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9911088	77	78	76	77
9911089	69	78	69	74
9911090	73	76	72	75
9911091	71	77	70	77
9911092	64	77	63	76
9911093	62	71	61	71
9911094	74	84	73	80
9911095	76	82	75	80
Blank	70	84	70	80
LCS	58	48	57	48
LCSD	66	74	65	70
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2011930 Sample # 9911088-96

COC # 568562

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (unfiltered)	F,N Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
112118-01-SW-U-A-1	11/21/18	0845	✓		11	2	2	1	1	1	1		3	
112118-02-SW-A-B-1	11/21/18	0920	✓		11	2	2	1	1	1	1		3	
112118-03-SW-D-B-1	11/21/18	1000	✓		11	2	2	1	1	1	1		3	
112118-02-SW-A-B-2	11/21/18	0935	✓		11	2	2	1	1	1	1		3	
112118-TB01-01	11/21/18	1230	✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/23/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/21/18	1630			
			[signature]	11/23/18	0930

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.5/1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234105

Group Number(s): 201930

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/23/2018 9:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 11:08 on 11/23/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.5	DT	Wet	Y	Bagged	N
2	DT146	1.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/26/18 – 12/10/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (13 working days) to evaluate conditions within the river during the remedial dredging activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/ conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes field turbidity and chemistry data collected during the above referenced reporting period

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 remedial dredging during the period 11/26/18 through 12/10/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings).

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan. The chemical sampling/ monitoring lab reports are presented in Attachment A.

Over the reporting period, there were several low level exceedances of the water quality criteria (Table 1). Mercury (7 exceedances) and zinc (1 exceedance) have been observed in excess of the guidance criteria previously during remedial activities and are not considered to be Site related. Chlorobenzene has not previously been detected in excess of the guidance value and there were five low level exceedances over the reporting period. Chlorobenzene had not been seen at this concentration prior to 12/1/18 and has not been seen since 12/6/18. There were also three exceedances for PCB Aroclor 1242 (total recoverable non-filtered water). PCB Aroclors were not seen at this concentration after 12/7/18. Additionally, in all cases of PCB exceedances, the paired filtered water sample returned a ND for all PCB Aroclors. To date, over 180 samples had been analyzed and exceedances of the guidance criteria are extremely limited in nature. PCB Aroclors are acknowledged as not being Site-related.

The field turbidity readings from the YSI 6920 sonde used during sampling are summarized below:

- Real-time turbidity observations at the Site had a maximum reading of 64 NTU during this period (n=157), with an overall average of 17.9 NTU.
- Turbidity was consistent with previous sampling events with the highest turbidity occurring at the middle and upper horizons (average 18.1 NTU). The surface horizon was comparatively similar to the other horizons (average 17.7 NTU).

Summary

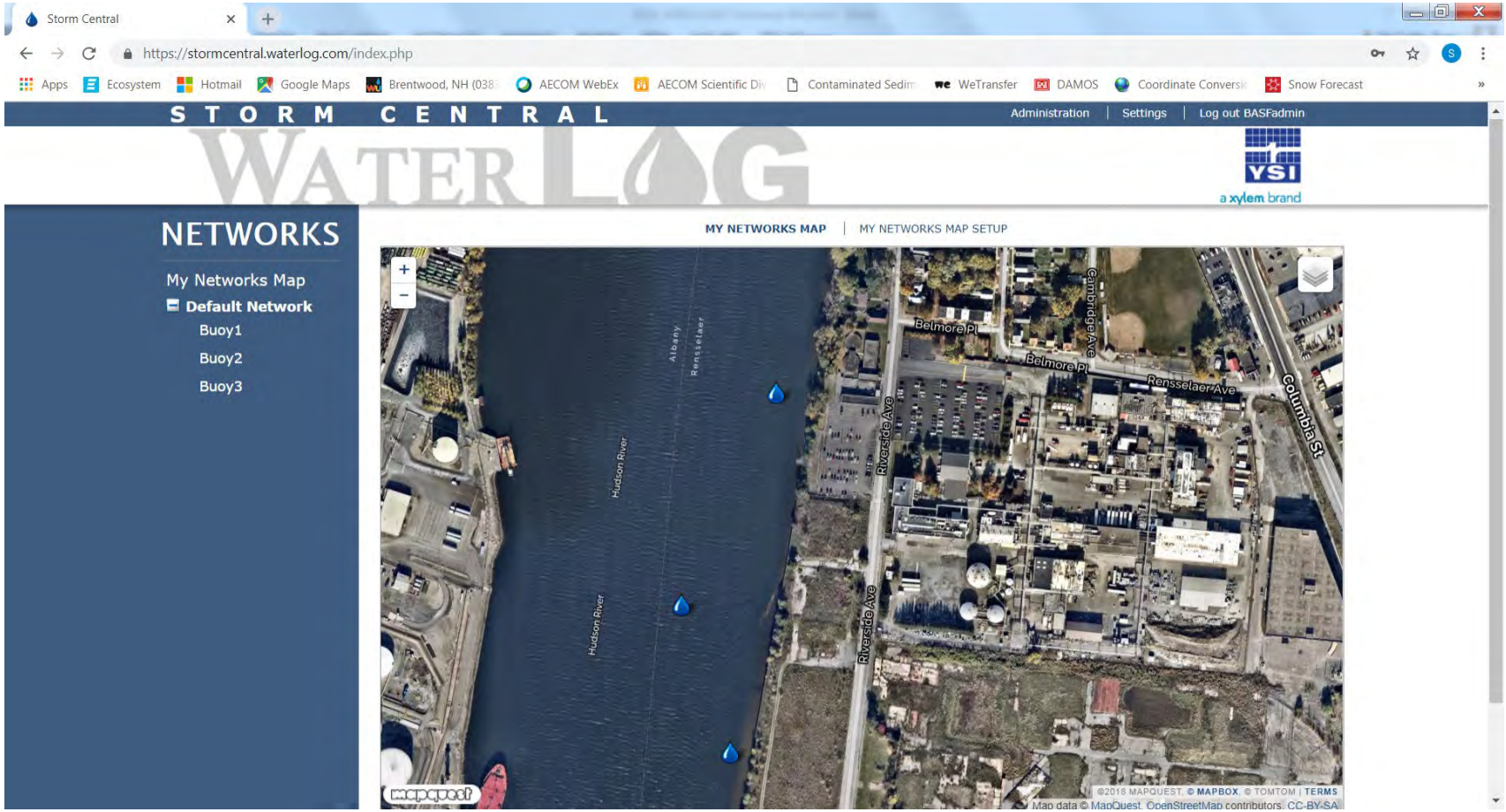
Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the remainder of dredging program (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency will continued as daily sampling until the completion of the TSCA dredging. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the remedial dredging.

Table 1: Water Quality Exceedances Summary

Sample ID	Analyte	CAS RN	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
112118-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	1		
112118-02-SW-A-B-2	CHLOROBENZENE	108-90-7	T	µg/l	5	0.6	J	
112718-01-SW-U-B-1	ZINC	7440-66-6	D	µg/l	17.2	12.8	J	
112718-03-SW-D-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.5	J	
112818-01-SW-U-B-1	ZINC	7440-66-6	D	µg/l	17.0	11.3	J	
112818-02-SW-A-B-1	ZINC	7440-66-6	D	µg/l	16.9	11.9	J	
112818-03-SW-D-B-1	ZINC	7440-66-6	D	µg/l	17.0	9.4	J	
112918-01-SW-U-C-1	ZINC	7440-66-6	D	µg/l	15.6	8.7	J	
112918-02-SW-A-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.436	J D1	X
112918-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
112918-02-SW-A-A-1	CHROMIUM, TOTAL	7440-47-3	D	µg/l	158.0	0.83	J	
112918-02-SW-A-A-1	ZINC	7440-66-6	D	µg/l	14.9	12.9	J	
112918-03-SW-D-A-1	ZINC	7440-66-6	D	µg/l	16.0	9.4	J	
120118-03-SW-D-B-1	ZINC	7440-66-6	D	µg/l	16.2	7.2	J	
120118-03-SW-D-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	8		X
120118-03-SW-D-C-1	BENZENE	71-43-2	T	µg/l	10	0.6	J	
120118-03-SW-D-C-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	0.8		
120318-01-SW-U-B-1	ZINC	7440-66-6	D	µg/l	16.5	24.7		X
120318-01-SW-U-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.2	J	
120318-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	9		X
120318-02-SW-A-B-1	BENZENE	71-43-2	T	µg/l	10	0.7	J	
120318-02-SW-A-B-1	DICHLOROBENZENE (MIXED ISOMERS)	25321-22-6	T	µg/l	5	1		
120418-01-SW-U-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.6	J	
120418-01-SW-U-B-1	CHROMIUM, TOTAL	7440-47-3	D	µg/l	162.7	0.72	J	
120418-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.5	J	
120418-02-SW-A-A-1	CHROMIUM, TOTAL	7440-47-3	D	µg/l	163.3	0.7	J	
120418-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
120518-01-SW-U-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
120518-01-SW-U-C-2	CHLOROBENZENE	108-90-7	T	µg/l	5	0.3	J	
120518-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.3	J	
120518-03-SW-D-A-1	MERCURY	7439-97-6	T	µg/l	0.05	0.071	J	X
120518-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.2	J	
120618-01-SW-U-C-1	BENZENE	71-43-2	T	µg/l	10	0.3	J	
120618-01-SW-U-C-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.204	J D1	X
120618-01-SW-U-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	8		X

Sample ID	Analyte	CAS RN	Fraction (Dissolved/ Total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
120618-01-SW-U-C-1	MERCURY	7439-97-6	T	µg/l	0.05	0.05	J	X
120618-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	6		X
120618-02-SW-A-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.13	J D1	
120618-02-SW-A-A-1	BENZENE	71-43-2	T	µg/l	10	0.3	J	
120618-02-SW-A-A-1	MERCURY	7439-97-6	T	µg/l	0.05	0.052	J	X
120618-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	6		X
120618-03-SW-D-A-1	MERCURY	7439-97-6	T	µg/l	0.05	0.056	J	X
120618-03-SW-D-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.143	J D1	
120618-03-SW-D-A-1	BENZENE	71-43-2	T	µg/l	10	0.3	J	
120718-01-SW-U-C-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.7	J	
120718-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.8	J	
120718-02-SW-A-A-1	AROCLOR-1242	53469-21-9	T	µg/l	0.2	0.25	J D1	X
120718-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.5	J	
120818-01-SW-U-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	2		
120818-02-SW-A-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.9	J	
120818-02-SW-A-B-1	MERCURY	7439-97-6	T	µg/l	0.05	0.055	J	X
120818-03-SW-D-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.5	J	
121018-01-SW-U-B-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.5	J	
121018-01-SW-U-B-2	CHLOROBENZENE	108-90-7	T	µg/l	5	0.4	J	
121018-02-SW-A-A-1	CHLOROBENZENE	108-90-7	T	µg/l	5	0.2	J	
121018-02-SW-A-A-1	MERCURY	7439-97-6	T	µg/l	0.05	0.054	J	X
121018-03-SW-D-A-1	MERCURY	7439-97-6	T	µg/l	0.05	0.08	J	X

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 03, 2018 10:41

Project: Rensselaer

Account #: 04285
Group Number: 2012866
SDG: RNS54
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112618-01-SW-U-A-1 Grab Surface Water	11/26/2018 09:10	9914738
112618-01-SW-U-A-1 Grab Filtered Surface Water	11/26/2018 09:10	9914739
112618-02-SW-A-A-1 Grab Surface Water	11/26/2018 09:40	9914740
112618-02-SW-A-A-1 Grab Filtered Surface Water	11/26/2018 09:40	9914741
112618-03-SW-D-A-1 Grab Surface Water	11/26/2018 08:10	9914742
112618-03-SW-D-A-1 Grab Filtered Surface Water	11/26/2018 08:10	9914743
112618-01-SW-U-A-3 Grab Water	11/26/2018 12:00	9914744
112618-01-SW-U-A-3 Grab Filtered Water	11/26/2018 12:00	9914745
112618-TB01-01 Water	11/26/2018 14:30	9914746

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112618-01-SW-U-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:10
SDG#: RNS54-01

BASF Corporation
ELLE Sample #: WW 9914738
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 20:49	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 20:48	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 20:40	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-01-SW-U-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:10
SDG#: RNS54-01

BASF Corporation
ELLE Sample #: WW 9914738
ELLE Group #: 2012866
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:48	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101A	11/29/2018 13:00	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112618-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:10
SDG#: RNS54-02

BASF Corporation
ELLE Sample #: WW 9914739
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 20:50	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-02-SW-A-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:40
SDG#: RNS54-03

BASF Corporation
ELLE Sample #: WW 9914740
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 21:15	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 21:14	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 21:01	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **112618-02-SW-A-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:40
SDG#: RNS54-03

BASF Corporation
ELLE Sample #: WW 9914740
ELLE Group #: 2012866
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:55	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101A	11/29/2018 13:08	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112618-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 09:40
SDG#: RNS54-04

BASF Corporation
ELLE Sample #: WW 9914741
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 21:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-03-SW-D-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 08:10
SDG#: RNS54-05

BASF Corporation
ELLE Sample #: WW 9914742
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 21:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 21:39	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 21:23	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **112618-03-SW-D-A-1 Grab Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 08:10
SDG#: RNS54-05

BASF Corporation
ELLE Sample #: WW 9914742
ELLE Group #: 2012866
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101A	11/29/2018 13:15	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112618-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 08:10
SDG#: RNS54-06

BASF Corporation
ELLE Sample #: WW 9914743
ELLE Group #: 2012866
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 21:56	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 12:59	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-01-SW-U-A-3 Grab Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 12:00
SDG#: RNS54-07EB

BASF Corporation
ELLE Sample #: WW 9914744
ELLE Group #: 2012866
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 19:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 19:05	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 22:06	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-01-SW-U-A-3 Grab Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 12:00
SDG#: RNS54-07EB

BASF Corporation
ELLE Sample #: WW 9914744
ELLE Group #: 2012866
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-01-SW-U-A-3 Grab Filtered Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 12:00
SDG#: RNS54-08EB

BASF Corporation
ELLE Sample #: WW 9914745
ELLE Group #: 2012866
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320014A	11/29/2018 22:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320014A	11/28/2018 17:10	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183320705014A	11/29/2018 13:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183320705014	11/29/2018 05:15	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112618-TB01-01 Water**
COC: 568563

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/26/2018 14:30
SDG#: RNS54-09TB

BASF Corporation
ELLE Sample #: WW 9914746
ELLE Group #: 2012866
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 19:31	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 19:30	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 10:41

Group Number: 2012866

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183331AA	Sample number(s): 9914738,9914740,9914742,9914744,9914746		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183320014A	Sample number(s): 9914738-9914745		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183320705014A	Sample number(s): 9914738-9914745		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183330571401	Sample number(s): 9914738-9914745		
Mercury	N.D.	0.050	0.20
Batch number: 18333001101A	Sample number(s): 9914738,9914740,9914742		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 10:41

Group Number: 2012866

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183331AA	Sample number(s): 9914738,9914740,9914742,9914744,9914746								
Benzene	20	19.92	20	20.11	100	101	80-120	1	30
Chlorobenzene	20	18.88	20	18.82	94	94	80-120	0	30
1,2-Dichlorobenzene	20	19.79	20	19.7	99	99	80-120	0	30
1,3-Dichlorobenzene	20	18.54	20	19.26	93	96	80-120	4	30
1,4-Dichlorobenzene	20	19	20	18.95	95	95	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183320014A	Sample number(s): 9914738-9914745								
PCB-1016	5.01	3.22	5.01	3.91	64	78	50-140	19	36
PCB-1260	5.00	4.25	5.00	5.05	85	101	50-140	17	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183320705014A	Sample number(s): 9914738-9914745								
Arsenic	10	9.59			96		85-115		
Cadmium	5.00	4.89			98		85-115		
Chromium	50	46.7			93		85-115		
Copper	50	48.18			96		85-115		
Lead	15	14.59			97		85-115		
Zinc	500	490.18			98		85-115		
Batch number: 183330571401	Sample number(s): 9914738-9914745								
Mercury	1.00	0.886			89		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18333001101A	Sample number(s): 9914738,9914740,9914742								
Total Hardness	40000	39520			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183320705014A	Sample number(s): 9914738-9914745 UNSPK: 9914741									
Arsenic	N.D.	10	10.14			101		70-130		
Cadmium	N.D.	5.00	4.59			92		70-130		
Chromium	N.D.	50	49.36			99		70-130		
Copper	N.D.	50	47.01			94		70-130		
Lead	N.D.	15	14.81			99		70-130		
Zinc	N.D.	500	473.26			95		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 10:41

Group Number: 2012866

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183330571401	Sample number(s): 9914738-9914745 UNSPK: 9914738									
Mercury	N.D.	1.00	0.908			91		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183320705014A	Sample number(s): 9914738-9914745 BKG: 9914741			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183330571401	Sample number(s): 9914738-9914745 BKG: 9914738			
Mercury	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9914738	98	101	104	103
9914740	97	101	104	102
9914742	99	104	104	101
9914744	97	100	102	101
9914746	98	103	102	102
Blank	98	102	103	102
LCS	99	105	96	99
LCSD	99	104	96	100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 10:41

Group Number: 2012866

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183331AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183320014A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9914738	54	77	53	77
9914739	50	74	48	72
9914740	57	82	55	81
9914741	64	84	62	80
9914742	54	80	54	80
9914743	66	88	65	87
9914744	66	85	66	83
9914745	67	93	64	91
Blank	54	57	54	57
LCS	47	58	47	58
LCSD	61	74	61	76
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2012866 Sample # 9914738-46

COC # 568563

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patricia Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F,N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs – 8260c H	Turbidity – SM2130	Remarks
112618-01-SW-U-A-1	11/26/18	0910	✓		11	2	2	1	1	1	1		3		
112618-02-SW-A-A-1	11/26/18	0940	✓		11	2	2	1	1	1	1		3		
112618-03-SW-D-A-1	11/26/18	0810	✓		11	2	2	1	1	1	1		3		
112618-01-SW-U-A-3	11/26/18	1200	✓		10	2	2	1	1	1			3		equipment blank
112618-TB01-01	11/26/18	1430	✓		1								1		

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/28/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/26/18	1500			
			[signature]	11/28/18	11:00

EDD Required? Yes No
If yes, format: per contract
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____
Temperature upon receipt 0.6 °C

Environmental Analysis Request/Chain of Custody

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OCD 12674 11/28/18 Ph 4285

For Eurofins Lancaster Laboratories Environmental use only: Group # 2012866 Sample # 9914738-46

COC # 568563

Client Information		Matrix						Analysis Requested												For Lab Use Only
Client: BASF	Acct. #:	Soil / Sediment / Tissue	Water / Potable / Ground	Other:	NPDES / Surface	Total # of Containers	Preservation and Filtration Codes	F		FN	N	N	N		H					FSC:
Project Name/#: Hudson River OU-2	PWSID #:							PCBs (6 Aroclors)	PCBs (Low Level)	Metals (6 Target)	Metals (Low Level)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130				SCR#:
Project Manager: John Bleiler	P.O. #: 229608																			
Sampler: Patrick Gelson	Quote #:																			
Date/Time samples were collected: NY	For Compliance: Yes ☑ No ☐																			

Sample Identification	Collected Date	Collected Time	Grab	Composite																Remarks
112618-01-Tue-U-A-1	11/26/18	0910	✓				✓		11	2	2	1	1	1	1		3			
112618-02-Tue-A-A-1	11/26/18	0940	✓				✓		11	2	2	1	1	1	1		3			
112618-03-Tue-B-A-1	11/26/18	0810	✓				✓		11	2	2	1	1	1	1		3			
112618-01-Tue-U-A-2	11/26/18	1200	✓				✓		10	2	2	1	1	1			3			Equipment Blank
112618-TB01-01	11/26/18	1430	✓				✓		1								1			

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/27/18

E-mail address: Ryan.McCarthy@arcadis.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) per contract Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gelson	11/26/18	1500			
			Received by		
				11/27/18	11:15

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS FedEx ✓ Other

Temperature upon receipt 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234349

Group Number(s): 2012866

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/28/2018 11:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	Yes		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Conrad Burkholder (12671) at 12:09 on 11/28/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.6	DT	Wet	Y	Bagged	N

Missing Sample Details

Sample ID on COC	Comments
TB01-01	

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
01-SW-U-A-1	6	11	
02-SW-A-A-1	7	11	
03-SW-D-A-1	5	11	
01-SW-U-A-3	4	11	

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Sample Administration Receipt Documentation Log

Doc Log ID: 234223

Group Number(s): 2012866

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/27/2018 11:15
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Conrad Burkholder (12671) at 11:51 on 11/27/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.9	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
01-SW-U-A-1	5	11	
02-SW-A-A-1	4	11	
03-SW-D-A-1	6	11	
01-SW-U-A-3	6	10	

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Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 03, 2018 13:04

Project: Rensselaer

Account #: 04285
Group Number: 2012878
SDG: RNS55
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112718-01-SW-U-B-1 Grab Surface Water	11/27/2018 11:35	9914802
112718-01-SW-U-B-1 Grab Filtered Surface Water	11/27/2018 11:35	9914803
112718-02-SW-A-B-1 Grab Surface Water	11/27/2018 12:05	9914804
112718-02-SW-A-B-1 Grab Filtered Surface Water	11/27/2018 12:05	9914805
112718-03-SW-D-B-1 Grab Surface Water	11/27/2018 12:35	9914806
112718-03-SW-D-B-1 Grab Filtered Surface Water	11/27/2018 12:35	9914807
112718-TB01-01 Water	11/27/2018 14:00	9914808

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112718-01-SW-U-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 11:35
SDG#: RNS55-01

BASF Corporation
ELLE Sample #: WW 9914802
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.99 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 22:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 22:05	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 20:48	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-01-SW-U-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 11:35
SDG#: RNS55-01

BASF Corporation
ELLE Sample #: WW 9914802
ELLE Group #: 2012878
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:41	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101A	11/29/2018 13:44	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112718-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 11:35
SDG#: RNS55-02

BASF Corporation
ELLE Sample #: WW 9914803
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.8 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 20:58	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571401	11/30/2018 09:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571401	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-02-SW-A-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:05
SDG#: RNS55-03

BASF Corporation
ELLE Sample #: WW 9914804
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.98 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.0	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 22:33	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 22:32	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 21:09	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-02-SW-A-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:05
SDG#: RNS55-03

BASF Corporation
ELLE Sample #: WW 9914804
ELLE Group #: 2012878
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:49	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571402	11/30/2018 10:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571402	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101A	11/29/2018 13:52	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112718-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:05
SDG#: RNS55-04

BASF Corporation
ELLE Sample #: WW 9914805
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 21:19	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571402	11/30/2018 10:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571402	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-03-SW-D-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:35
SDG#: RNS55-05

BASF Corporation
ELLE Sample #: WW 9914806
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.0 J	1.1	3.0	1
06049	Zinc	7440-66-6	16.9	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 22:58	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 22:57	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 21:30	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-03-SW-D-B-1 Grab Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:35
SDG#: RNS55-05

BASF Corporation
ELLE Sample #: WW 9914806
ELLE Group #: 2012878
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571402	11/30/2018 10:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571402	11/30/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18333001101B	11/29/2018 14:00	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112718-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 12:35
SDG#: RNS55-06

BASF Corporation
ELLE Sample #: WW 9914807
ELLE Group #: 2012878
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183320049A	12/02/2018 21:40	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183320049A	11/29/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705005A	12/03/2018 05:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183330571402	11/30/2018 10:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705005	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183330571402	11/30/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **112718-TB01-01 Water**
COC: 568564

Project Name: **Rensselaer**

Submittal Date/Time: 11/28/2018 11:00
Collection Date/Time: 11/27/2018 14:00
SDG#: RNS55-07TB

BASF Corporation
ELLE Sample #: **WW 9914808**
ELLE Group #: **2012878**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 19:57	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 19:56	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2012878
Reported: 12/03/2018 13:04

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183331AA	Sample number(s): 9914802,9914804,9914806,9914808		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183320049A	Sample number(s): 9914802-9914807		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183330571401	Sample number(s): 9914802-9914803		
Mercury	N.D.	0.050	0.20
Batch number: 183330571402	Sample number(s): 9914804-9914807		
Mercury	N.D.	0.050	0.20
Batch number: 183340705005A	Sample number(s): 9914802-9914807		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	10.6 J	6.2	15.0
Batch number: 18333001101A	Sample number(s): 9914802,9914804		
Total Hardness	N.D.	3,000	10,000
Batch number: 18333001101B	Sample number(s): 9914806		
Total Hardness	N.D.	3,000	10,000

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 13:04

Group Number: 2012878

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183331AA	Sample number(s): 9914802,9914804,9914806,9914808								
Benzene	20	19.92	20	20.11	100	101	80-120	1	30
Chlorobenzene	20	18.88	20	18.82	94	94	80-120	0	30
1,2-Dichlorobenzene	20	19.79	20	19.7	99	99	80-120	0	30
1,3-Dichlorobenzene	20	18.54	20	19.26	93	96	80-120	4	30
1,4-Dichlorobenzene	20	19	20	18.95	95	95	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183320049A	Sample number(s): 9914802-9914807								
PCB-1016	5.01	4.33	5.01	4.43	87	88	50-140	2	36
PCB-1260	5.00	3.88	5.00	3.86	78	77	50-140	1	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183330571401	Sample number(s): 9914802-9914803								
Mercury	1.00	0.886			89		85-115		
Batch number: 183330571402	Sample number(s): 9914804-9914807								
Mercury	1.00	0.888			89		85-115		
Batch number: 183340705005A	Sample number(s): 9914802-9914807								
Arsenic	10	10.45			105		85-115		
Cadmium	5.00	5.15			103		85-115		
Chromium	50	46.67			93		85-115		
Copper	50	49.05			98		85-115		
Lead	15	14.99			100		85-115		
Zinc	500	517.54			104		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18333001101A	Sample number(s): 9914802,9914804								
Total Hardness	40000	39520			99		85-110		
Batch number: 18333001101B	Sample number(s): 9914806								
Total Hardness	40000	39520			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183330571402	Sample number(s): 9914804-9914807 UNSPK: 9914804									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 13:04

Group Number: 2012878

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Mercury	N.D.	1.00	0.907			91		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 183330571402	Sample number(s): 9914804-9914807 BKG: 9914804			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18333001101B	Sample number(s): 9914806 BKG: 9914806			
Total Hardness	78160	94940	19* (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9914802	97	101	103	101
9914804	99	102	103	102
9914806	97	101	104	102
9914808	98	100	104	101
Blank	98	102	103	102
LCS	99	105	96	99
LCSD	99	104	96	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183320049A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9914802	61	62	57	57

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/03/2018 13:04

Group Number: 2012878

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183320049A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9914803	64	67	60	62
9914804	63	62	59	58
9914805	65	67	61	67
9914806	60	64	55	59
9914807	63	65	58	63
Blank	66	42	62	40
LCS	59	71	56	67
LCSD	62	71	58	65
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 20/2878 Sample # 99/4802-08

COC # 568564

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260c H	Turbidity - SM2130	
112718-01-SW-U-B-1	11/27/18	1135	✓		11	2	2	1	1	1	1		3		
112718-02-SW-A-B-1	11/27/18	1205	✓		11	2	2	1	1	1	1		3		
112718-03-SW-D-B-1	11/27/18	1235	✓		11	2	2	1	1	1	1		3		
112718-TB01-01	11/27/18	1400	✓		1								1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/29/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Date	Time		Date	Time
Relinquished by	11/27/18	1730	Received by		
Relinquished by			Received by		
Relinquished by			Received by		
Relinquished by			Received by		
Relinquished by			Received by	11/29/18	1100

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.4 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234347

Group Number(s): 2012878

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/28/2018 11:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:03 on 11/28/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	0.4	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 07, 2018 16:58

Project: Rensselaer

Account #: 04285
Group Number: 2013273
SDG: RNS56
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112818-01-SW-U-B-1 Grab Surface Water	11/28/2018 08:30	9916434
112818-01-SW-U-B-1 Grab Filtered Surface Water	11/28/2018 08:30	9916435
112818-02-SW-A-B-1 Grab Surface Water	11/28/2018 09:00	9916436
112818-02-SW-A-B-1 Grab Filtered Surface Water	11/28/2018 09:00	9916437
112818-03-SW-D-B-1 Grab Surface Water	11/28/2018 09:25	9916438
112818-03-SW-D-B-1 Grab Filtered Surface Water	11/28/2018 09:25	9916439
112818-TB01-01 Water	11/28/2018 12:00	9916440

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112818-01-SW-U-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 08:30
SDG#: RNS56-01

BASF Corporation
ELLE Sample #: WW 9916434
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	26.8	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 23:24	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 23:23	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/02/2018 23:26	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-01-SW-U-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 08:30
SDG#: RNS56-01

BASF Corporation
ELLE Sample #: WW 9916434
ELLE Group #: 2013273
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 06:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:15	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18333001102A	11/29/2018 18:59	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112818-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 08:30
SDG#: RNS56-02

BASF Corporation
ELLE Sample #: WW 9916435
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.3 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/02/2018 23:37	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:16	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-02-SW-A-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:00
SDG#: RNS56-03

BASF Corporation
ELLE Sample #: WW 9916436
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.72 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.7 J	1.1	3.0	1
06049	Zinc	7440-66-6	26.7	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 23:50	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 23:49	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/02/2018 23:47	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-02-SW-A-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:00
SDG#: RNS56-03

BASF Corporation
ELLE Sample #: WW 9916436
ELLE Group #: 2013273
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:18	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:19	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18333001102A	11/29/2018 19:07	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112818-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:00
SDG#: RNS56-04

BASF Corporation
ELLE Sample #: WW 9916437
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/02/2018 23:58	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:20	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	2	183400571401	12/07/2018 07:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-03-SW-D-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:25
SDG#: RNS56-05

BASF Corporation
ELLE Sample #: WW 9916438
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	N.D.	0.0930	0.628	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.9 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.9 J	1.1	3.0	1
06049	Zinc	7440-66-6	27.2	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/30/2018 00:16	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/30/2018 00:15	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/03/2018 00:08	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-03-SW-D-B-1 Grab Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:25
SDG#: RNS56-05

BASF Corporation
ELLE Sample #: WW 9916438
ELLE Group #: 2013273
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:22	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18333001102A	11/29/2018 19:14	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112818-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 09:25
SDG#: RNS56-06

BASF Corporation
ELLE Sample #: WW 9916439
ELLE Group #: 2013273
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	9.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183330036A	12/03/2018 00:19	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183330036A	11/29/2018 16:41	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183340705006A	12/03/2018 07:24	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183340705006	11/30/2018 15:40	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183340571401	11/30/2018 16:35	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571401	12/04/2018 00:00	Denise L Trimby	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **112818-TB01-01 Water**
COC: 568565

Project Name: **Rensselaer**

Submittal Date/Time: 11/29/2018 10:30
Collection Date/Time: 11/28/2018 12:00
SDG#: RNS56-07TB

BASF Corporation
ELLE Sample #: **WW 9916440**
ELLE Group #: **2013273**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183331AA	11/29/2018 20:23	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183331AA	11/29/2018 20:22	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/07/2018 16:58

Group Number: 2013273

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183331AA	Sample number(s): 9916434,9916436,9916438,9916440		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183330036A	Sample number(s): 9916434-9916439		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183340705006A	Sample number(s): 9916434-9916439		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	0.78 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183400571401	Sample number(s): 9916434-9916439		
Mercury	N.D.	0.050	0.20
Batch number: 18333001102A	Sample number(s): 9916434,9916436,9916438		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/07/2018 16:58

Group Number: 2013273

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183331AA	Sample number(s): 9916434,9916436,9916438,9916440								
Benzene	20	19.92	20	20.11	100	101	80-120	1	30
Chlorobenzene	20	18.88	20	18.82	94	94	80-120	0	30
1,2-Dichlorobenzene	20	19.79	20	19.7	99	99	80-120	0	30
1,3-Dichlorobenzene	20	18.54	20	19.26	93	96	80-120	4	30
1,4-Dichlorobenzene	20	19	20	18.95	95	95	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183330036A	Sample number(s): 9916434-9916439								
PCB-1016	5.01	3.61	5.01	3.54	72	71	50-140	2	36
PCB-1260	5.00	3.93	5.00	4.13	79	83	50-140	5	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183340705006A	Sample number(s): 9916434-9916439								
Arsenic	10	9.52			95		85-115		
Cadmium	5.00	5.02			100		85-115		
Chromium	50	48.77			98		85-115		
Copper	50	46.84			94		85-115		
Lead	15	14.77			98		85-115		
Zinc	500	487.74			98		85-115		
Batch number: 183400571401	Sample number(s): 9916434-9916439								
Mercury	1.00	0.899			90		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18333001102A	Sample number(s): 9916434,9916436,9916438								
Total Hardness	40000	39640			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183340705006A	Sample number(s): 9916434-9916439 UNSPK: 9916434									
Arsenic	N.D.	10	10.8			108		70-130		
Cadmium	N.D.	5.00	5.18			104		70-130		
Chromium	1.77	50	50.83			98		70-130		
Copper	N.D.	50	52.08			104		70-130		
Lead	1.49	15	16.69			101		70-130		
Zinc	26.83	500	527.65			100		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/07/2018 16:58

Group Number: 2013273

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183340705006A	Sample number(s): 9916434-9916439 BKG: 9916434			
Arsenic	N.D.	0.708	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.77	1.84	4 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	1.49	1.64	10 (1)	20
Zinc	26.83	31.81	17 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183331AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9916434	97	100	103	100
9916436	98	100	103	100
9916438	98	102	103	101
9916440	98	101	103	101
Blank	98	102	103	102
LCS	99	105	96	99
LCSD	99	104	96	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183330036A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9916434	76	73	74	72

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/07/2018 16:58

Group Number: 2013273

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183330036A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9916435	73	89	72	88
9916436	82	70	79	70
9916437	81	88	77	85
9916438	79	85	75	85
9916439	77	86	77	85
Blank	70	75	70	73
LCS	46	71	44	73
LCSD	50	58	48	57
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 201273 Sample # 991643 4-40

COC # 568565

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F,N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260 c	Turbidity – SM2130
112818-01-SW-U-B-1	11/28/18	0836	✓		11	2	2	1	1	1	1		3	
112818-02-SW-A-B-1	11/28/18	0900	✓		11	2	2	1	1	1	1		3	
112818-03-SW-D-B-1	11/28/18	0925	✓		11	2	2	1	1	1	1		3	
112818-TB01-01	11/28/18	1200	✓		1								1	

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 11/30/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/28/18	1500			
			[signature]	11/29/18	10:30

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234465

Group Number(s): 203273

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/29/2018 10:30
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 11:10 on 11/29/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 10, 2018 10:42

Project: Rensselaer

Account #: 04285
Group Number: 2013830
SDG: RNS58
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
112918-01-SW-U-C-1 Grab Surface Water	11/29/2018 10:50	9918690
112918-01-SW-U-C-1 Grab Filtered Surface Water	11/29/2018 10:50	9918691
112918-02-SW-A-A-1 Grab Surface Water	11/29/2018 11:05	9918692
112918-02-SW-A-A-1MS Grab Surface Water	11/29/2018 11:05	9918693
112918-02-SW-A-A-1MSD Grab Surface Water	11/29/2018 11:05	9918694
112918-02-SW-A-A-1DUP Grab Surface Water	11/29/2018 11:05	9918695
112918-02-SW-A-A-1 Grab Filtered Surface Water	11/29/2018 11:05	9918696
112918-02-SW-A-A-1MS Grab Filtered Surface Water	11/29/2018 11:05	9918697
112918-02-SW-A-A-1MSD Grab Filtered Surface Water	11/29/2018 11:05	9918698
112918-02-SW-A-A-1DUP Grab Filtered Surface Water	11/29/2018 11:05	9918699
112918-03-SW-D-A-1 Grab Surface Water	11/29/2018 11:50	9918700
112918-03-SW-D-A-1 Grab Filtered Surface Water	11/29/2018 11:50	9918701
112918-TB01-01 Water	11/29/2018 14:00	9918702

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **112918-01-SW-U-C-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 10:50
SDG#: RNS58-01

BASF Corporation
ELLE Sample #: WW 9918690
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	13.3 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 20:36	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 20:35	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340070A	12/04/2018 17:25	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-01-SW-U-C-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 10:50
SDG#: RNS58-01

BASF Corporation
ELLE Sample #: WW 9918690
ELLE Group #: 2013830
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340070A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:31	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 21:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 10:50
SDG#: RNS58-02

BASF Corporation
ELLE Sample #: WW 9918691
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340070A	12/04/2018 17:36	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340070A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:45	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03BKG

BASF Corporation
ELLE Sample #: WW 9918692
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	0.436 JD1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	0.436 J	0.0907	0.613	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.3 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	2.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	18.2	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 19:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 19:17	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340070A	12/04/2018 17:47	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03BKG

BASF Corporation
ELLE Sample #: WW 9918692
ELLE Group #: 2013830
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340070A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 22:04	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MS Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03MS

BASF Corporation
ELLE Sample #: WW 9918693
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	20	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	20	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	19	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	19	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.73 D2	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	5.65 D2	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	10.4	0.0911	0.616	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.0	0.15	1.0	1
06031	Chromium	7440-47-3	52.0	0.70	4.0	1
06033	Copper	7440-50-8	52.1	9.9	40.0	1
06035	Lead	7439-92-1	18.8	1.1	3.0	1
06049	Zinc	7440-66-6	518	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.92	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	146,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 19:44	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 19:43	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340070A	12/04/2018 18:19	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MS Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03MS

BASF Corporation
ELLE Sample #: WW 9918693
ELLE Group #: 2013830
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340070A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 22:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MSD Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03MSD

BASF Corporation
ELLE Sample #: WW 9918694
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	19	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	19	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	19	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	18	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.37 D2	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	5.16 D2	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	9.53	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.9	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	52.2	0.70	4.0	1
06033	Copper	7440-50-8	52.8	9.9	40.0	1
06035	Lead	7439-92-1	16.6	1.1	3.0	1
06049	Zinc	7440-66-6	533	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	159,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 20:10	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 20:09	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340070A	12/04/2018 18:30	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MSD Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03MSD

BASF Corporation
ELLE Sample #: WW 9918694
ELLE Group #: 2013830
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340070A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:39	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 22:22	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1DUP Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-03DUP

BASF Corporation
ELLE Sample #: WW 9918695
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.72 J	0.68	2.0	1
06028	Cadmium	7440-43-9	0.20 J	0.15	1.0	1
06031	Chromium	7440-47-3	2.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	2.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	18.2	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571401	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 22:30	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-04BKG

BASF Corporation
ELLE Sample #: WW 9918696
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.83 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340071A	12/04/2018 19:03	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340071A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:19	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MS Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-04MS

BASF Corporation
ELLE Sample #: WW 9918697
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.86 D2	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	5.74 D2	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	10.6	0.0902	0.610	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	11.0	0.68	2.0	1
06028	Cadmium	7440-43-9	5.4	0.15	1.0	1
06031	Chromium	7440-47-3	51.4	0.70	4.0	1
06033	Copper	7440-50-8	51.5	9.9	40.0	1
06035	Lead	7439-92-1	16.3	1.1	3.0	1
06049	Zinc	7440-66-6	518	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.91	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340071A	12/04/2018 19:14	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340071A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:25	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1MSD Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-04MSD

BASF Corporation
ELLE Sample #: WW 9918698
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.80 D2	0.123	0.616	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.616	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.616	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.616	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.616	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.616	1
14188	PCB-1260	11096-82-5	5.78 D2	0.123	0.616	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0911	0.616	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0911	0.616	1
14188	Total PCBs	1336-36-3	10.6	0.0911	0.616	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.6	0.68	2.0	1
06028	Cadmium	7440-43-9	5.3	0.15	1.0	1
06031	Chromium	7440-47-3	51.7	0.70	4.0	1
06033	Copper	7440-50-8	50.4	9.9	40.0	1
06035	Lead	7439-92-1	16.3	1.1	3.0	1
06049	Zinc	7440-66-6	534	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.92	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340071A	12/04/2018 19:25	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340071A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:27	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-02-SW-A-A-1DUP Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:05
SDG#: RNS58-04DUP

BASF Corporation
ELLE Sample #: WW 9918699
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.81 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.0 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-03-SW-D-A-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:50
SDG#: RNS58-05

BASF Corporation
ELLE Sample #: WW 9918700
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D2	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D2	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.4 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 21:02	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 21:01	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340071A	12/04/2018 19:36	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-03-SW-D-A-1 Grab Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:50
SDG#: RNS58-05

BASF Corporation
ELLE Sample #: WW 9918700
ELLE Group #: 2013830
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340071A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:32	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:33	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001101A	12/02/2018 22:58	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **112918-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 11:50
SDG#: RNS58-06

BASF Corporation
ELLE Sample #: WW 9918701
ELLE Group #: 2013830
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	9.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183340071A	12/04/2018 19:46	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183340071A	12/02/2018 17:25	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:34	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571402	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **112918-TB01-01 Water**
COC: 568566

Project Name: **Rensselaer**

Submittal Date/Time: 11/30/2018 10:20
Collection Date/Time: 11/29/2018 14:00
SDG#: RNS58-07TB

BASF Corporation
ELLE Sample #: WW 9918702
ELLE Group #: 2013830
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 18:26	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 18:25	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183371AA	Sample number(s): 9918690,9918692-9918694,9918700,9918702		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183340070A	Sample number(s): 9918690-9918694		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183340071A	Sample number(s): 9918696-9918698,9918700-9918701		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183370705001A	Sample number(s): 9918690-9918695		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183370705002A	Sample number(s): 9918696-9918701		
Arsenic	N.D.	0.68	2.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183400571401	Sample number(s): 9918690,9918692-9918695,9918700		
Mercury	N.D.	0.050	0.20
Batch number: 183410571408	Sample number(s): 9918691,9918696-9918699,9918701		
Mercury	N.D.	0.050	0.20
Batch number: 18336001101A	Sample number(s): 9918690,9918692-9918695,9918700		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183371AA	Sample number(s): 9918690,9918692-9918694,9918700,9918702								
Benzene	20	19.88			99		80-120		
Chlorobenzene	20	19.16			96		80-120		
1,2-Dichlorobenzene	20	19.78			99		80-120		
1,3-Dichlorobenzene	20	18.68			93		80-120		
1,4-Dichlorobenzene	20	19.76			99		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183340070A	Sample number(s): 9918690-9918694								
PCB-1016	5.01	3.63			73		50-140		
PCB-1260	5.00	4.81			96		50-140		
Batch number: 183340071A	Sample number(s): 9918696-9918698,9918700-9918701								
PCB-1016	5.01	3.74			75		50-140		
PCB-1260	5.00	4.48			90		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183370705001A	Sample number(s): 9918690-9918695								
Arsenic	10	10			100		85-115		
Cadmium	5.00	5.19			104		85-115		
Chromium	50	51.37			103		85-115		
Copper	50	50.11			100		85-115		
Lead	15	15.39			103		85-115		
Zinc	500	506.63			101		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183370705002A	Sample number(s): 9918696-9918701								
Arsenic	10	10.25			103		85-115		
Cadmium	5.00	5.37			107		85-115		
Chromium	50	49.32			99		85-115		
Copper	50	48.99			98		85-115		
Lead	15	15.27			102		85-115		
Zinc	500	519.07			104		85-115		
Batch number: 183400571401	Sample number(s): 9918690,9918692-9918695,9918700								
Mercury	1.00	0.899			90		85-115		
Batch number: 183410571408	Sample number(s): 9918691,9918696-9918699,9918701								
Mercury	1.00	0.885			88		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18336001101A	Sample number(s): 9918690,9918692-9918695,9918700								
Total Hardness	40000	39040			98		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183371AA	Sample number(s): 9918690,9918692-9918694,9918700,9918702 UNSPK: 9918692									
Benzene	N.D.	20	21.73	20	20.65	109	103	80-120	5	30
Chlorobenzene	0.418	20	20.04	20	19.15	98	94	80-120	5	30
1,2-Dichlorobenzene	N.D.	20	19.62	20	18.82	98	94	80-120	4	30
1,3-Dichlorobenzene	N.D.	20	19.46	20	18.51	97	93	80-120	5	30
1,4-Dichlorobenzene	N.D.	20	19.1	20	18.33	96	92	80-120	4	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183340070A	Sample number(s): 9918690-9918694 UNSPK: 9918692									
PCB-1016	N.D.	6.17	4.73	5.61	4.37	77	78	50-140	8	36
PCB-1260	N.D.	6.16	5.65	5.61	5.16	92	92	50-140	9	38
Batch number: 183340071A	Sample number(s): 9918696-9918698,9918700-9918701 UNSPK: 9918696									
PCB-1016	N.D.	6.11	4.86	6.17	4.80	80	78	50-140	1	36
PCB-1260	N.D.	6.10	5.74	6.16	5.78	94	94	50-140	1	38
	ug/l	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183370705001A	Sample number(s): 9918690-9918695 UNSPK: 9918692									
Arsenic	1.27	10	10.91	10	11.94	96	107	70-130	9	20
Cadmium	N.D.	5.00	5.01	5.00	4.90	100	98	70-130	2	20
Chromium	2.35	50	52.03	50	52.25	99	100	70-130	0	20
Copper	N.D.	50	52.09	50	52.77	104	106	70-130	1	20
Lead	1.82	15	18.75	15	16.57	113	98	70-130	12	20
Zinc	18.16	500	518.07	500	532.75	100	103	70-130	3	20
Batch number: 183370705002A	Sample number(s): 9918696-9918701 UNSPK: 9918696									
Arsenic	N.D.	10	11.04	10	10.61	110	106	70-130	4	20
Cadmium	N.D.	5.00	5.45	5.00	5.32	109	106	70-130	2	20
Chromium	0.829	50	51.36	50	51.66	101	102	70-130	1	20
Copper	N.D.	50	51.51	50	50.41	103	101	70-130	2	20
Lead	N.D.	15	16.32	15	16.27	109	108	70-130	0	20
Zinc	12.88	500	518	500	533.66	101	104	70-130	3	20
Batch number: 183400571401	Sample number(s): 9918690,9918692-9918695,9918700 UNSPK: 9918692									
Mercury	N.D.	1.00	0.919	1.00	0.906	92	91	80-120	1	20
Batch number: 183410571408	Sample number(s): 9918691,9918696-9918699,9918701 UNSPK: 9918696									
Mercury	N.D.	1.00	0.913	1.00	0.918	91	92	80-120	1	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18336001101A	Sample number(s): 9918690,9918692-9918695,9918700 UNSPK: 9918692									
Total Hardness	68800	80000	145940	80000	159400	96	113*	85-110	9*	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183370705001A	Sample number(s): 9918690-9918695 BKG: 9918692			
Arsenic	1.27	0.721	55* (1)	20
Cadmium	N.D.	0.199	200* (1)	20
Chromium	2.35	2.49	6 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	1.82	2.44	29* (1)	20
Zinc	18.16	18.16	0 (1)	20
Batch number: 183370705002A	Sample number(s): 9918696-9918701 BKG: 9918696			

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.829	0.813	2 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	12.88	12.96	1 (1)	20
Batch number: 183400571401	Sample number(s): 9918690,9918692-9918695,9918700 BKG: 9918692			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183410571408	Sample number(s): 9918691,9918696-9918699,9918701 BKG: 9918696			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18336001101A	Sample number(s): 9918690,9918692-9918695,9918700 BKG: 9918692			
Total Hardness	68800	74900	8* (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9918690	100	103	101	97
9918692	99	101	101	96
9918693	102	104	93	95
9918694	103	104	93	96
9918700	98	98	102	98
9918702	100	101	102	97
Blank	98	100	101	97
LCS	101	102	96	98
MS	102	104	93	95
MSD	103	104	93	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183340070A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:42

Group Number: 2013830

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183340070A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9918690	67	72	66	69
9918691	67	82	65	81
9918692	72	74	70	76
9918693	66	76	65	74
9918694	65	75	64	73
Blank	54	52	54	49
LCS	39	86	38	84
MS	66	76	65	74
MSD	65	75	64	73
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183340071A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9918696	67	77	67	74
9918697	70	80	68	80
9918698	72	82	70	80
9918700	74	72	75	74
9918701	71	85	69	85
Blank	46	59	44	60
LCS	46	87	45	81
MS	70	80	68	80
MSD	72	82	70	80
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2013830 Sample # 99/8690-702

COC # 568566

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs - 8260C H	Turbidity - SM2130	
112918-01-SW-U-C-1	11/29/18	1050	✓		11	2	2	1	1	1	1		3		
112918-02-SW-A-A-1	11/29/18	1105	✓		31	6	6	3	3	3	1		9		MS/MSD
112918-03-SW-D-A-1	11/29/18	1150	✓		11	2	2	1	1	1	1		3		
112918-TB01-01	11/29/18	1400	✓		1								1		

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

MS/MSD

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/1/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/29/18	1700			
			[signature]	11/30/18	10126

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 0.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234622

Group Number(s): 2013830

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	11/30/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12 671) at 12:09 on 11/30/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.8	DT	Wet	Y	Bagged	N
2	DT146	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 10, 2018 10:35

Project: Rensselaer

Account #: 04285
Group Number: 2014149
SDG: RNS59
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
113018-01-SW-U-B-1 Grab Surface Water	11/30/2018 09:00	9920328
113018-01-SW-U-B-1 Grab Filtered Surface Water	11/30/2018 09:00	9920329
113018-02-SW-A-B-1 Grab Surface Water	11/30/2018 09:30	9920330
113018-02-SW-A-B-1 Grab Filtered Surface Water	11/30/2018 09:30	9920331
113018-03-SW-D-B-1 Grab Surface Water	11/30/2018 10:05	9920332
113018-03-SW-D-B-1 Grab Filtered Surface Water	11/30/2018 10:05	9920333
113018-02-SW-A-B-2 Grab Surface Water	11/30/2018 09:40	9920334
113018-02-SW-A-B-2 Grab Filtered Surface Water	11/30/2018 09:40	9920335
113018-TB01-01 Water	11/30/2018 12:00	9920336

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **113018-01-SW-U-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:00
SDG#: RNS59-01

BASF Corporation
ELLE Sample #: WW 9920328
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D2	0.107	0.536	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.536	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.536	1
14188	PCB-1242	53469-21-9	N.D. D2	0.107	0.536	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.536	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.536	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.536	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0794	0.536	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0794	0.536	1
14188	Total PCBs	1336-36-3	N.D.	0.0794	0.536	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	4.9	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 21:28	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 21:27	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:02	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-01-SW-U-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:00
SDG#: RNS59-01

BASF Corporation
ELLE Sample #: WW 9920328
ELLE Group #: 2014149
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:50	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571401	12/07/2018 07:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571401	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001102A	12/02/2018 23:06	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **113018-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:00
SDG#: RNS59-02

BASF Corporation
ELLE Sample #: WW 9920329
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:13	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 07:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:30
SDG#: RNS59-03

BASF Corporation
ELLE Sample #: WW 9920330
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.536	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.536	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.536	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.536	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.536	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.536	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.536	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0794	0.536	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0794	0.536	1
14188	Total PCBs	1336-36-3	N.D.	0.0794	0.536	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	79,500	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 21:54	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 21:53	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:24	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:30
SDG#: RNS59-03

BASF Corporation
ELLE Sample #: WW 9920330
ELLE Group #: 2014149
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 07:53	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001102A	12/02/2018 23:30	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:30
SDG#: RNS59-04

BASF Corporation
ELLE Sample #: WW 9920331
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:35	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:55	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 07:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-03-SW-D-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 10:05
SDG#: RNS59-05

BASF Corporation
ELLE Sample #: WW 9920332
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.108	0.541	1
14188	PCB-1221	11104-28-2	N.D. D1	0.108	0.541	1
14188	PCB-1232	11141-16-5	N.D. D1	0.108	0.541	1
14188	PCB-1242	53469-21-9	N.D. D1	0.108	0.541	1
14188	PCB-1248	12672-29-6	N.D. D1	0.108	0.541	1
14188	PCB-1254	11097-69-1	N.D. D1	0.108	0.541	1
14188	PCB-1260	11096-82-5	N.D. D1	0.108	0.541	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0801	0.541	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0801	0.541	1
14188	Total PCBs	1336-36-3	N.D.	0.0801	0.541	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 22:20	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 22:19	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:45	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **113018-03-SW-D-B-1 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 10:05
SDG#: RNS59-05

BASF Corporation
ELLE Sample #: WW 9920332
ELLE Group #: 2014149
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 07:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001102A	12/03/2018 00:20	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **113018-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 10:05
SDG#: RNS59-06

BASF Corporation
ELLE Sample #: WW 9920333
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 01:56	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 04:59	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 08:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-2 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:40
SDG#: RNS59-07

BASF Corporation
ELLE Sample #: WW 9920334
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 22:46	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 22:45	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 02:07	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-2 Grab Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:40
SDG#: RNS59-07

BASF Corporation
ELLE Sample #: WW 9920334
ELLE Group #: 2014149
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705001A	12/04/2018 05:01	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571402	12/07/2018 07:41	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705001	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571406	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183400571402	12/06/2018 09:15	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18336001102A	12/03/2018 00:28	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **113018-02-SW-A-B-2 Grab Filtered Surface Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 09:40
SDG#: RNS59-08

BASF Corporation
ELLE Sample #: WW 9920335
ELLE Group #: 2014149
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D2	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183370003A	12/05/2018 02:18	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183370003A	12/03/2018 19:50	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183370705002A	12/04/2018 12:42	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183410571408	12/08/2018 10:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183370705002	12/03/2018 04:47	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183370571403	12/03/2018 17:15	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	183380571407	12/05/2018 04:22	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	3	183410571408	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **113018-TB01-01 Water**
COC: 568567

Project Name: **Rensselaer**

Submittal Date/Time: 12/01/2018 10:30
Collection Date/Time: 11/30/2018 12:00
SDG#: RNS59-09TB

BASF Corporation
ELLE Sample #: **WW 9920336**
ELLE Group #: **2014149**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183371AA	12/03/2018 18:52	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183371AA	12/03/2018 18:51	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2014149
Reported: 12/10/2018 10:35

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183371AA	Sample number(s): 9920328,9920330,9920332,9920334,9920336		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183370003A	Sample number(s): 9920328-9920335		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183370705001A	Sample number(s): 9920328-9920334		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183370705002A	Sample number(s): 9920335		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183400571401	Sample number(s): 9920328		
Mercury	N.D.	0.050	0.20
Batch number: 183400571402	Sample number(s): 9920329-9920334		
Mercury	N.D.	0.050	0.20
Batch number: 183410571408	Sample number(s): 9920335		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:35

Group Number: 2014149

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Mercury	N.D.	0.050	0.20
Batch number: 18336001102A	Sample number(s): 9920328,9920330,9920332,9920334		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183371AA	Sample number(s): 9920328,9920330,9920332,9920334,9920336								
Benzene	20	19.88			99		80-120		
Chlorobenzene	20	19.16			96		80-120		
1,2-Dichlorobenzene	20	19.78			99		80-120		
1,3-Dichlorobenzene	20	18.68			93		80-120		
1,4-Dichlorobenzene	20	19.76			99		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183370003A	Sample number(s): 9920328-9920335								
PCB-1016	5.01	3.85	5.01	3.78	77	76	50-140	2	36
PCB-1260	5.00	4.84	5.00	4.56	97	91	50-140	6	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183370705001A	Sample number(s): 9920328-9920334								
Arsenic	10	10			100		85-115		
Cadmium	5.00	5.19			104		85-115		
Chromium	50	51.37			103		85-115		
Copper	50	50.11			100		85-115		
Lead	15	15.39			103		85-115		
Zinc	500	506.63			101		85-115		
Batch number: 183370705002A	Sample number(s): 9920335								
Arsenic	10	10.25			103		85-115		
Cadmium	5.00	5.37			107		85-115		
Chromium	50	49.32			99		85-115		
Copper	50	48.99			98		85-115		
Lead	15	15.27			102		85-115		
Zinc	500	519.07			104		85-115		
Batch number: 183400571401	Sample number(s): 9920328								
Mercury	1.00	0.899			90		85-115		
Batch number: 183400571402	Sample number(s): 9920329-9920334								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:35

Group Number: 2014149

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Mercury	1.00	0.866			87		85-115		
Batch number: 183410571408	Sample number(s): 9920335								
Mercury	1.00	0.885			88		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18336001102A	Sample number(s): 9920328,9920330,9920332,9920334								
Total Hardness	40000	38870			97		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183400571402	Sample number(s): 9920329-9920334 UNSPK: 9920334									
Mercury	N.D.	1.00	0.884			88		80-120		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18336001102A	Sample number(s): 9920328,9920330,9920332,9920334 UNSPK: 9920328									
Total Hardness	75840	80000	149480			92		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183400571402	Sample number(s): 9920329-9920334 BKG: 9920334			
Mercury	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18336001102A	Sample number(s): 9920328,9920330,9920332,9920334 BKG: 9920328			
Total Hardness	75840	83500	10* (1)	7

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:35

Group Number: 2014149

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183371AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9920328	102	102	100	98
9920330	102	101	101	97
9920332	102	104	101	96
9920334	100	99	100	96
9920336	101	103	101	97
Blank	98	100	101	97
LCS	101	102	96	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183370003A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9920328	71	82	71	79
9920329	68	87	66	81
9920330	68	79	67	81
9920331	71	90	70	90
9920332	67	77	68	75
9920333	67	93	66	89
9920334	71	80	69	77
9920335	72	91	71	91
Blank	68	78	68	77
LCS	44	81	44	84
LCSD	57	54	57	51
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2014149 Sample # 9920328-36

COC # 568567

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered)	PCBs (unfiltered)	Metals (Filtered)	Metals (unfiltered)	Mercury	Hardness	TSS	VOCs - 8260c	Turbidity - SM2130
113018-01-SW-U-B-1	11/30/18	0900	✓		2	2	1	1	1	1		3		
113018-02-SW-A-B-1	11/30/18	0930	✓		2	2	1	1	1	1		3		
113018-03-SW-D-B-1	11/30/18	1005	✓		2	2	1	1	1	1		3		
113018-02-SW-A-B-2	11/30/18	0940	✓		2	2	1	1	1	1		3		
113018-TB01-01	11/30/18	1200	✓		1							1		

Analysis Requested — Preservation and Filtration Codes: F | | F/N | N | N | N | | H | | |

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/2/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/30/18	1530			
			[signature]	12-1-18	1030

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.3-1.7 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234768

Group Number(s): 2014149

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/01/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 12:23 on 12/01/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.7	DT	Wet	Y	Bagged	N
2	DT131	1.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 14, 2018 16:06

Project: Rensselaer

Account #: 04285
Group Number: 2015714
SDG: RNS60
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120118-01-SW-U-C-1 Grab Surface Water	12/01/2018 09:25	9926696
120118-01-SW-U-C-1 Grab Filtered Surface Water	12/01/2018 09:25	9926697
120118-02-SW-A-A-1 Grab Surface Water	12/01/2018 09:40	9926698
120118-02-SW-A-A-1 Grab Filtered Surface Water	12/01/2018 09:40	9926699
120118-03-SW-D-B-1 Grab Surface Water	12/01/2018 10:20	9926700
120118-03-SW-D-B-1 Grab Filtered Surface Water	12/01/2018 10:20	9926701
120118-01-SW-U-A-3 Grab Surface Water	12/01/2018 12:05	9926702
120118-01-SW-U-A-3 Grab Filtered Surface Water	12/01/2018 12:05	9926703
120118-01-SW-U-B-1 Grab Surface Water	12/03/2018 10:50	9926704
120118-01-SW-U-B-1 Grab Filtered Surface Water	12/03/2018 10:50	9926705
120118-02-SW-A-B-1 Grab Surface Water	12/03/2018 11:20	9926706
120118-02-SW-A-B-1 Grab Filtered Surface Water	12/03/2018 11:20	9926707
120118-03-SW-D-C-1 Grab Surface Water	12/03/2018 11:50	9926708
120118-03-SW-D-C-1 Grab Filtered Surface Water	12/03/2018 11:50	9926709
120118-TB01-01 Water	12/03/2018 14:30	9926710

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120118-01-SW-U-C-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:25
SDG#: RNS60-01

BASF Corporation
ELLE Sample #: WW 9926696
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 12:39	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 12:38	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 17:14	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-C-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:25
SDG#: RNS60-01

BASF Corporation
ELLE Sample #: WW 9926696
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 17:29	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:25
SDG#: RNS60-02

BASF Corporation
ELLE Sample #: WW 9926697
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 17:25	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-A-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:40
SDG#: RNS60-03

BASF Corporation
ELLE Sample #: WW 9926698
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 13:42	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 13:41	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 17:35	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-A-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:40
SDG#: RNS60-03

BASF Corporation
ELLE Sample #: WW 9926698
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:46	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 17:52	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 09:40
SDG#: RNS60-04

BASF Corporation
ELLE Sample #: WW 9926699
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 17:46	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:48	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-03-SW-D-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 10:20
SDG#: RNS60-05

BASF Corporation
ELLE Sample #: WW 9926700
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.73 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 14:04	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 14:03	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 17:56	Jessica L Miller	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120118-03-SW-D-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 10:20
SDG#: RNS60-05

BASF Corporation
ELLE Sample #: WW 9926700
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 18:00	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-03-SW-D-B-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 10:20
SDG#: RNS60-06

BASF Corporation
ELLE Sample #: WW 9926701
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 18:07	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-A-3 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 12:05
SDG#: RNS60-07EB

BASF Corporation
ELLE Sample #: WW 9926702
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**SW-846 8260C**	**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 11:36	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 11:35	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 18:17	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120118-01-SW-U-A-3 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 12:05
SDG#: RNS60-07EB

BASF Corporation
ELLE Sample #: WW 9926702
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 01:59	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-A-3 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/01/2018 12:05
SDG#: RNS60-08EB

BASF Corporation
ELLE Sample #: WW 9926703
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.571	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.571	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.571	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.571	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.571	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.571	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.571	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0845	0.571	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0845	0.571	1
14188	Total PCBs	1336-36-3	N.D.	0.0845	0.571	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183400020A	12/07/2018 18:28	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183400020A	12/06/2018 20:15	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:01	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 10:50
SDG#: RNS60-09

BASF Corporation
ELLE Sample #: WW 9926704
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 14:25	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 14:24	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 10:45	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120118-01-SW-U-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 10:50
SDG#: RNS60-09

BASF Corporation
ELLE Sample #: WW 9926704
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705001A	12/09/2018 02:03	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705001	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 18:08	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 10:50
SDG#: RNS60-10

BASF Corporation
ELLE Sample #: WW 9926705
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	24.7	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 10:56	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:29	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571401	12/08/2018 07:57	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705002	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571401	12/07/2018 16:15	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:20
SDG#: RNS60-11

BASF Corporation
ELLE Sample #: WW 9926706
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.7 J	0.2	1	1
11997	Chlorobenzene	108-90-7	9	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	1 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
	Chromium was detected in the prep blank at a concentration of 1.58137 ug/L. The blank value was not subtracted from the analytical result.					
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,800	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-B-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:20
SDG#: RNS60-11

BASF Corporation
ELLE Sample #: WW 9926706
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 14:46	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 14:45	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:06	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:31	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:31	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705001A	12/13/2018 15:22	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:31	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:31	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:31	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571402	12/08/2018 08:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705002	12/07/2018 15:20	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183440705002	12/11/2018 03:43	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	3	183470705001	12/13/2018 07:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571402	12/07/2018 15:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 18:16	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:20
SDG#: RNS60-12

BASF Corporation
ELLE Sample #: WW 9926707
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D2	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D2	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
	Chromium was detected in the prep blank at a concentration of 1.58137 ug/L. The blank value was not subtracted from the analytical result.					
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 12:56	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:34	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:34	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705001A	12/13/2018 15:23	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:34	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:34	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:34	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571402	12/08/2018 08:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705002	12/07/2018 15:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:20
SDG#: RNS60-12

BASF Corporation
ELLE Sample #: WW 9926707
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183440705002	12/11/2018 03:43	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	3	183470705001	12/13/2018 07:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571402	12/07/2018 15:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-03-SW-D-C-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:50
SDG#: RNS60-13

BASF Corporation
ELLE Sample #: WW 9926708
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.6 J	0.2	1	1
11997	Chlorobenzene	108-90-7	8	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	0.8 J	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
	Chromium was detected in the prep blank at a concentration of 1.58137 ug/L. The blank value was not subtracted from the analytical result.					
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	9.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Sample Description: **120118-03-SW-D-C-1 Grab Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:50
SDG#: RNS60-13

BASF Corporation
ELLE Sample #: WW 9926708
ELLE Group #: 2015714
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 15:07	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 15:06	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:17	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:36	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:36	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183470705001A	12/13/2018 15:14	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:36	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:36	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:36	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571402	12/08/2018 08:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705002	12/07/2018 15:20	JoElla L Rice	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	2	183440705002	12/11/2018 03:43	James L Mertz	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	3	183470705001	12/13/2018 07:20	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571402	12/07/2018 15:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18340001103A	12/06/2018 18:23	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120118-03-SW-D-C-1 Grab Filtered Surface Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 11:50
SDG#: RNS60-14

BASF Corporation
ELLE Sample #: WW 9926709
ELLE Group #: 2015714
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	N.D.	0.0837	0.566	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:27	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705002A	12/08/2018 13:38	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571402	12/08/2018 08:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705002	12/07/2018 15:20	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571402	12/07/2018 15:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120118-TB01-01 Water**
COC: 569866

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/03/2018 14:30
SDG#: RNS60-15TB

BASF Corporation
ELLE Sample #: WW 9926710
ELLE Group #: 2015714
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183411AA	12/07/2018 11:57	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183411AA	12/07/2018 11:56	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183411AA	Sample number(s): 9926696,9926698,9926700,9926702,9926704,9926706,9926708,9926710		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183400020A	Sample number(s): 9926696-9926703		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183440001A	Sample number(s): 9926704-9926706,9926708-9926709		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183440002A	Sample number(s): 9926707		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total PCBs	N.D.	0.0740	0.500
Batch number: 183410571401	Sample number(s): 9926696-9926705		
Mercury	N.D.	0.050	0.20
Batch number: 183410571402	Sample number(s): 9926706-9926709		
Mercury	N.D.	0.050	0.20
Batch number: 183410705001A	Sample number(s): 9926696-9926704		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	6.6 J	6.2	15.0
Batch number: 183410705002A	Sample number(s): 9926705-9926709		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	4.9	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183470705001A	Sample number(s): 9926706-9926708		
Chromium	1.6 J	0.70	4.0
Batch number: 18340001103A	Sample number(s): 9926696,9926698,9926700,9926704,9926706,9926708		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5183411AA	Sample number(s): 9926696,9926698,9926700,9926702,9926704,9926706,9926708,9926710								
Benzene	20	21.36	20	21.48	107	107	80-120	1	30
Chlorobenzene	20	20.47	20	20.83	102	104	80-120	2	30
1,2-Dichlorobenzene	20	19.46	20	19.62	97	98	80-120	1	30
1,3-Dichlorobenzene	20	19.03	20	19.29	95	96	80-120	1	30
1,4-Dichlorobenzene	20	19.67	20	19.77	98	99	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183400020A	Sample number(s): 9926696-9926703								
PCB-1016	5.01	4.13	5.01	4.00	83	80	50-140	3	36

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
PCB-1260	5.00	3.96	5.00	4.10	79	82	50-140	4	38
Batch number: 183440001A	Sample number(s): 9926704-9926706,9926708-9926709								
PCB-1016	5.01	3.14			63		50-140		
PCB-1260	5.00	4.89			98		50-140		
Batch number: 183440002A	Sample number(s): 9926707								
PCB-1016	5.01	3.81			76		50-140		
PCB-1260	5.00	4.67			93		50-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183410571401	Sample number(s): 9926696-9926705								
Mercury	1.00	0.891			89		85-115		
Batch number: 183410571402	Sample number(s): 9926706-9926709								
Mercury	1.00	0.905			90		85-115		
Batch number: 183410705001A	Sample number(s): 9926696-9926704								
Arsenic	10	10.74			107		85-115		
Cadmium	5.00	4.86			97		85-115		
Chromium	50	52.81			106		85-115		
Copper	50	56.45			113		85-115		
Lead	15	16.02			107		85-115		
Zinc	500	543.32			109		85-115		
Batch number: 183410705002A	Sample number(s): 9926705-9926709								
Arsenic	10	10.48			105		85-115		
Cadmium	5.00	5.11			102		85-115		
Chromium	50	57.31			115		85-115		
Copper	50	52.61			105		85-115		
Lead	15	15.43			103		85-115		
Zinc	500	542.44			108		85-115		
Batch number: 183470705001A	Sample number(s): 9926706-9926708								
Chromium	50	52.38			105		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18340001103A	Sample number(s): 9926696,9926698,9926700,9926704,9926706,9926708								
Total Hardness	40000	43400			109		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 5183411AA	Sample number(s): 9926696,9926698,9926700,9926702,9926704,9926706,9926708,9926710 UNSPK: 9926696									
Benzene	N.D.	20	22.34	20	23.92	112	120	80-120	7	30
Chlorobenzene	0.232	20	21.24	20	22.88	105	113	80-120	7	30
1,2-Dichlorobenzene	N.D.	20	19.57	20	21.04	98	105	80-120	7	30
1,3-Dichlorobenzene	N.D.	20	19.4	20	21.09	97	105	80-120	8	30
1,4-Dichlorobenzene	N.D.	20	19.82	20	21.3	99	107	80-120	7	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183410571401	Sample number(s): 9926696-9926705 UNSPK: 9926696									
Mercury	N.D.	1.00	0.863			86		80-120		
Batch number: 183410705001A	Sample number(s): 9926696-9926704 UNSPK: 9926697									
Arsenic	N.D.	10	10.94			109		70-130		
Cadmium	N.D.	5.00	5.18			104		70-130		
Chromium	N.D.	50	52.77			106		70-130		
Copper	N.D.	50	54.53			109		70-130		
Lead	N.D.	15	16.07			107		70-130		
Zinc	N.D.	500	535.75			107		70-130		
Batch number: 183470705001A	Sample number(s): 9926706-9926708 UNSPK: 9926708									
Chromium	1.49	50	51.95			101		70-130		
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18340001103A	Sample number(s): 9926696,9926698,9926700,9926704,9926706,9926708 UNSPK: 9926696									
Total Hardness	73260	80000	151900			98		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183410571401	Sample number(s): 9926696-9926705 BKG: 9926696			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183410705001A	Sample number(s): 9926696-9926704 BKG: 9926697			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	0.948	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183470705001A	Sample number(s): 9926706-9926708 BKG: 9926708			
Chromium	1.49	1.32	12 (1)	20
	ug/l	ug/l		
Batch number: 18340001103A	Sample number(s): 9926696,9926698,9926700,9926704,9926706,9926708 BKG: 9926696			
Total Hardness	73260	70900	3 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9926696	103	102	102	97
9926698	102	101	101	97
9926700	103	101	100	98
9926702	102	101	100	97
9926704	104	102	101	96
9926706	103	101	101	98
9926708	104	102	101	97
9926710	103	102	100	96
Blank	101	102	100	97
LCS	101	100	102	105
LCSD	101	100	102	105
MS	103	101	103	106
MSD	102	99	102	106
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183400020A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9926696	72	72	70	69
9926697	71	76	70	75
9926698	75	73	74	71
9926699	76	79	73	76

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 16:06

Group Number: 2015714

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183400020A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9926700	68	67	65	68
9926701	70	75	67	74
9926702	64	35	62	35
9926703	66	35	63	35
Blank	56	81	55	80
LCS	55	60	54	57
LCSD	46	75	45	71
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9926704	73	80	69	80
9926705	71	80	68	80
9926706	74	76	72	74
9926708	76	83	72	84
9926709	47	71	44	71
Blank	63	43	59	43
LCS	24*	51	22*	49
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9926707	69	78	66	77
Blank	64	46	63	45
LCS	36	67	35	64
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2015714 Sample # 9926696-710

COC # 569866

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 227608
Sampler: Patrick Gehean	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes: F | F/N | N | N | N | H

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Unfiltered)	PCBs (unfiltered)	Metals (Filtered)	Metals (unfiltered)	Mercury	Hardness	TSS	VOCs - 8260	Turbidity - SM2130	Remarks
120118-01-SW-U-C-1	12/1/18	0925	✓		11	2	2	1	1	1	1		3		
120118-02-SW-A-A-1	12/1/18	0940	✓		11	2	2	1	1	1	1		3		
120118-03-SW-D-B-1	12/1/18	1020	✓		11	2	2	1	1	1	1		3		
120118-01-SW-U-A-3	12/1/18	1205	✓		10	2	2	1	1	1			3		Equipment blank
120318-01-SW-U-B-1	12/3/18	1050	✓		11	2	2	1	1	1	1		3		
120318-02-SW-A-B-1	12/3/18	1120	✓		11	2	2	1	1	1	1		3		
120318-03-SW-D-C-1	12/3/18	1150	✓		11	2	2	1	1	1	1		3		
120318-TB01-01	12/3/18	1430	✓		1	1							1		

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/5/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehean	12/3/18	1500			
			Received by	12/4/18	10:00

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 0.8 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 234920

Group Number(s): 2015714

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/04/2018 10:00
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Zane Hollinger (10251) at 11:36 on 12/04/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.8	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
120118-01-SW-U-C-1	3	11	Only 3 HCl vials received
120118-02-SW-A-A-1	3	11	Only 3 HCl vials received
120118-03-SW-D-B-1	3	11	Only 3 HCl vials received
120118-01-SW-U-A-3	9	10	Received 3 HCl vials, 4 BC 153's (2 filtered, 2 unfiltered), and 2 BC 08's (1 filtered, 1 unfiltered)
120318-01-SW-U-B-1	6	11	Received 3 HCl vials, 2 BC 153's (unfiltered), and 1 BC 08 (unfiltered)
120318-02-SW-A-B-1	6	11	Received 3 HCl vials, 2 BC 153's (unfiltered), and 1 BC 08 (unfiltered)
120318-03-SW-D-C-1	3	11	Only 3 HCl vials received

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

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Sample Administration Receipt Documentation Log

Doc Log ID: 235223

Group Number(s): 2015714

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/06/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 12:07 on 12/06/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.6	DT	Wet	Y	Bagged	N
2	DT42-01	2.5	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 10, 2018 10:39

Project: Rensselaer

Account #: 04285
Group Number: 2015128
SDG: RNS61
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120418-01-SW-U-B-1 Grab Surface Water	12/04/2018 08:20	9924398
120418-01-SW-U-B-1 Grab Filtered Surface Water	12/04/2018 08:20	9924399
120418-02-SW-A-A-1 Grab Surface Water	12/04/2018 08:45	9924400
120418-02-SW-A-A-1 Grab Filtered Surface Water	12/04/2018 08:45	9924401
120418-03-SW-D-A-1 Grab Surface Water	12/04/2018 09:10	9924402
120418-03-SW-D-A-1 Grab Filtered Surface Water	12/04/2018 09:10	9924403
120418-TB01-01 Water	12/04/2018 12:00	9924404

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120418-01-SW-U-B-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:20
SDG#: RNS61-01

BASF Corporation
ELLE Sample #: WW 9924398
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.6 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.74 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.6 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183392AA	12/06/2018 05:51	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183392AA	12/06/2018 05:50	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 16:44	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120418-01-SW-U-B-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:20
SDG#: RNS61-01

BASF Corporation
ELLE Sample #: WW 9924398
ELLE Group #: 2015128
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:42	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18340001101A	12/06/2018 12:19	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120418-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:20
SDG#: RNS61-02

BASF Corporation
ELLE Sample #: WW 9924399
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.72 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 16:55	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:44	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **120418-02-SW-A-A-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:45
SDG#: RNS61-03

BASF Corporation
ELLE Sample #: WW 9924400
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.7 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183392AA	12/06/2018 06:13	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183392AA	12/06/2018 06:12	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 17:06	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120418-02-SW-A-A-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:45
SDG#: RNS61-03

BASF Corporation
ELLE Sample #: WW 9924400
ELLE Group #: 2015128
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:47	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18340001101A	12/06/2018 12:27	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120418-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 08:45
SDG#: RNS61-04

BASF Corporation
ELLE Sample #: WW 9924401
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.106	0.532	1
14188	PCB-1221	11104-28-2	N.D. D1	0.106	0.532	1
14188	PCB-1232	11141-16-5	N.D. D1	0.106	0.532	1
14188	PCB-1242	53469-21-9	N.D. D1	0.106	0.532	1
14188	PCB-1248	12672-29-6	N.D. D1	0.106	0.532	1
14188	PCB-1254	11097-69-1	N.D. D1	0.106	0.532	1
14188	PCB-1260	11096-82-5	N.D. D1	0.106	0.532	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0787	0.532	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0787	0.532	1
14188	Total PCBs	1336-36-3	N.D.	0.0787	0.532	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.70 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 17:17	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:49	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **120418-03-SW-D-A-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 09:10
SDG#: RNS61-05

BASF Corporation
ELLE Sample #: WW 9924402
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.8 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.8 J	1.1	3.0	1
06049	Zinc	7440-66-6	10.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183392AA	12/06/2018 06:35	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183392AA	12/06/2018 06:34	Patrick T Herres	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 17:27	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120418-03-SW-D-A-1 Grab Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 09:10
SDG#: RNS61-05

BASF Corporation
ELLE Sample #: WW 9924402
ELLE Group #: 2015128
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:51	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1
12147	Total Hardness	EPA 130.2	1	18340001101A	12/06/2018 12:35	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120418-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 09:10
SDG#: RNS61-06

BASF Corporation
ELLE Sample #: WW 9924403
ELLE Group #: 2015128
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183390024A	12/06/2018 17:38	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183390024A	12/05/2018 20:05	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183400705001A	12/07/2018 22:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183400571407	12/08/2018 07:20	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183400705001	12/06/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183400571407	12/07/2018 10:05	Denise L Trimby	1

*=This limit was used in the evaluation of the final result

Sample Description: **120418-TB01-01 Water**
COC: 568568

Project Name: **Rensselaer**

Submittal Date/Time: 12/05/2018 10:10
Collection Date/Time: 12/04/2018 12:00
SDG#: RNS61-07TB

BASF Corporation
ELLE Sample #: **WW 9924404**
ELLE Group #: **2015128**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	L183392AA	12/05/2018 22:36	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	L183392AA	12/05/2018 22:35	Patrick T Herres	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:39

Group Number: 2015128

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: L183392AA	Sample number(s): 9924398,9924400,9924402,9924404		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183390024A	Sample number(s): 9924398-9924403		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183400571407	Sample number(s): 9924398-9924403		
Mercury	N.D.	0.050	0.20
Batch number: 183400705001A	Sample number(s): 9924398-9924403		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	0.84 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18340001101A	Sample number(s): 9924398,9924400,9924402		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:39

Group Number: 2015128

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: L183392AA	Sample number(s): 9924398,9924400,9924402,9924404								
Benzene	20	22.51			113		80-120		
Chlorobenzene	20	21.77			109		80-120		
1,2-Dichlorobenzene	20	21.3			107		80-120		
1,3-Dichlorobenzene	20	21.31			107		80-120		
1,4-Dichlorobenzene	20	21.28			106		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183390024A	Sample number(s): 9924398-9924403								
PCB-1016	5.01	3.79	5.01	3.73	76	74	50-140	2	36
PCB-1260	5.00	4.52	5.00	4.53	90	91	50-140	0	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183400571407	Sample number(s): 9924398-9924403								
Mercury	1.00	0.899			90		85-115		
Batch number: 183400705001A	Sample number(s): 9924398-9924403								
Arsenic	10	10.64			106		85-115		
Cadmium	5.00	5.23			105		85-115		
Chromium	50	51.3			103		85-115		
Copper	50	52.56			105		85-115		
Lead	15	15.31			102		85-115		
Zinc	500	532.05			106		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18340001101A	Sample number(s): 9924398,9924400,9924402								
Total Hardness	40000	39100			98		85-110		

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L183392AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9924398	98	101	99	98
9924400	98	101	98	98
9924402	98	102	98	98
9924404	97	101	100	98
Blank	97	99	100	98
LCS	98	102	99	99

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/10/2018 10:39

Group Number: 2015128

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: L183392AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183390024A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9924398	75	74	72	73
9924399	79	76	78	74
9924400	76	78	75	75
9924401	80	85	80	81
9924402	74	72	71	69
9924403	76	80	73	78
Blank	71	77	70	75
LCS	61	43	60	41
LCSD	55	52	53	48
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2015128 Sample # 9924393-404

COC # 568568

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F,N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130
120418-01-SW-U-B-1	12/4/18	0820	✓		11	2	2	1	1	1	1		3	
120418-02-SW-A-A-1	12/4/18	0845	✓		11	2	2	1	1	1	1		3	
120418-03-SW-D-A-1	12/4/18	0910	✓		11	2	2	1	1	1	1		3	
120418-TB01-01	12/4/18	1200	✓		1								1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/6/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/4/18	1600			
			[signature]	12/5/18	1010

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx ✓ Other _____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235073

Group Number(s): 2015128

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/05/2018 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:05 on 12/05/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 11, 2018 16:47

Project: Rensselaer

Account #: 04285
Group Number: 2015808
SDG: RNS62
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120518-01-SW-U-C-1 Grab Surface Water	12/05/2018 10:00	9927141
120518-01-SW-U-C-1 Grab Filtered Surface Water	12/05/2018 10:00	9927142
120518-02-SW-A-B-1 Grab Surface Water	12/05/2018 09:05	9927143
120518-02-SW-A-B-1 Grab Filtered Surface Water	12/05/2018 09:05	9927144
120518-03-SW-D-A-1 Grab Surface Water	12/05/2018 08:30	9927145
120518-03-SW-D-A-1 Grab Filtered Surface Water	12/05/2018 08:30	9927146
120518-01-SW-U-C-2 Grab Surface Water	12/05/2018 10:05	9927147
120518-01-SW-U-C-2 Grab Filtered Surface Water	12/05/2018 10:05	9927148
120518-TB01-01 Water	12/05/2018 14:30	9927149

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120518-01-SW-U-C-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:00
SDG#: RNS62-01

BASF Corporation
ELLE Sample #: WW 9927141
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.83 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	6.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183412AA	12/07/2018 22:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183412AA	12/07/2018 22:17	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 16:36	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-01-SW-U-C-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:00
SDG#: RNS62-01

BASF Corporation
ELLE Sample #: WW 9927141
ELLE Group #: 2015808
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:17	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:17	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:17	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:17	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:30	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:22	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18341001101B	12/07/2018 10:52	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120518-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:00
SDG#: RNS62-02

BASF Corporation
ELLE Sample #: WW 9927142
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 16:47	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:20	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:20	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:20	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:20	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:20	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:33	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:28	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-02-SW-A-B-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 09:05
SDG#: RNS62-03

BASF Corporation
ELLE Sample #: WW 9927143
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.107	0.536	1
14188	PCB-1221	11104-28-2	N.D. D1	0.107	0.536	1
14188	PCB-1232	11141-16-5	N.D. D1	0.107	0.536	1
14188	PCB-1242	53469-21-9	N.D. D1	0.107	0.536	1
14188	PCB-1248	12672-29-6	N.D. D1	0.107	0.536	1
14188	PCB-1254	11097-69-1	N.D. D1	0.107	0.536	1
14188	PCB-1260	11096-82-5	N.D. D1	0.107	0.536	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0794	0.536	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0794	0.536	1
14188	Total PCBs	1336-36-3	N.D.	0.0794	0.536	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	70,300	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183412AA	12/07/2018 22:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183412AA	12/07/2018 22:39	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 16:57	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-02-SW-A-B-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 09:05
SDG#: RNS62-03

BASF Corporation
ELLE Sample #: WW 9927143
ELLE Group #: 2015808
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:22	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:22	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:22	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:22	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:22	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:35	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:30	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18341001101A	12/07/2018 11:08	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120518-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 09:05
SDG#: RNS62-04

BASF Corporation
ELLE Sample #: WW 9927144
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 17:08	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:28	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:28	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:28	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:28	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:28	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:41	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:32	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-03-SW-D-A-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 08:30
SDG#: RNS62-05

BASF Corporation
ELLE Sample #: WW 9927145
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.98 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	8.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.071 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183412AA	12/07/2018 23:01	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183412AA	12/07/2018 23:00	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 17:19	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120518-03-SW-D-A-1 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 08:30
SDG#: RNS62-05

BASF Corporation
ELLE Sample #: WW 9927145
ELLE Group #: 2015808
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:30	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:30	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:30	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:30	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:30	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18341001101A	12/07/2018 11:16	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120518-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 08:30
SDG#: RNS62-06

BASF Corporation
ELLE Sample #: WW 9927146
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.060 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 17:30	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:07	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:20	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-01-SW-U-C-2 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:05
SDG#: RNS62-07

BASF Corporation
ELLE Sample #: WW 9927147
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.90 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	6.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183412AA	12/07/2018 23:22	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183412AA	12/07/2018 23:21	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 17:41	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120518-01-SW-U-C-2 Grab Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:05
SDG#: RNS62-07

BASF Corporation
ELLE Sample #: WW 9927147
ELLE Group #: 2015808
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:33	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:33	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:33	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:33	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:33	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:45	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18341001101A	12/07/2018 11:23	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120518-01-SW-U-C-2 Grab Filtered Surface Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 10:05
SDG#: RNS62-08

BASF Corporation
ELLE Sample #: WW 9927148
ELLE Group #: 2015808
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.607	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.607	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.607	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.607	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.607	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.607	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.607	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0898	0.607	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0898	0.607	1
14188	Total PCBs	1336-36-3	N.D.	0.0898	0.607	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183410009A	12/09/2018 18:14	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183410009A	12/07/2018 17:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:35	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:35	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:35	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:35	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705007A	12/10/2018 14:35	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705007A	12/11/2018 06:48	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183410571407	12/10/2018 11:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705007	12/10/2018 05:33	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571407	12/10/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **120518-TB01-01 Water**
COC: 568569

Project Name: **Rensselaer**

Submittal Date/Time: 12/06/2018 10:30
Collection Date/Time: 12/05/2018 14:30
SDG#: RNS62-09TB

BASF Corporation
ELLE Sample #: WW 9927149
ELLE Group #: 2015808
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5183412AA	12/07/2018 21:57	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5183412AA	12/07/2018 21:56	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 2015808
Reported: 12/11/2018 16:47

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5183412AA	Sample number(s): 9927141,9927143,9927145,9927147,9927149		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183410009A	Sample number(s): 9927141-9927148		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183410571407	Sample number(s): 9927141-9927148		
Mercury	N.D.	0.050	0.20
Batch number: 183410705007A	Sample number(s): 9927141-9927148		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18341001101A	Sample number(s): 9927143,9927145,9927147		
Total Hardness	N.D.	3,000	10,000
Batch number: 18341001101B	Sample number(s): 9927141		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/11/2018 16:47

Group Number: 2015808

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 5183412AA	Sample number(s): 9927141,9927143,9927145,9927147,9927149								
Benzene	20	22.67	20	22.22	113	111	80-120	2	30
Chlorobenzene	20	21.63	20	21.08	108	105	80-120	3	30
1,2-Dichlorobenzene	20	20.3	20	20.34	101	102	80-120	0	30
1,3-Dichlorobenzene	20	20.07	20	19.85	100	99	80-120	1	30
1,4-Dichlorobenzene	20	20.63	20	20.39	103	102	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183410009A	Sample number(s): 9927141-9927148								
PCB-1016	5.01	4.89	5.01	4.97	98	99	50-140	2	36
PCB-1260	5.00	5.03	5.00	4.93	101	99	50-140	2	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183410571407	Sample number(s): 9927141-9927148								
Mercury	1.00	0.957			96		85-115		
Batch number: 183410705007A	Sample number(s): 9927141-9927148								
Arsenic	10	10.37			104		85-115		
Cadmium	5.00	5.04			101		85-115		
Chromium	50	50.97			102		85-115		
Copper	50	50.94			102		85-115		
Lead	15	14.9			99		85-115		
Zinc	500	509.08			102		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18341001101A	Sample number(s): 9927143,9927145,9927147								
Total Hardness	40000	39090	40000	38870	98	97	85-110	1	3
Batch number: 18341001101B	Sample number(s): 9927141								
Total Hardness	40000	39090	40000	38870	98	97	85-110	1	3

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183410571407	Sample number(s): 9927141-9927148 UNSPK: 9927141									
Mercury	N.D.	1.00	0.977			98		80-120		
Batch number: 183410705007A	Sample number(s): 9927141-9927148 UNSPK: 9927146									

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/11/2018 16:47

Group Number: 2015808

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Arsenic	N.D.	10	10.14			101		70-130		
Cadmium	N.D.	5.00	4.74			95		70-130		
Chromium	N.D.	50	50.95			102		70-130		
Copper	N.D.	50	50.95			102		70-130		
Lead	N.D.	15	14.84			99		70-130		
Zinc	N.D.	500	484.11			97		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183410571407	Sample number(s): 9927141-9927148 BKG: 9927141			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183410705007A	Sample number(s): 9927141-9927148 BKG: 9927146			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18341001101B	Sample number(s): 9927141 BKG: 9927141			
Total Hardness	71200	70740	1 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183412AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9927141	102	101	101	97
9927143	102	101	100	97

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/11/2018 16:47

Group Number: 2015808

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5183412AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9927145	103	100	100	97
9927147	103	101	101	96
9927149	102	101	100	98
Blank	100	99	100	99
LCS	102	101	101	106
LCSD	102	101	101	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183410009A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9927141	74	72	71	71
9927142	69	81	68	75
9927143	70	70	68	68
9927144	71	78	71	78
9927145	68	81	67	78
9927146	73	81	72	79
9927147	70	76	69	73
9927148	61	87	60	84
Blank	67	58	64	56
LCS	61	86	57	84
LCSD	56	83	55	82
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 2015808 Sample # 9927141-9

COC # 568569

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
120518-01-SW-U-C-1	12/5/18	1000	✓		11	2	2	1	1	1	1		3	
120518-02-SW-A-B-1	12/5/18	0405	✓		11	2	2	1	1	1	1		3	
120518-03-SW-D-A-1	12/5/18	0850	✓		11	2	2	1	1	1	1		3	
120518-01-SW-U-C-2	12/5/18	1005	✓		11	2	2	1	1	1	1		3	
120518-TB01-01	12/5/18	1430	✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/7/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	12/5/18	1500			
			Jason [illegible]	12/6/18	10:30

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.2-3.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235233

Group Number(s): 2015808

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/06/2018 10:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	No	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 120518-01-SW-U-C-02 (1 vial)

Unpacked by Zane Hollinger (10251) at 13:20 on 12/06/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.2	DT	Wet	Y	Loose/Bag	N
2	DT131	3.3	DT	Wet	Y	Loose/Bag	N

Samples Not Intact Details

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
120518-01-SW-U-C-2	40 ml glass vial (GC/MS) - HCl	1	Y	Lid was cracked

2425 New Holland Pike
Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 13, 2018 11:06

Project: Rensselaer

Account #: 04285
Group Number: 2016315
SDG: RNS63
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120618-01-SW-U-C-1 Grab Surface Water	12/06/2018 14:05	9929610
120618-01-SW-U-C-1 Grab Filtered Surface Water	12/06/2018 14:05	9929611
120618-02-SW-A-A-1 Grab Surface Water	12/06/2018 14:30	9929612
120618-02-SW-A-A-1 Grab Filtered Surface Water	12/06/2018 14:30	9929613
120618-03-SW-D-A-1 Grab Surface Water	12/06/2018 15:00	9929614
120618-03-SW-D-A-1 Grab Filtered Surface Water	12/06/2018 15:00	9929615
120618-01-SW-U-A-3 Grab Surface Water	12/06/2018 09:30	9929616
120618-01-SW-U-A-3 Grab Filtered Surface Water	12/06/2018 09:30	9929617
120618-TB01-01 Water	12/06/2018 16:30	9929618

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120618-01-SW-U-C-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:05
SDG#: RNS63-01

BASF Corporation
ELLE Sample #: WW 9929610
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.3 J	0.2	1	1
11997	Chlorobenzene	108-90-7	8	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	0.204 JD1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	0.204 J	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.7 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.4 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.050 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	73,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/12/2018 00:47	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/12/2018 00:46	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 13:07	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-01-SW-U-C-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:05
SDG#: RNS63-01

BASF Corporation
ELLE Sample #: WW 9929610
ELLE Group #: 2016315
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:11	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:01	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18341001102A	12/07/2018 15:18	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120618-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:05
SDG#: RNS63-02

BASF Corporation
ELLE Sample #: WW 9929611
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.058 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 13:18	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:20	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:03	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-02-SW-A-A-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:30
SDG#: RNS63-03

BASF Corporation
ELLE Sample #: WW 9929612
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.3 J	0.2	1	1
11997	Chlorobenzene	108-90-7	6	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.566	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.566	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.566	1
14188	PCB-1242	53469-21-9	0.130 JD1	0.113	0.566	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.566	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.566	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.566	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0837	0.566	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0837	0.566	1
14188	Total PCBs	1336-36-3	0.130 J	0.0837	0.566	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.5 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.5 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.052 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/12/2018 01:13	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/12/2018 01:12	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 13:29	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-02-SW-A-A-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:30
SDG#: RNS63-03

BASF Corporation
ELLE Sample #: WW 9929612
ELLE Group #: 2016315
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:22	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:05	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18341001102A	12/07/2018 15:26	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120618-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 14:30
SDG#: RNS63-04

BASF Corporation
ELLE Sample #: WW 9929613
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.123	0.613	1
14188	PCB-1221	11104-28-2	N.D. D1	0.123	0.613	1
14188	PCB-1232	11141-16-5	N.D. D1	0.123	0.613	1
14188	PCB-1242	53469-21-9	N.D. D1	0.123	0.613	1
14188	PCB-1248	12672-29-6	N.D. D1	0.123	0.613	1
14188	PCB-1254	11097-69-1	N.D. D1	0.123	0.613	1
14188	PCB-1260	11096-82-5	N.D. D1	0.123	0.613	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0907	0.613	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0907	0.613	1
14188	Total PCBs	1336-36-3	N.D.	0.0907	0.613	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.052 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 13:40	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:23	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:07	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-03-SW-D-A-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:00
SDG#: RNS63-05

BASF Corporation
ELLE Sample #: WW 9929614
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	0.3 J	0.2	1	1
11997	Chlorobenzene	108-90-7	6	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	0.143 JD1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	0.143 J	0.0849	0.573	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.0 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.056 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	71,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/12/2018 01:38	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/12/2018 01:37	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 13:51	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-03-SW-D-A-1 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:00
SDG#: RNS63-05

BASF Corporation
ELLE Sample #: WW 9929614
ELLE Group #: 2016315
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:29	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:09	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18341001102A	12/07/2018 15:34	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120618-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 15:00
SDG#: RNS63-06

BASF Corporation
ELLE Sample #: WW 9929615
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.581	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.581	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.581	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.581	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.581	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.581	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.581	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0860	0.581	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0860	0.581	1
14188	Total PCBs	1336-36-3	N.D.	0.0860	0.581	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 14:02	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:31	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 06:55	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-01-SW-U-A-3 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 09:30
SDG#: RNS63-07EB

BASF Corporation
ELLE Sample #: WW 9929616
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.91 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 20:27	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 20:26	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 14:13	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-01-SW-U-A-3 Grab Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 09:30
SDG#: RNS63-07EB

BASF Corporation
ELLE Sample #: WW 9929616
ELLE Group #: 2016315
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:32	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:15	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-01-SW-U-A-3 Grab Filtered Surface Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 09:30
SDG#: RNS63-08EB

BASF Corporation
ELLE Sample #: WW 9929617
ELLE Group #: 2016315
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.72 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.052 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 14:45	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
06031	Chromium	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
06033	Copper	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
06035	Lead	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
06049	Zinc	EPA 200.8 rev 5.4	1	183410705010A	12/11/2018 15:34	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183410571409	12/11/2018 07:17	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183410705010	12/11/2018 03:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183410571409	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120618-TB01-01 Water**
COC: 568570

Project Name: **Rensselaer**

Submittal Date/Time: 12/07/2018 10:20
Collection Date/Time: 12/06/2018 16:30
SDG#: RNS63-09TB

BASF Corporation
ELLE Sample #: WW 9929618
ELLE Group #: 2016315
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 20:53	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 20:52	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:06

Group Number: 2016315

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183452AA	Sample number(s): 9929610,9929612,9929614,9929616,9929618		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183440002A	Sample number(s): 9929610-9929617		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183410571409	Sample number(s): 9929610-9929617		
Mercury	N.D.	0.050	0.20
Batch number: 183410705010A	Sample number(s): 9929610-9929617		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18341001102A	Sample number(s): 9929610,9929612,9929614		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:06

Group Number: 2016315

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P183452AA	Sample number(s): 9929610,9929612,9929614,9929616,9929618								
Benzene	20	21.33			107		80-120		
Chlorobenzene	20	21.19			106		80-120		
1,2-Dichlorobenzene	20	20.57			103		80-120		
1,3-Dichlorobenzene	20	20.93			105		80-120		
1,4-Dichlorobenzene	20	20.18			101		80-120		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183440002A	Sample number(s): 9929610-9929617								
PCB-1016	5.01	3.81			76		50-140		
PCB-1260	5.00	4.67			93		50-140		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 183410571409	Sample number(s): 9929610-9929617								
Mercury	1.00	0.942			94		85-115		
Batch number: 183410705010A	Sample number(s): 9929610-9929617								
Arsenic	10	9.80			98		85-115		
Cadmium	5.00	4.70			94		85-115		
Chromium	50	52.44			105		85-115		
Copper	50	49.36			99		85-115		
Lead	15	15.01			100		85-115		
Zinc	500	483.76			97		85-115		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18341001102A	Sample number(s): 9929610,9929612,9929614								
Total Hardness	40000	40110			100		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183410571409	Sample number(s): 9929610-9929617 UNSPK: 9929615									
Mercury	N.D.	1.00	0.963			96		80-120		
Batch number: 183410705010A	Sample number(s): 9929610-9929617 UNSPK: 9929610									
Arsenic	N.D.	10	9.79			98		70-130		
Cadmium	N.D.	5.00	4.74			95		70-130		
Chromium	1.66	50	53.14			103		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:06

Group Number: 2016315

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Copper	N.D.	50	53.49			107		70-130		
Lead	1.44	15	17.2			105		70-130		
Zinc	N.D.	500	514.35			103		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183410571409	Sample number(s): 9929610-9929617 BKG: 9929615			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183410705010A	Sample number(s): 9929610-9929617 BKG: 9929610			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.66	1.44	14 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	1.44	1.50	4 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183452AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9929610	96	102	112	104
9929612	96	102	112	103
9929614	96	104	112	104
9929616	96	101	110	105
9929618	97	101	111	104
Blank	99	100	107	106
LCS	100	105	99	100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2016315
Reported: 12/13/2018 11:06

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183452AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9929610	72	79	70	73
9929611	67	83	65	78
9929612	64	69	64	67
9929613	60	78	57	73
9929614	66	80	67	79
9929615	62	79	61	79
9929616	25*	14	25*	13
9929617	67	89	67	86
Blank	64	46	63	45
LCS	36	67	35	64
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2016315 Sample # 9929610-18

COC # 568570

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Other: ___

Analysis Requested — Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	PCBs (Filtered) F	PCBs (Unfiltered)	Metals (Filtered) F/N	Metals (Unfiltered) N	Mercury N	Hardness N	TSS	VOCs – 8260c H	Turbidity – SM2130	
120618-01-SW-U-C-1	12/6/18	1405	✓		11	2	2	1	1	1	1		3		
120618-02-SW-A-A-1	12/6/18	1430	✓		11	2	2	1	1	1	1		3		
120618-03-SW-D-A-1	12/6/18	1500	✓		11	2	2	1	1	1	1		3		
120618-01-SW-U-A-3	12/6/18	0930	✓		10	2	2	1	1	1			3		Equipment Blank
120618-TB01-01	12/6/18	1630	✓		1								1		

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/8/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/6/18	1530			
			[signature]	12/7/18	1020

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx ☑ Other _____

Temperature upon receipt 1.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235414

Group Number(s): 2016315

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/07/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 13:27 on 12/07/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.6	DT	Wet	Y	Bagged	N
2	DT42-01	3.2	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 13, 2018 11:29

Project: Rensselaer

Account #: 04285
Group Number: 2016644
SDG: RNS66
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120718-01-SW-U-C-1 Grab Surface Water	12/07/2018 10:10	9931134
120718-01-SW-U-C-1 Grab Filtered Surface Water	12/07/2018 10:10	9931135
120718-02-SW-A-A-1 Grab Surface Water	12/07/2018 09:30	9931136
120718-02-SW-A-A-1 Grab Filtered Surface Water	12/07/2018 09:30	9931137
120718-03-SW-D-A-1 Grab Surface Water	12/07/2018 08:40	9931138
120718-03-SW-D-A-1MS Grab Surface Water	12/07/2018 08:40	9931139
120718-03-SW-D-A-1MSD Grab Surface Water	12/07/2018 08:40	9931140
120718-03-SW-D-A-1DUP Grab Surface Water	12/07/2018 08:40	9931141
120718-03-SW-D-A-1 Grab Filtered Surface Water	12/07/2018 08:40	9931142
120718-03-SW-D-A-1MS Grab Filtered Surface Water	12/07/2018 08:40	9931143
120718-03-SW-D-A-1MSD Grab Filtered Surface Water	12/07/2018 08:40	9931144
120718-03-SW-D-A-1DUP Grab Filtered Surface Water	12/07/2018 08:40	9931145
120718-TB01-01 Grab Water	12/07/2018 12:00	9931146

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120718-01-SW-U-C-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 10:10
SDG#: RNS66-01

BASF Corporation
ELLE Sample #: WW 9931134
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.7 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	65,900	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/12/2018 02:04	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/12/2018 02:03	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:38	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120718-01-SW-U-C-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 10:10
SDG#: RNS66-01

BASF Corporation
ELLE Sample #: WW 9931134
ELLE Group #: 2016644
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:45	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 08:42	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-01-SW-U-C-1 Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 10:10
SDG#: RNS66-02

BASF Corporation
ELLE Sample #: WW 9931135
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:48	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:47	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:47	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:47	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:29	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-02-SW-A-A-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 09:30
SDG#: RNS66-03

BASF Corporation
ELLE Sample #: WW 9931136
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.8 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	0.250 JD1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	0.250 J	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.6 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.3 J	1.1	3.0	1
06049	Zinc	7440-66-6	6.4 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	64,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/12/2018 02:30	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/12/2018 02:29	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 11:59	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120718-02-SW-A-A-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 09:30
SDG#: RNS66-03

BASF Corporation
ELLE Sample #: WW 9931136
ELLE Group #: 2016644
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:47	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:26	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 08:50	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 09:30
SDG#: RNS66-04

BASF Corporation
ELLE Sample #: WW 9931137
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.122	0.610	1
14188	PCB-1221	11104-28-2	N.D. D1	0.122	0.610	1
14188	PCB-1232	11141-16-5	N.D. D1	0.122	0.610	1
14188	PCB-1242	53469-21-9	N.D. D1	0.122	0.610	1
14188	PCB-1248	12672-29-6	N.D. D1	0.122	0.610	1
14188	PCB-1254	11097-69-1	N.D. D1	0.122	0.610	1
14188	PCB-1260	11096-82-5	N.D. D1	0.122	0.610	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0902	0.610	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0902	0.610	1
14188	Total PCBs	1336-36-3	N.D.	0.0902	0.610	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 12:30	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:50	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:50	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:50	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:50	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:50	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:35	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:50	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05BKG

BASF Corporation
ELLE Sample #: WW 9931138
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.79 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	60,400	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 21:45	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 21:44	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 12:40	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120718-03-SW-D-A-1 Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05BKG

BASF Corporation
ELLE Sample #: WW 9931138
ELLE Group #: 2016644
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:19	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 08:57	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MS Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05MS

BASF Corporation
ELLE Sample #: WW 9931139
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	21	0.2	1	1
11997	Chlorobenzene	108-90-7	22	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	21	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	21	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	21	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.83 D2	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	5.19 D2	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	9.02	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.0	0.15	1.0	1
06031	Chromium	7440-47-3	52.1	0.70	4.0	1
06033	Copper	7440-50-8	50.3	9.9	40.0	1
06035	Lead	7439-92-1	16.2	1.1	3.0	1
06049	Zinc	7440-66-6	506	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.90	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	140,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 22:11	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 22:10	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 12:51	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MS Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05MS

BASF Corporation
ELLE Sample #: WW 9931139
ELLE Group #: 2016644
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:25	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 09:05	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MSD Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05MSD

BASF Corporation
ELLE Sample #: WW 9931140
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	22	0.2	1	1
11997	Chlorobenzene	108-90-7	23	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	22	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	22	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	22	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	3.87 D2	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	5.09 D2	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	8.96	0.0819	0.553	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.6	0.68	2.0	1
06028	Cadmium	7440-43-9	4.9	0.15	1.0	1
06031	Chromium	7440-47-3	51.5	0.70	4.0	1
06033	Copper	7440-50-8	50.8	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	505	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.89	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	134,000	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 22:36	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 22:35	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440001A	12/11/2018 13:01	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MSD Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05MSD

BASF Corporation
ELLE Sample #: WW 9931140
ELLE Group #: 2016644
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440001A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:27	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 09:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1DUP Grab Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-05DUP

BASF Corporation
ELLE Sample #: WW 9931141
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	62,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705001A	12/10/2018 16:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	183430571401	12/11/2018 10:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705001	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571401	12/11/2018 06:25	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 09:20	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-06BKG

BASF Corporation
ELLE Sample #: WW 9931142
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.119	0.595	1
14188	PCB-1221	11104-28-2	N.D. D1	0.119	0.595	1
14188	PCB-1232	11141-16-5	N.D. D1	0.119	0.595	1
14188	PCB-1242	53469-21-9	N.D. D1	0.119	0.595	1
14188	PCB-1248	12672-29-6	N.D. D1	0.119	0.595	1
14188	PCB-1254	11097-69-1	N.D. D1	0.119	0.595	1
14188	PCB-1260	11096-82-5	N.D. D1	0.119	0.595	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0881	0.595	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0881	0.595	1
14188	Total PCBs	1336-36-3	N.D.	0.0881	0.595	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 14:56	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:26	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:26	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:26	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:26	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:26	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:17	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:23	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MS Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-06MS

BASF Corporation
ELLE Sample #: WW 9931143
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.24 D2	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	5.39 D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	9.63	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.2	0.15	1.0	1
06031	Chromium	7440-47-3	53.2	0.70	4.0	1
06033	Copper	7440-50-8	53.0	9.9	40.0	1
06035	Lead	7439-92-1	15.8	1.1	3.0	1
06049	Zinc	7440-66-6	511	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.97	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 15:07	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:32	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:32	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:32	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:32	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:32	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:22	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:27	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1MSD Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-06MSD

BASF Corporation
ELLE Sample #: WW 9931144
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	4.31 D2	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	5.28 D2	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	9.59	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	10.9	0.68	2.0	1
06028	Cadmium	7440-43-9	5.3	0.15	1.0	1
06031	Chromium	7440-47-3	53.0	0.70	4.0	1
06033	Copper	7440-50-8	54.6	9.9	40.0	1
06035	Lead	7439-92-1	16.4	1.1	3.0	1
06049	Zinc	7440-66-6	524	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.93	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183440002A	12/11/2018 15:18	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183440002A	12/10/2018 16:39	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:35	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:35	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:35	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:35	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:35	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:24	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:29	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-03-SW-D-A-1DUP Grab Filtered Surface Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 08:40
SDG#: RNS66-06DUP

BASF Corporation
ELLE Sample #: WW 9931145
ELLE Group #: 2016644
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	7.9	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:30	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:30	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:30	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:30	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	183430705002A	12/10/2018 13:30	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	183430705002A	12/11/2018 16:21	Bradley M Berlot	1
00259	Mercury	EPA 245.1 rev 3	1	183430571402	12/11/2018 07:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183430705002	12/09/2018 03:07	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183430571402	12/10/2018 16:00	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120718-TB01-01 Grab Water**
COC: 567690

Project Name: **Rensselaer**

Submittal Date/Time: 12/08/2018 09:40
Collection Date/Time: 12/07/2018 12:00
SDG#: RNS66-07TB

BASF Corporation
ELLE Sample #: **WW 9931146**
ELLE Group #: **2016644**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183452AA	12/11/2018 21:19	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183452AA	12/11/2018 21:18	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183452AA	Sample number(s): 9931134,9931136,9931138-9931140,9931146		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183440001A	Sample number(s): 9931134-9931140		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183440002A	Sample number(s): 9931142-9931144		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183430571401	Sample number(s): 9931134,9931136,9931138-9931141		
Mercury	N.D.	0.050	0.20
Batch number: 183430571402	Sample number(s): 9931135,9931137,9931142-9931145		
Mercury	N.D.	0.050	0.20
Batch number: 183430705001A	Sample number(s): 9931134,9931136,9931138-9931141		
Arsenic	N.D.	0.68	3.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	10.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183430705002A	Sample number(s): 9931135,9931137,9931142-9931145		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	0.95 J	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18346001101A	Sample number(s): 9931134,9931136,9931138-9931141		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183452AA	Sample number(s): 9931134,9931136,9931138-9931140,9931146								
Benzene	20	21.33			107		80-120		
Chlorobenzene	20	21.19			106		80-120		
1,2-Dichlorobenzene	20	20.57			103		80-120		
1,3-Dichlorobenzene	20	20.93			105		80-120		
1,4-Dichlorobenzene	20	20.18			101		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183440001A	Sample number(s): 9931134-9931140								
PCB-1016	5.01	3.14			63		50-140		
PCB-1260	5.00	4.89			98		50-140		
Batch number: 183440002A	Sample number(s): 9931142-9931144								
PCB-1016	5.01	3.81			76		50-140		
PCB-1260	5.00	4.67			93		50-140		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183430571401	Sample number(s): 9931134,9931136,9931138-9931141								
Mercury	1.00	0.896			90		85-115		
Batch number: 183430571402	Sample number(s): 9931135,9931137,9931142-9931145								
Mercury	1.00	0.959			96		85-115		
Batch number: 183430705001A	Sample number(s): 9931134,9931136,9931138-9931141								
Arsenic	10	10.4			104		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.19			104		85-115		
Chromium	50	51.42			103		85-115		
Copper	50	50			100		85-115		
Lead	15	15.29			102		85-115		
Zinc	500	509.64			102		85-115		
Batch number: 183430705002A	Sample number(s): 9931135,9931137,9931142-9931145								
Arsenic	10	10.61			106		85-115		
Cadmium	5.00	5.18			104		85-115		
Chromium	50	50.32			101		85-115		
Copper	50	51.02			102		85-115		
Lead	15	15.24			102		85-115		
Zinc	500	522.04			104		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18346001101A	Sample number(s): 9931134,9931136,9931138-9931141								
Total Hardness	40000	39630			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P183452AA	Sample number(s): 9931134,9931136,9931138-9931140,9931146 UNSPK: 9931138									
Benzene	N.D.	20	20.71	20	21.78	104	109	80-120	5	30
Chlorobenzene	0.519	20	22.37	20	23.37	109	114	80-120	4	30
1,2-Dichlorobenzene	N.D.	20	20.7	20	21.73	103	109	80-120	5	30
1,3-Dichlorobenzene	N.D.	20	21.27	20	21.98	106	110	80-120	3	30
1,4-Dichlorobenzene	N.D.	20	20.64	20	21.91	103	110	80-120	6	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183440001A	Sample number(s): 9931134-9931140 UNSPK: 9931138									
PCB-1016	N.D.	5.88	3.83	5.54	3.87	65	70	50-140	1	36
PCB-1260	N.D.	5.87	5.19	5.53	5.09	88	92	50-140	2	38
Batch number: 183440002A	Sample number(s): 9931142-9931144 UNSPK: 9931142									
PCB-1016	N.D.	5.54	4.24	5.77	4.31	77	75	50-140	2	36
PCB-1260	N.D.	5.53	5.39	5.76	5.28	97	92	50-140	2	38
	ug/l	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183430571401	Sample number(s): 9931134,9931136,9931138-9931141 UNSPK: 9931138									
Mercury	N.D.	1.00	0.896	1.00	0.895	90	89	80-120	0	20
Batch number: 183430571402	Sample number(s): 9931135,9931137,9931142-9931145 UNSPK: 9931142									
Mercury	N.D.	1.00	0.971	1.00	0.926	97	93	80-120	5	20
Batch number: 183430705001A	Sample number(s): 9931134,9931136,9931138-9931141 UNSPK: 9931138									
Arsenic	N.D.	10	10.94	10	10.63	109	106	70-130	3	20
Cadmium	N.D.	5.00	5.00	5.00	4.95	100	99	70-130	1	20
Chromium	0.791	50	52.13	50	51.45	103	101	70-130	1	20
Copper	N.D.	50	50.35	50	50.83	101	102	70-130	1	20
Lead	N.D.	15	16.21	15	15.85	108	106	70-130	2	20
Zinc	N.D.	500	506.42	500	505.11	101	101	70-130	0	20
Batch number: 183430705002A	Sample number(s): 9931135,9931137,9931142-9931145 UNSPK: 9931142									
Arsenic	N.D.	10	10.94	10	10.94	109	109	70-130	0	20
Cadmium	N.D.	5.00	5.23	5.00	5.34	105	107	70-130	2	20
Chromium	N.D.	50	53.15	50	53.03	106	106	70-130	0	20
Copper	N.D.	50	52.95	50	54.61	106	109	70-130	3	20
Lead	N.D.	15	15.76	15	16.42	105	109	70-130	4	20
Zinc	N.D.	500	511.05	500	524.02	102	105	70-130	3	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18346001101A	Sample number(s): 9931134,9931136,9931138-9931141 UNSPK: 9931138									
Total Hardness	60360	80000	139880	80000	133740	99	92	85-110	4	7

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183430571401	Sample number(s): 9931134,9931136,9931138-9931141 BKG: 9931138			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183430571402	Sample number(s): 9931135,9931137,9931142-9931145 BKG: 9931142			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183430705001A	Sample number(s): 9931134,9931136,9931138-9931141 BKG: 9931138			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Chromium	0.791	1.14	37* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183430705002A	Sample number(s): 9931135,9931137,9931142-9931145 BKG: 9931142			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	7.95	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	ug/l	ug/l		
Batch number: 18346001101A	Sample number(s): 9931134,9931136,9931138-9931141 BKG: 9931138			
Total Hardness	60360	62240	3 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183452AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9931134	96	102	112	103
9931136	97	101	112	103
9931138	97	102	111	104
9931139	98	105	104	100
9931140	97	104	104	100
9931146	97	101	111	104
Blank	99	100	107	106
LCS	100	105	99	100
MS	98	105	104	100
MSD	97	104	104	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440001A

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/13/2018 11:29

Group Number: 2016644

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440001A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9931134	74	82	71	82
9931135	82	91	78	90
9931136	72	79	69	79
9931137	72	89	69	83
9931138	70	83	66	82
9931139	42	85	39	79
9931140	60	87	56	82
Blank	63	43	59	43
LCS	24*	51	22*	49
MS	42	85	39	79
MSD	60	87	56	82
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183440002A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9931142	72	91	73	91
9931143	43	89	42	88
9931144	63	85	62	82
Blank	64	46	63	45
LCS	36	67	35	64
MS	43	89	42	88
MSD	63	85	62	82
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 2016644 Sample # 993134-46

COC # 567690

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patricia Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ | Potable ☐ Ground ☐ Surface ☑ NPDES ☐ | Other: ___

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Pr Hvrd)	PCBs (Unfr Hvrd)	F,N Metals (Pr Hvrd)	N Metals (Unfr Hvrd)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
120718-01-SW-U-C-1	12/7/18	1010	✓		11	2	2	1	1	1	1		3		
120718-02-SW-A-A-1	12/7/18	0930	✓		11	2	2	1	1	1	1		3		
120718-03-SW-D-A-1	12/7/18	0840	✓		31	6	6	3	3	3	1		9		MS/MSD
120718-TB01-01	12/7/18	1200	✓		1								1		

For Lab Use Only

FSC: _____
SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/9/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/5/18	1530			
			[signature]	12/8/18	940

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx X Other _____

Temperature upon receipt 0.8-1.0 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235557

Group Number(s): 2016644

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/08/2018 9:40
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ariel Garcia (15332) at 11:12 on 12/08/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.8	DT	Wet	Y	Bagged	N
2	DT42-01	1.0	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: December 14, 2018 15:49

Project: Rensselaer

Account #: 04285
Group Number: 2017294
SDG: RNS67
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
120818-01-SW-U-A-1 Grab Surface Water	12/08/2018 09:40	9934363
120818-01-SW-U-A-1 Grab Filtered Surface Water	12/08/2018 09:40	9934364
120818-02-SW-A-B-1 Grab Surface Water	12/08/2018 10:25	9934365
120818-02-SW-A-B-1 Grab Filtered Surface Water	12/08/2018 10:25	9934366
120818-03-SW-D-A-1 Grab Surface Water	12/08/2018 10:45	9934367
120818-03-SW-D-A-1 Grab Filtered Surface Water	12/08/2018 10:45	9934368
121018-01-SW-U-B-1 Grab Surface Water	12/10/2018 09:10	9934369
121018-01-SW-U-B-1 Grab Filtered Surface Water	12/10/2018 09:10	9934370
121018-02-SW-A-A-1 Grab Surface Water	12/10/2018 09:45	9934371
121018-02-SW-A-A-1 Grab Filtered Surface Water	12/10/2018 09:45	9934372
121018-03-SW-D-A-1 Grab Surface Water	12/10/2018 10:35	9934373
121018-03-SW-D-A-1 Grab Filtered Surface Water	12/10/2018 10:35	9934374
121018-01-SW-U-B-2 Grab Surface Water	12/10/2018 09:25	9934375
121018-01-SW-U-B-2 Grab Filtered Surface Water	12/10/2018 09:25	9934376
121018-TB01-01 Water	12/10/2018 12:00	9934377

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **120818-01-SW-U-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 09:40
SDG#: RNS67-01

BASF Corporation
ELLE Sample #: WW 9934363
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	2	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.99 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 00:00	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/12/2018 23:59	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 16:53	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **120818-01-SW-U-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 09:40
SDG#: RNS67-01

BASF Corporation
ELLE Sample #: WW 9934363
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:41	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:24	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 09:28	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120818-01-SW-U-A-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 09:40
SDG#: RNS67-02

BASF Corporation
ELLE Sample #: WW 9934364
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:04	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:52	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:34	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120818-02-SW-A-B-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:25
SDG#: RNS67-03

BASF Corporation
ELLE Sample #: WW 9934365
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.9 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.055 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	68,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 00:26	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 00:25	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:14	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120818-02-SW-A-B-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:25
SDG#: RNS67-03

BASF Corporation
ELLE Sample #: WW 9934365
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:54	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:36	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 09:36	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120818-02-SW-A-B-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:25
SDG#: RNS67-04

BASF Corporation
ELLE Sample #: WW 9934366
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.127	0.635	1
14188	PCB-1221	11104-28-2	N.D. D1	0.127	0.635	1
14188	PCB-1232	11141-16-5	N.D. D1	0.127	0.635	1
14188	PCB-1242	53469-21-9	N.D. D1	0.127	0.635	1
14188	PCB-1248	12672-29-6	N.D. D1	0.127	0.635	1
14188	PCB-1254	11097-69-1	N.D. D1	0.127	0.635	1
14188	PCB-1260	11096-82-5	N.D. D1	0.127	0.635	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0939	0.635	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0939	0.635	1
14188	Total PCBs	1336-36-3	N.D.	0.0939	0.635	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:25	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 04:56	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:38	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **120818-03-SW-D-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:45
SDG#: RNS67-05

BASF Corporation
ELLE Sample #: WW 9934367
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.619	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.619	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.619	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.619	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.619	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.619	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.619	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0916	0.619	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0916	0.619	1
14188	Total PCBs	1336-36-3	N.D.	0.0916	0.619	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 00:51	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 00:50	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:35	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **120818-03-SW-D-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:45
SDG#: RNS67-05

BASF Corporation
ELLE Sample #: WW 9934367
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:32	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:40	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705002	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 10:05	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **120818-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/08/2018 10:45
SDG#: RNS67-06

BASF Corporation
ELLE Sample #: WW 9934368
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.551	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.551	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.551	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.551	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.551	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.551	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.551	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0815	0.551	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0815	0.551	1
14188	Total PCBs	1336-36-3	N.D.	0.0815	0.551	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:46	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:42	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-01-SW-U-B-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:10
SDG#: RNS67-07

BASF Corporation
ELLE Sample #: WW 9934369
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.584	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.584	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.584	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.584	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.584	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.584	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.584	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0864	0.584	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0864	0.584	1
14188	Total PCBs	1336-36-3	N.D.	0.0864	0.584	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 01:17	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 01:16	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 17:56	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121018-01-SW-U-B-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:10
SDG#: RNS67-07

BASF Corporation
ELLE Sample #: WW 9934369
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:04	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 10:13	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121018-01-SW-U-B-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:10
SDG#: RNS67-08

BASF Corporation
ELLE Sample #: WW 9934370
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.0758	0.379	1
14188	PCB-1221	11104-28-2	N.D. D1	0.0758	0.379	1
14188	PCB-1232	11141-16-5	N.D. D1	0.0758	0.379	1
14188	PCB-1242	53469-21-9	N.D. D1	0.0758	0.379	1
14188	PCB-1248	12672-29-6	N.D. D1	0.0758	0.379	1
14188	PCB-1254	11097-69-1	N.D. D1	0.0758	0.379	1
14188	PCB-1260	11096-82-5	N.D. D1	0.0758	0.379	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0561	0.379	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0561	0.379	1
14188	Total PCBs	1336-36-3	N.D.	0.0561	0.379	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 18:28	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:07	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:46	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-02-SW-A-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:45
SDG#: RNS67-09

BASF Corporation
ELLE Sample #: WW 9934371
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.2 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.631	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.631	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.631	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.631	1
14188	PCB-1248	12672-29-6	N.D. D1	0.126	0.631	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.631	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.631	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0934	0.631	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0934	0.631	1
14188	Total PCBs	1336-36-3	N.D.	0.0934	0.631	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.054 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,700	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 01:43	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 01:42	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 18:38	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-02-SW-A-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:45
SDG#: RNS67-09

BASF Corporation
ELLE Sample #: WW 9934371
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:09	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:48	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 10:21	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121018-02-SW-A-A-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:45
SDG#: RNS67-10

BASF Corporation
ELLE Sample #: WW 9934372
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.054 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460018A	12/13/2018 18:49	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460018A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:11	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571401	12/13/2018 07:50	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571401	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-03-SW-D-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 10:35
SDG#: RNS67-11

BASF Corporation
ELLE Sample #: WW 9934373
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.080 J	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	69,600	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 02:09	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 02:08	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460021A	12/13/2018 19:41	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

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Sample Description: **121018-03-SW-D-A-1 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 10:35
SDG#: RNS67-11

BASF Corporation
ELLE Sample #: WW 9934373
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460021A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:43	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571402	12/13/2018 08:11	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705002	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571402	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 10:29	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121018-03-SW-D-A-1 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 10:35
SDG#: RNS67-12

BASF Corporation
ELLE Sample #: WW 9934374
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.067 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460021A	12/13/2018 19:52	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460021A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705001A	12/13/2018 05:13	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571402	12/13/2018 08:13	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705001	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571402	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-01-SW-U-B-2 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:25
SDG#: RNS67-13FD

BASF Corporation
ELLE Sample #: WW 9934375
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.4 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	72,200	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/13/2018 02:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/13/2018 02:34	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460021A	12/13/2018 20:02	Covenant Mutuku	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-01-SW-U-B-2 Grab Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:25
SDG#: RNS67-13FD

BASF Corporation
ELLE Sample #: WW 9934375
ELLE Group #: 2017294
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460021A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:45	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571402	12/13/2018 08:15	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705002	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571402	12/12/2018 16:55	JoElla L Rice	1
12147	Total Hardness	EPA 130.2	1	18346001101A	12/12/2018 10:37	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **121018-01-SW-U-B-2 Grab Filtered Surface Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 09:25
SDG#: RNS67-14FD

BASF Corporation
ELLE Sample #: WW 9934376
ELLE Group #: 2017294
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.075 J	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	183460021A	12/13/2018 20:33	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	183460021A	12/12/2018 16:45	Ryan J Dowdy	1
06025	Arsenic	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	183460705002A	12/13/2018 05:47	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	183460571402	12/13/2018 08:21	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	183460705002	12/12/2018 16:00	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	183460571402	12/12/2018 16:55	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **121018-TB01-01 Water**
COC: 567691

Project Name: **Rensselaer**

Submittal Date/Time: 12/11/2018 10:05
Collection Date/Time: 12/10/2018 12:00
SDG#: RNS67-15TB

BASF Corporation
ELLE Sample #: WW 9934377
ELLE Group #: 2017294
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	P183463AA	12/12/2018 20:59	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P183463AA	12/12/2018 20:58	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 15:49

Group Number: 2017294

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: P183463AA	Sample number(s): 9934363,9934365,9934367,9934369,9934371,9934373,9934375,9934377		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 183460018A	Sample number(s): 9934363-9934372		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183460021A	Sample number(s): 9934373-9934376		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 183460571401	Sample number(s): 9934363-9934372		
Mercury	N.D.	0.050	0.20
Batch number: 183460571402	Sample number(s): 9934373-9934376		
Mercury	0.078 J	0.050	0.20
Batch number: 183460705001A	Sample number(s): 9934363-9934366,9934368-9934372,9934374		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 15:49

Group Number: 2017294

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 183460705002A	Sample number(s): 9934367,9934373,9934375-9934376		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 18346001101A	Sample number(s): 9934363,9934365,9934367,9934369,9934371,9934373,9934375		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P183463AA	Sample number(s): 9934363,9934365,9934367,9934369,9934371,9934373,9934375,9934377								
Benzene	20	20.2	20	20.09	101	100	80-120	1	30
Chlorobenzene	20	21.42	20	21.3	107	106	80-120	1	30
1,2-Dichlorobenzene	20	21.76	20	21.01	109	105	80-120	4	30
1,3-Dichlorobenzene	20	20.62	20	20.04	103	100	80-120	3	30
1,4-Dichlorobenzene	20	21.34	20	21.03	107	105	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183460018A	Sample number(s): 9934363-9934372								
PCB-1016	5.01	3.54	5.01	3.98	71	80	50-140	12	36
PCB-1260	5.00	4.06	5.00	4.47	81	89	50-140	9	38
Batch number: 183460021A	Sample number(s): 9934373-9934376								
PCB-1016	5.01	4.22	5.01	3.90	84	78	50-140	8	36
PCB-1260	5.00	4.46	5.00	4.78	89	96	50-140	7	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183460571401	Sample number(s): 9934363-9934372								
Mercury	1.00	0.924			92		85-115		
Batch number: 183460571402	Sample number(s): 9934373-9934376								
Mercury	1.00	0.964			96		85-115		
Batch number: 183460705001A	Sample number(s): 9934363-9934366,9934368-9934372,9934374								
Arsenic	10	10.53			105		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 15:49

Group Number: 2017294

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Cadmium	5.00	5.36			107		85-115		
Chromium	50	50.89			102		85-115		
Copper	50	51.62			103		85-115		
Lead	15	14.86			99		85-115		
Zinc	500	510.48			102		85-115		
Batch number: 183460705002A	Sample number(s): 9934367,9934373,9934375-9934376								
Arsenic	10	10.56			106		85-115		
Cadmium	5.00	5.46			109		85-115		
Chromium	50	51.18			102		85-115		
Copper	50	50.64			101		85-115		
Lead	15	15.02			100		85-115		
Zinc	500	508.47			102		85-115		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18346001101A	Sample number(s): 9934363,9934365,9934367,9934369,9934371,9934373,9934375								
Total Hardness	40000	39630			99		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 183460571401	Sample number(s): 9934363-9934372 UNSPK: 9934363									
Mercury	N.D.	1.00	0.922			92		80-120		
Batch number: 183460705001A	Sample number(s): 9934363-9934366,9934368-9934372,9934374 UNSPK: 9934363									
Arsenic	N.D.	10	10.3			103		70-130		
Cadmium	N.D.	5.00	5.10			102		70-130		
Chromium	0.993	50	50.03			98		70-130		
Copper	N.D.	50	51.74			103		70-130		
Lead	N.D.	15	16.58			111		70-130		
Zinc	N.D.	500	507.83			102		70-130		
Batch number: 183460705002A	Sample number(s): 9934367,9934373,9934375-9934376 UNSPK: 9934367									
Arsenic	N.D.	10	10.69			107		70-130		
Cadmium	N.D.	5.00	5.09			102		70-130		
Chromium	N.D.	50	48.83			98		70-130		
Copper	N.D.	50	52.32			105		70-130		
Lead	N.D.	15	15.55			104		70-130		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 15:49

Group Number: 2017294

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Zinc	N.D.	500	509.58			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 183460571401	Sample number(s): 9934363-9934372 BKG: 9934363			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183460705001A	Sample number(s): 9934363-9934366,9934368-9934372,9934374 BKG: 9934363			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.993	0.890	11 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
Batch number: 183460705002A	Sample number(s): 9934367,9934373,9934375-9934376 BKG: 9934367			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183463AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9934363	95	102	111	102
9934365	95	103	110	103
9934367	95	102	111	103

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 12/14/2018 15:49

Group Number: 2017294

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: P183463AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9934369	95	102	110	102
9934371	94	101	110	104
9934373	96	104	111	103
9934375	94	100	111	103
9934377	94	99	112	103
Blank	95	103	111	104
LCS	97	105	105	100
LCSD	96	107	105	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 183460018A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9934363	60	72	56	68
9934364	75	88	69	81
9934365	68	79	63	73
9934366	70	87	64	82
9934367	70	81	65	74
9934368	75	88	70	84
9934369	68	87	64	82
9934370	73	83	67	79
9934371	68	83	63	81
9934372	75	92	68	84
Blank	48	59	45	56
LCS	44	75	40	73
LCSD	54	87	50	82
Limits:	33-137	10-148	33-137	10-148

Analysis Name: PCB (608.3) 250 ml
Batch number: 183460021A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9934373	81	88	74	82
9934374	80	92	73	84
9934375	73	79	67	73
9934376	74	86	67	79
Blank	76	78	70	75
LCS	72	86	65	82
LCSD	74	56	67	53

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 2017294
Reported: 12/14/2018 15:49

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 183460021A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 2017294 Sample # 9934363-77

COC # 567691

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☐ Potable ☐ Ground ☐ NPDES ☑ Surface ☑ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130	Remarks
120818-01-SW-U-A-1	12/8/18	0940	✓		11	2	2	1	1	1	1		3		
120818-02-SW-A-B-1	12/8/18	1025	✓		11	2	2	1	1	1	1		3		
120818-03-SW-D-A-1	12/8/18	1045	✓		11	2	2	1	1	1	1		3		
121018-01-SW-U-B-1	12/10/18	0910	✓		11	2	2	1	1	1	1		3		
121018-02-SW-A-A-1	12/10/18	0945	✓		11	2	2	1	1	1	1		3		
121018-03-SW-D-A-1	12/10/18	1035	✓		11	2	2	1	1	1	1		3		
121018-01-SW-U-B-2	12/10/18	0925	✓		11	2	2	1	1	1	1		3		Duplicate
121018-TB01-01	12/10/18	1200	✓		1								1		

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 12/12/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	12/10/18	1530			
			[signature]	12/11/18	1005

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ✓ Other ____

Temperature upon receipt 12-2.6 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 235714

Group Number(s): 2017294

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	12/11/2018 10:05
Number of Packages:	3	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Leah Foreman (12616) at 12:38 on 12/11/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.2	DT	Wet	Y	Bagged	N
2	DT42-01	1.4	DT	Wet	Y	Bagged	N
3	DT42-01	2.6	DT	Wet	Y	Bagged	N

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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/19/19 – 12/30/19 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (6 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 12/18/19 through 12/30/19. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria. However, the data file for Buoy 3 was somehow corrupted during the week and only contained data for two days. Several attempts were made with YSI technical support to try and recover the data, however efforts were unsuccessful. Given the low turbidity values observed at the other stations and the lack of a visible plume, the chance of any upriver migration of suspended particulate is extremely unlikely.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 30 NTU, with limited readings in excess of that. The recorded values at the Site were comparable to the USGS maintained gage at the

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

Port of Albany (maximum observed value of 35.6 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



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Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1*	0	37.4	2.99	1083
Buoy 2*	0	28.09	4.07	487
Buoy 3**	2.58	81.89	8.39	523

Notes:

* - Negative values (assumed to be erroneous readings) have been removed.

** - Buoy data file was corrupted.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/31/19 – 1/18/20 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (15 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 12/31/19 through 1/18/20. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria. However, the data file for Buoy 2 was somehow corrupted during the week and did not contain any data. Several attempts were made with YSI technical support to try and recover the data, however efforts were unsuccessful. Given the low turbidity values observed at the other stations and the lack of a visible plume, the chance of any migration of suspended particulate is extremely unlikely.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 30 NTU, with limited readings in excess of that. The recorded values at the Site were comparable to the USGS maintained gage at the

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

Port of Albany (maximum observed value of 79.1 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

Summary

The dredging/ backfilling operations are now completed so water quality data will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, the water column monitoring/ sampling program is complete and the Site is currently being demobilized.

Figure 1: Example buoy layout (from Monitoring Plan)



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Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1*	0.25	37.05	6.61	1355
Buoy 2**	NA	NA	NA	NA
Buoy 3*	0.01	89.7	6.98	1400

Notes:

* - Negative values (assumed to be erroneous readings) have been removed.

** - Buoy data file was corrupted.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**11/20/19 – 12/4/19 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (10 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 11/20/19 through 12/4/19. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria. However, at Buoy 1 (upriver) there were two turbidity spikes observed greater than 150 NTU around 10:00pm on 12/1/19. Since it was a Sunday evening, Site operations were not active. These readings were either a spike due to natural conditions, temporary debris fouling, or an erroneous reading. The latter is more likely, as the readings on either side of these two spikes were both less than 17 NTU. The USGS sonde at the Port of Albany did not have any similar readings over this time period, and the same can be said for the other two buoys.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 20 NTU. The recorded values at the Site were comparable to the USGS maintained gage at the Port of Albany (maximum observed value

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

less than 7 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



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Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1*	0.27	23.65	5.74	1437
Buoy 2	0.12	15.63	5.37	717
Buoy 3	3.85	25.41	8.7	1269

Note:
Negative values (assumed to be erroneous readings) have been removed.
* - Erroneous >150 NTU values removed.

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/5/19 – 12/11/19 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 12/5/19 through 12/11/19. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria. However, the data file for Buoy 1 was somehow corrupted during the week and did not contain any data. Several attempts were made with YSI technical support to try and recover the data, however efforts were unsuccessful. Given the low turbidity values observed at the other stations and the lack of a visible plume, the chance of any upriver migration of suspended particulate is extremely unlikely. Additionally, at Buoy 3 (downriver) there was a turbidity spike observed greater than 100 NTU around 5:15am on 12/11/19. This reading was early in the morning prior to the commencement of Site activities. This reading was either a spike due to natural conditions, temporary debris fouling, or an erroneous reading. The latter is more likely, as the readings on

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

either side of these two spikes were both less than 41 NTU. The USGS sonde at the Port of Albany did not have any similar readings over this time period, and the same can be said for Buoy 2.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 30 NTU. The recorded values at the Site were comparable to the USGS maintained gage at the Port of Albany (maximum observed value less than 7 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



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Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1*	NA	NA	NA	NA
Buoy 2**	0	63.6	24.7	300
Buoy 3***	3.3	106.6	11.8	670

Notes:

* - Buoy data file was corrupted.

** - Negative values (assumed to be erroneous readings) have been removed.

*** - Single value > 100 NTU observed at 5:15am (outside working hours).

Weekly Water Quality Monitoring Summary

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**12/12/19 – 12/18/19 (Turbidity)**

On behalf of BASF Corporation (BASF), AECOM has prepared this water monitoring data summary for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data was collected in accordance with the revised Surface Water Remedial Action Monitoring Plan (the Plan) prepared by AECOM (2019).

Introduction

Surface water monitoring activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during remedial dredging activities to ensure that the measures used to control off-Site migration of Site related turbidity are effective, and to document ambient water quality/conditions in the river. A typical buoy layout is included as Figure 1. Since the conclusion of dredging, the monitoring program consists of the following real-time monitoring:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically during backfilling activities;
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week[1]);
- Additionally, if plumes are observed, Total Suspended Solids (TSS) samples will be collected per the decision tree in the Plan (Figure 2-3). These samples will allow for comparison with the real-time/ field collected turbidity measurements.

The in-situ monitoring results are compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan.

Constituent Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 cover system installation over the period 12/12/19 through 12/18/19. Turbidity readings were collected using a YSI EXO2 sonde. Field turbidity readings were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (see Table 1). Over the reporting period, there were no exceedances of the water quality criteria. However, the data file for Buoy 2 was somehow corrupted during the week and did not contain any data. Several attempts were made with YSI technical support to try and recover the data, however efforts were unsuccessful. Given the low turbidity values observed at the other stations and the lack of a visible plume, the chance of any upriver migration of suspended particulate is extremely unlikely.

Typically, field turbidity readings from the YSI EXO2 sondes were observed to be less than 40 NTU. The recorded values at the Site were comparable to the USGS maintained gage at the Port of Albany (average observed value of

[1] When buoys have come off the river for repair/ maintenance mobile monitoring has ben conducted, as well as monitoring the USGS maintained meter at the Port of Albany (background location).

42 NTU over the monitoring period). No sediment plumes were observed during the monitoring of the backfilling operations.

Summary

The dredging program is now completed so chemistry samples will no longer be collected. Pursuant to the final Surface Water Remedial Action Monitoring Plan, and a 9/18/19 email from Drew Hoffert (NYSDEC) the monitoring program during backfilling operations will be continued on a continuous basis for turbidity. The following criteria apply to the backfilling operations:

- TSS samples to be collected if there is a visible plume emanating from the containment system.

Figure 1: Example buoy layout (from Monitoring Plan)



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Table 1. Summary of Turbidity Data (NTU)

Location	Min	Max	Average	N
Buoy 1*	7.5	39.2	17.4	616
Buoy 2**	NA	NA	NA	NA
Buoy 3	11.4	70.8	24.1	671

Notes:

* - Negative values (assumed to be erroneous readings) have been removed.

** - Buoy data file was corrupted.

AECOM Imagine it. Delivered.

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Bulkhead Water Quality Monitoring Summary Technical Memorandum

Client:	**BASF**
Location:	**Rensselaer, New York**
Period:	**10/8/18 – 10/12/18 (Chemistry)**

On behalf of BASF Corporation (BASF), AECOM Technology Services (AECOM) has prepared this chemical water quality monitoring data summary technical memorandum for Hudson River Operable Unit 2 (OU-2) remedial activities at the Former BASF Facility located in Rensselaer, New York (referred to herein as "Site"). This data summary includes both tabular information and written discussions summarizing the ambient water-quality data collected during the indicated reporting period at the Site. The data were collected in accordance with the Surface Water Remedial Action Monitoring Plan prepared by AECOM (2018).

Introduction

Surface water monitoring and sampling activities were conducted during the reporting period (5 working days) to evaluate conditions within the river during the sheet pile bulkhead installation activities to ensure that the measures used to control off-Site migration of Site related contaminants turbidity are effective, and to document ambient water quality/conditions in the river. An example buoy layout is included as Figure 1. The monitoring program consists of the following real-time monitoring and integrated sampling[1]:

- In-situ hand-held monitoring for turbidity, as well as observational monitoring sediment plumes conducted periodically, and during sampling activities;
- Daily (Monday through Friday) TSS samples collected from each monitoring buoy at approximately shallow, mid-depth, and near bottom in the water column. These samples are also analyzed for turbidity in the laboratory to allow comparison with the real-time measurements and TSS data;
- Daily (Monday through Friday) samples collected (one from each monitoring station from near bottom in the water column, unless the worst case turbidity is observed at another depth in which case that depth will be sampled) for laboratory analysis for VOCs, hardness and dissolved and total metals and PCBs.
- Continuous real-time monitoring for (every 15 minutes for turbidity conducted at three fixed autonomous water quality buoys positioned up-river, adjacent to, and downriver of the active work area (24 hours per day, 7 days per week);

This memorandum summarizes turbidity/ TSS/ chemistry data collected during the above referenced reporting period

Total Suspended Solids/ Turbidity Sampling

In accordance with the Monitoring Plan, during the sheet pile installation (10/8/18 through 10/12/18), 45 daily TSS/ turbidity water grab samples were collected. Turbidity was analyzed in the field and in the laboratory. A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The TSS and turbidity grab samples were each collected in 500 milliliter (ml) poly bottles. While the sample was being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to Eurofins laboratory in Lancaster, PA.

[1] Turbidity and TSS baseline relationship data have been summarized in a separate technical memorandum.

Field turbidity data and laboratory TSS data collected during the reporting period are presented in Table 1.

- Real-time turbidity observations at the Site were typically less than 15 NTU during this period (n=31), with remaining observations between 15 and 20 NTU (n=5). One exception was during 10/12/18, where there were nine (9) observations between 0800 and 0935 where the field turbidity meters were reading > 400 NTUs (max reading of 498 NTU). The laboratory analyzed turbidity samples ranged from 9 to 17 NTU, suggesting there may have been an issue with the field turbidity meter. The real time turbidity levels available on the Storm Central website indicated that turbidity never exceeded 16 NTUs during this time period.
- Excluding the anomalies, the lower portion of the water column continued to have the highest turbidity (average 11.3 NTU). The middle and surficial horizon consistently had the lowest values (averages 9.7 and 8.6 NTU respectively).
- Although there was some minor variability in the data set, field and laboratory turbidity measurements were generally consistent with one another.

Constituents of Concern Evaluation

AECOM conducted daily water quality monitoring associated with the Hudson River OU-2 sheetpile installation during the period 10/8/18 through 10/13/18. In accordance with the September 2018 Surface Water Remedial Action Monitoring Plan, filtered analytical chemistry samples were collected daily for analysis of PCB Aroclors and metals. Whole water samples were collected for VOCs, PCB Aroclors, metals, total suspended solids (TSS), hardness, and turbidity (3 locations, one depth based on maximum observed in-situ turbidity readings). TSS and turbidity samples were collected from two additional depths.

A Geotech Geopump™ peristaltic pump was used to collect samples at three depths in the water column (surface, mid-depth, and bottom). The PCB Aroclor and metals samples were filtered using a 0.45 micron filter. Once collected, the filter was removed and the remainder of the sample bottles were filled. While the samples were being collected, the turbidity reading from the paired YSI 6920 sonde was recorded in the project logbook. The samples were submitted under chain of custody to the Eurofins laboratory in Lancaster, PA. Upon receipt, all lab data packages provided by the lab were reviewed by AECOM's chemistry staff for completeness and accuracy.

Detected concentrations of organic and inorganic constituents were compared to a list of Site-specific guidance values that were presented in Table 3-1 of the Surface Water Remedial Action Monitoring Plan (Table 2). The chemical sampling/ monitoring lab reports are presented in Attachment A.

PCBs were undetected (filtered and non-filtered) during the monitoring program. Over the reporting period, there was one low level exceedance of the water quality criteria (Table 3) for izinc which is not believed to be Site-related, This low level detection may be representative of ambient Site conditions and does not appear related on Site remedial activities.

Summary

Pursuant to the October 29, 2018 communication from NYSDEC, and in accordance with the final Surface Water Remedial Action Monitoring Plan, the chemistry monitoring program for the remainder of bulkhead installation (VOCs, hardness, total and dissolved metals and PCBs) sampling frequency will be reduced to collection of two samples per week. Continuous daily turbidity monitoring will continue as described in the Work Plan throughout the duration of the sheetpile installation.

Table 1: Water Quality Detections Summary

Sample ID	Sample Date/ Time	Field Turbidity (NTU)	Lab Turbidity (NTU)	Lab TSS (mg/L)
101118-03-SW-D-A-1	10/11/18 8:00	6	8.1	7.76
101018-01-SW-U-A-1	10/10/18 11:40	7.2	7.2	9.1
101018-02-SW-A-A-1	10/10/18 12:20	7.3	9	10.4
101118-02-SW-A-A-1	10/11/18 8:50	7.5	8.3	8.96
101118-01-SW-U-A-1	10/11/18 8:35	8.2	8.9	10.6
100918-02-SW-A-A-1	10/9/18 14:45	9.4	11	10
100918-03-SW-U-A-1	10/9/18 13:00	9.8	10	10.7
100918-01-SW-D-A-1	10/9/18 14:10	13.9	14	19.6
101018-03-SW-D-A-1	10/10/18 10:55	15.2	10	24.5
100818-01-SW-U-A-1	10/8/18 10:50	16.3	16	17.8
100818-03-SW-D-A-1	10/8/18 10:15	17.4	15	15.9
100818-02-SW-A-A-1	10/8/18 11:35	17.8	16	15.3
101218-02-SW-A-A-1	10/12/18 9:25	477.8	17	21.2
101218-01-SW-U-A-1	10/12/18 8:50	489.9	14	16.9
101218-03-SW-D-A-1	10/12/18 8:00	495.2	11	10.6
101118-03-SW-D-B-1	10/11/18 8:05	5.3	6.4	6.72
101018-02-SW-A-B-1	10/10/18 12:30	6.2	7.9	8.81
101018-01-SW-U-B-1	10/10/18 11:45	6.7	8.8	8.06
101118-01-SW-U-B-1	10/11/18 8:40	7.1	9.4	9.7
101118-02-SW-A-B-1	10/11/18 8:55	7.2	9	5.82
100918-02-SW-A-B-1	10/9/18 14:50	8.9	9.7	9.43
101018-03-SW-D-B-1	10/10/18 11:05	9.8	11	14
100918-01-SW-D-B-1	10/9/18 14:15	10	13	12.9
100918-03-SW-U-B-1	10/9/18 13:05	10.8	9.2	10.4
100818-03-SW-D-B-1	10/8/18 10:20	14.5	16	15.9
100818-02-SW-A-B-1	10/8/18 11:40	14.7	14	15.1
100818-01-SW-U-B-1	10/8/18 11:00	15.1	16	15.4
101218-02-SW-A-B-1	10/12/18 9:30	479.9	15	20.7
101218-01-SW-U-B-1	10/12/18 8:55	488.9	12	15.4
101218-03-SW-D-B-1	10/12/18 8:05	497.3	9.3	10.7
101118-03-SW-D-C-1	10/11/18 8:10	4.2	6	5.97

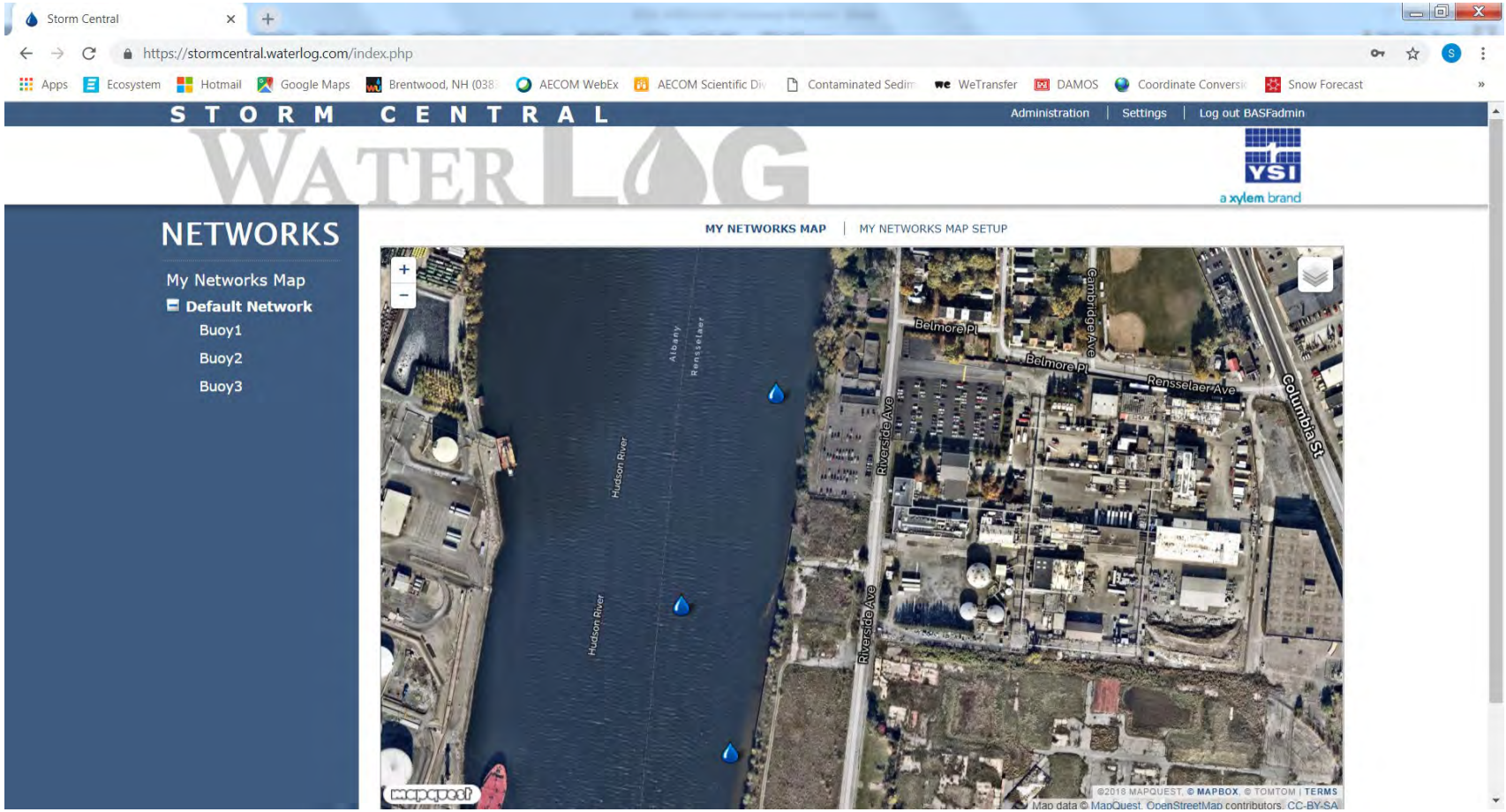
101118-02-SW-A-C-1	10/11/18 9:15	5.2	7.5	6.72
101018-02-SW-A-C-1	10/10/18 12:35	5.3	7.1	7.76
101018-01-SW-U-C-1	10/10/18 11:50	5.4	7	7.31
101118-01-SW-U-C-1	10/11/18 8:45	6.2	8.1	5.97
100918-02-SW-A-C-1	10/9/18 14:55	6.9	7.7	5.71
100918-03-SW-U-C-1	10/9/18 13:10	8.6	7.4	9.43
101018-03-SW-D-C-1	10/10/18 11:10	9.6	10	15.4
100918-01-SW-D-C-1	10/9/18 14:20	10.3	11	12
100818-02-SW-A-C-1	10/8/18 11:45	13.4	14	12.3
100818-01-SW-U-C-1	10/8/18 11:05	14	14	15.1
100818-03-SW-D-C-1	10/8/18 10:25	14.9	15	15.3
101218-02-SW-A-C-1	10/12/18 9:35	480.7	14	19.4
101218-01-SW-U-C-1	10/12/18 9:00	488.6	12	15.1
101218-03-SW-D-C-1	10/12/18 8:10	498	11	11.6
Average Values (excluding anomolies)		9.9	11.0	12.3

Table 2: Water Quality Exceedances Summary

Sample ID	Analyte	Fraction (dissolved/ total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
100818-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.3		
100818-01-SW-U-A-1	ZINC	D	µg/l	16.5	12.4	J	
100818-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		
100818-02-SW-A-A-1	ZINC	D	µg/l	15.8	10.9	J	
100818-03-SW-D-A-1	ARSENIC	D	µg/l	150	0.97	J	
100818-03-SW-D-A-1	CHLOROBENZENE	T	µg/l	5	0.5	J	
100818-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.4		
100818-03-SW-D-A-1	ZINC	D	µg/l	17.1	11.6	J	
100918-01-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
100918-01-SW-D-A-1	ZINC	D	µg/l	17.2	8.3	J	
100918-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
100918-03-SW-U-B-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
100918-03-SW-U-B-2	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
100918-03-SW-U-B-2	ZINC	D	µg/l	16.0	10.2	J	
101018-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.8		
101018-01-SW-U-A-1	ZINC	D	µg/l	17.6	10.9	J	
101018-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.5		
101018-02-SW-A-A-1	ZINC	D	µg/l	16.7	9.9	J	
101018-03-SW-D-A-1	ARSENIC	D	µg/l	150	0.79	J	
101018-03-SW-D-A-1	CHLOROBENZENE	T	µg/l	5	0.3	J	
101018-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.7		
101018-03-SW-D-A-1	ZINC	D	µg/l	17.3	13.2	J	
101118-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
101118-01-SW-U-A-1	ZINC	D	µg/l	16.3	11.7	J	

Sample ID	Analyte	Fraction (dissolved/ total)	Unit	Guidance Value	Result	Lab Qualifier	Exceedance?
101118-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
101118-02-SW-A-A-1	ZINC	D	µg/l	16.2	10	J	
101118-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.9		
101218-01-SW-U-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	1		
101218-01-SW-U-A-1	ZINC	D	µg/l	16.4	11.9	J	
101218-02-SW-A-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.8		
101218-02-SW-A-A-1	ZINC	D	µg/l	17.4	17.8		X
101218-03-SW-D-A-1	DICHLOROBENZENE (SUM)	T	µg/l	5	0.6		

Figure 1: Example Buoy Layout (screenshot from StormCentral website)



ATTACHMENT A
ANALYTICAL LABORATORY REPORTS

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 15, 2018 14:28

Project: Rensselaer

Account #: 04285
Group Number: 1996331
SDG: RNS22
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100818-01-SW-U-A-1 Grab Surface Water	10/08/2018 10:50	9843066
100818-01-SW-U-A-1 Filtered Grab Surface Water	10/08/2018 10:50	9843067
100818-01-SW-U-B-1 Grab Surface Water	10/08/2018 11:00	9843068
100818-01-SW-U-C-1 Grab Surface Water	10/08/2018 11:05	9843069
100818-02-SW-A-A-1 Grab Surface Water	10/08/2018 11:35	9843070
100818-02-SW-A-A-1 Filtered Grab Surface Water	10/08/2018 11:35	9843071
100818-02-SW-A-B-1 Grab Surface Water	10/08/2018 11:40	9843072
100818-02-SW-A-C-1 Grab Surface Water	10/08/2018 11:45	9843073
100818-03-SW-D-A-1 Grab Surface Water	10/08/2018 10:15	9843074
100818-03-SW-D-A-1 Filtered Grab Surface Water	10/08/2018 10:15	9843075
100818-03-SW-D-B-1 Grab Surface Water	10/08/2018 10:20	9843076
100818-03-SW-D-C-1 Grab Surface Water	10/08/2018 10:25	9843077
100818-TB-01 Water	10/08/2018 15:30	9843078

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100818-01-SW-U-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:50
SDG#: RNS22-01

BASF Corporation
ELLE Sample #: WW 9843066
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.3 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.590	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.590	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.590	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.590	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.590	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.590	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.590	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0873	0.590	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0873	0.590	1
14188	Total PCBs	1336-36-3	N.D.	0.0873	0.590	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.75 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.1 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.4	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	16	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	17,800	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100818-01-SW-U-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:50
SDG#: RNS22-01

BASF Corporation
ELLE Sample #: WW 9843066
ELLE Group #: 1996331
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182842AA	10/12/2018 04:42	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182842AA	10/12/2018 04:42	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 00:32	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 14:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 14:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 14:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:09	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 14:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 14:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:37	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101B	10/11/2018 10:42	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385802A	10/10/2018 17:11	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:50
SDG#: RNS22-02

BASF Corporation
ELLE Sample #: WW 9843067
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.4 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 00:42	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:19	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:07	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:39	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1

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Analysis Report

Sample Description: **100818-01-SW-U-B-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:00
SDG#: RNS22-03

BASF Corporation
ELLE Sample #: WW 9843068
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	16	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385802A	10/10/2018 17:11	Angelica Cintron	1

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Analysis Report

Sample Description: **100818-01-SW-U-C-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:05
SDG#: RNS22-04

BASF Corporation
ELLE Sample #: WW 9843069
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-02-SW-A-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:35
SDG#: RNS22-05

BASF Corporation
ELLE Sample #: WW 9843070
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.70 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.81 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,000	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	16	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,300	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

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Sample Description: **100818-02-SW-A-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:35
SDG#: RNS22-05

BASF Corporation
ELLE Sample #: WW 9843070
ELLE Group #: 1996331
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182842AA	10/12/2018 05:05	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182842AA	10/12/2018 05:05	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 00:53	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:10	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:10	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:10	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:21	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:10	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:10	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:41	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 10:58	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:35
SDG#: RNS22-06

BASF Corporation
ELLE Sample #: WW 9843071
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.553	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.553	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.553	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.553	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.553	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.553	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.553	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0819	0.553	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0819	0.553	1
14188	Total PCBs	1336-36-3	N.D.	0.0819	0.553	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 01:03	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:12	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:12	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:12	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:26	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:12	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:12	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:43	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-02-SW-A-B-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:40
SDG#: RNS22-07

BASF Corporation
ELLE Sample #: WW 9843072
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-02-SW-A-C-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 11:45
SDG#: RNS22-08

BASF Corporation
ELLE Sample #: WW 9843073
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,300	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451A	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-03-SW-D-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:15
SDG#: RNS22-09

BASF Corporation
ELLE Sample #: WW 9843074
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.5 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.4 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	1.4 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	1.2 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	15.7	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	80,700	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100818-03-SW-D-A-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:15
SDG#: RNS22-09

BASF Corporation
ELLE Sample #: WW 9843074
ELLE Group #: 1996331
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182842AA	10/12/2018 05:29	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182842AA	10/12/2018 05:29	Kevin D Kelly	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 01:14	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:15	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:15	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:15	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:28	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:15	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:15	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 11:06	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18282121451B	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:15
SDG#: RNS22-10

BASF Corporation
ELLE Sample #: WW 9843075
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.116	0.579	1
14188	PCB-1221	11104-28-2	N.D. D1	0.116	0.579	1
14188	PCB-1232	11141-16-5	N.D. D1	0.116	0.579	1
14188	PCB-1242	53469-21-9	N.D. D1	0.116	0.579	1
14188	PCB-1248	12672-29-6	N.D. D1	0.116	0.579	1
14188	PCB-1254	11097-69-1	N.D. D1	0.116	0.579	1
14188	PCB-1260	11096-82-5	N.D. D1	0.116	0.579	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0856	0.579	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0856	0.579	1
14188	Total PCBs	1336-36-3	N.D.	0.0856	0.579	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.97 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.6 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182820060A	10/11/2018 01:45	Covenant Mutuku	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182820060A	10/10/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:17	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:17	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:17	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182830705003A	10/12/2018 12:30	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:17	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182830705003A	10/11/2018 15:17	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182830571401	10/11/2018 12:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182830705003	10/11/2018 05:37	Annamaria Kuhns	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182830571401	10/11/2018 06:40	Annamaria Kuhns	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-03-SW-D-B-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:20
SDG#: RNS22-11

BASF Corporation
ELLE Sample #: WW 9843076
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	16	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451B	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-03-SW-D-C-1 Grab Surface Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 10:25
SDG#: RNS22-12

BASF Corporation
ELLE Sample #: WW 9843077
ELLE Group #: 1996331
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,300	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18282121451B	10/09/2018 19:10	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385803A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100818-TB-01 Water**
COC: 577534

Project Name: **Rensselaer**

Submittal Date/Time: 10/09/2018 10:25
Collection Date/Time: 10/08/2018 15:30
SDG#: RNS22-13TB

BASF Corporation
ELLE Sample #: WW 9843078
ELLE Group #: 1996331
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182842AA	10/11/2018 23:08	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182842AA	10/11/2018 23:08	Kevin D Kelly	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 14:28

Group Number: 1996331

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182842AA	Sample number(s): 9843066,9843070,9843074,9843078		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182820060A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182830571401	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075		
Mercury	N.D.	0.050	0.20
Batch number: 182830705003A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
	NTU	NTU	NTU
Batch number: 18282121451A	Sample number(s): 9843066,9843068-9843070,9843072-9843073		
Turbidity	0.20 J	0.140	1.00
Batch number: 18282121451B	Sample number(s): 9843074,9843076-9843077		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18283385802A	Sample number(s): 9843066,9843068		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18283385803A	Sample number(s): 9843069-9843070,9843072-9843074,9843076-9843077		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 14:28

Group Number: 1996331

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18284001101A	Sample number(s): 9843070,9843074		
Total Hardness	N.D.	3,000	10,000
Batch number: 18284001101B	Sample number(s): 9843066		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182842AA	Sample number(s): 9843066,9843070,9843074,9843078								
Benzene	20	21.41	20	21.15	107	106	80-120	1	30
Chlorobenzene	20	22.3	20	22.15	112	111	80-120	1	30
1,2-Dichlorobenzene	20	22.56	20	22.63	113	113	80-120	0	30
1,3-Dichlorobenzene	20	22.8	20	22.71	114	114	80-120	0	30
1,4-Dichlorobenzene	20	22.83	20	22.66	114	113	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182820060A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075								
PCB-1016	5.01	5.00	5.01	4.50	100	90	50-140	11	36
PCB-1260	5.00	4.90	5.00	4.54	98	91	50-140	8	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182830571401	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075								
Mercury	1.00	0.954			95		85-115		
Batch number: 182830705003A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075								
Arsenic	10	10.21			102		85-115		
Cadmium	5.00	4.88			98		85-115		
Chromium	50	51.26			103		85-115		
Copper	50	49.97			100		85-115		
Lead	15	14.9			99		85-115		
Zinc	500	517.7			104		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18282121451A	Sample number(s): 9843066,9843068-9843070,9843072-9843073								
Turbidity	10	9.90			99		90-104		
Batch number: 18282121451B	Sample number(s): 9843074,9843076-9843077								
Turbidity	10	9.90			99		90-104		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 14:28

Group Number: 1996331

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18283385802A	Sample number(s): 9843066,9843068								
Total Suspended Solids	150000	139400			93		89-105		
Batch number: 18283385803A	Sample number(s): 9843069-9843070,9843072-9843074,9843076-9843077								
Total Suspended Solids	150000	149000			99		89-105		
Batch number: 18284001101A	Sample number(s): 9843070,9843074								
Total Hardness	40000	38450			96		85-110		
Batch number: 18284001101B	Sample number(s): 9843066								
Total Hardness	40000	38450			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182830705003A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075 UNSPK: 9843066									
Arsenic	0.747	10	10.69			99		70-130		
Cadmium	N.D.	5.00	5.07			101		70-130		
Chromium	1.10	50	51.81			101		70-130		
Copper	N.D.	50	52.23			104		70-130		
Lead	N.D.	15	15.93			106		70-130		
Zinc	15.38	500	513.9			100		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182830705003A	Sample number(s): 9843066-9843067,9843070-9843071,9843074-9843075 BKG: 9843066			
Arsenic	0.747	N.D.	200* (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	1.10	0.997	10 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	15.38	13.95	10 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 14:28

Group Number: 1996331

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
	N T U	N T U		
Batch number: 18282121451A	Sample number(s): 9843066,9843068-9843070,9843072-9843073 BKG: 9843066			
Turbidity	16	16	0	8
Batch number: 18282121451B	Sample number(s): 9843074,9843076-9843077 BKG: 9843074			
Turbidity	15	16	6	8
	ug/l	ug/l		
Batch number: 18284001101B	Sample number(s): 9843066 BKG: 9843066			
Total Hardness	77940	77720	0 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182842AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9843066	94	98	98	93
9843070	94	100	98	92
9843074	93	99	98	92
9843078	93	101	99	93
Blank	93	98	98	92
LCS	94	102	100	95
LCSD	93	101	100	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820060A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9843066	74	73	73	75
9843067	65	75	64	76
9843070	66	72	66	75
9843071	78	84	78	84
9843074	71	77	72	78
9843075	73	76	73	79
Blank	82	95	77	93
LCS	82	92	81	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation Group Number: 1996331
Reported: 10/15/2018 14:28

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182820060A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
LCSD	74	84	72	87
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1196331 Sample # 9843 OCC-78 -78 (SM 2018 10/9/18)

COC # 577534

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	FN Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM 2130
100818-01-SW-U-A-1	10/8/18	1050	✓		13	2	2	1	1	1	1	1	3	1
100818-01-SW-U-B-1	10/8/18	1100	✓		2							1		1
100818-01-SW-U-C-1	10/8/18	1105	✓		2							1		1
100818-02-SW-A-A-1	10/8/18	1135	✓		13	2	2	1	1	1	1	1	3	1
100818-02-SW-A-B-1	10/8/18	1140	✓		2							1		1
100818-02-SW-A-C-1	10/8/18	1145	✓		2							1		1
100818-03-SW-D-A-1	10/8/18	1015	✓		13	2	2	1	1	1	1	1	3	1
100818-03-SW-D-B-1	10/8/18	1020	✓		2							1		1
100818-03-SW-D-C-1	10/8/18	1025	✓		2							1		1
100818-TB-01	10/8/18	1530	✓		1								1	

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/16/18

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	10/10/18	1600			

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? (Yes) No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.8-2.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229454

Group Number(s): 1496331

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/09/2018 10:25
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Carolyn Cyms (964) at 12:29 on 10/09/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	2.5	DT	Wet	Y	Bagged	N
2	DT42-01	1.8	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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F : 717-656-2681
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 15, 2018 17:14

Project: Rensselaer

Account #: 04285
Group Number: 1996734
SDG: RNS23
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
100918-01-SW-D-A-1 Grab Surface Water	10/09/2018 14:10	9844629
100918-01-SW-D-A-1 Filtered Grab Surface Water	10/09/2018 14:10	9844630
100918-01-SW-D-B-1 Grab Surface Water	10/09/2018 14:15	9844631
100918-01-SW-D-C-1 Grab Surface Water	10/09/2018 14:20	9844632
100918-02-SW-A-A-1 Grab Surface Water	10/09/2018 14:45	9844633
100918-02-SW-A-A-1 Filtered Grab Surface Water	10/09/2018 14:45	9844634
100918-02-SW-A-B-1 Grab Surface Water	10/09/2018 14:50	9844635
100918-02-SW-A-C-1 Grab Surface Water	10/09/2018 14:55	9844636
100918-03-SW-U-A-1 Grab Surface Water	10/09/2018 13:00	9844637
100918-03-SW-U-B-1 Grab Surface Water	10/09/2018 13:05	9844638
100918-03-SW-U-B-1 Filtered Grab Surface Water	10/09/2018 13:05	9844639
100918-03-SW-U-C-1 Grab Surface Water	10/09/2018 13:10	9844640
100918-03-SW-U-B-2 Grab Surface Water	10/09/2018 13:25	9844641
100918-03-SW-U-B-2 Filtered Grab Surface Water	10/09/2018 13:25	9844642
100918-TB-01 Water	10/09/2018 17:00	9844643

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **100918-01-SW-D-A-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:10
SDG#: RNS23-01

BASF Corporation
ELLE Sample #: WW 9844629
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.126	0.628	1
14188	PCB-1221	11104-28-2	N.D. D1	0.126	0.628	1
14188	PCB-1232	11141-16-5	N.D. D1	0.126	0.628	1
14188	PCB-1242	53469-21-9	N.D. D1	0.126	0.628	1
14188	PCB-1248	12672-29-6	N.D. D2	0.126	0.628	1
14188	PCB-1254	11097-69-1	N.D. D1	0.126	0.628	1
14188	PCB-1260	11096-82-5	N.D. D1	0.126	0.628	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0930	0.628	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0930	0.628	1
14188	Total PCBs	1336-36-3	N.D.	0.0930	0.628	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.90 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.0 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	81,500	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	19,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100918-01-SW-D-A-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:10
SDG#: RNS23-01

BASF Corporation
ELLE Sample #: WW 9844629
ELLE Group #: 1996734
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182871AA	10/14/2018 22:12	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182871AA	10/14/2018 22:12	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 17:52	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:02	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:35	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 11:32	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18283121451A	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-01-SW-D-A-1 Filtered Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:10
SDG#: RNS23-02

BASF Corporation
ELLE Sample #: WW 9844630
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.543	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.543	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.543	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.543	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.543	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.543	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.543	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0804	0.543	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0804	0.543	1
14188	Total PCBs	1336-36-3	N.D.	0.0804	0.543	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	8.3 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:02	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:11	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:41	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **100918-01-SW-D-B-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:15
SDG#: RNS23-03

BASF Corporation
ELLE Sample #: WW 9844631
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	13	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **100918-01-SW-D-C-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:20
SDG#: RNS23-04

BASF Corporation
ELLE Sample #: WW 9844632
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	12,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-02-SW-A-A-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:45
SDG#: RNS23-05

BASF Corporation
ELLE Sample #: WW 9844633
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.128	0.638	1
14188	PCB-1221	11104-28-2	N.D. D1	0.128	0.638	1
14188	PCB-1232	11141-16-5	N.D. D1	0.128	0.638	1
14188	PCB-1242	53469-21-9	N.D. D1	0.128	0.638	1
14188	PCB-1248	12672-29-6	N.D. D1	0.128	0.638	1
14188	PCB-1254	11097-69-1	N.D. D1	0.128	0.638	1
14188	PCB-1260	11096-82-5	N.D. D1	0.128	0.638	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0944	0.638	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0944	0.638	1
14188	Total PCBs	1336-36-3	N.D.	0.0944	0.638	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100918-02-SW-A-A-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:45
SDG#: RNS23-05

BASF Corporation
ELLE Sample #: WW 9844633
ELLE Group #: 1996734
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182871AA	10/14/2018 22:34	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182871AA	10/14/2018 22:34	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:13	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:13	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:43	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 11:40	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:45
SDG#: RNS23-06

BASF Corporation
ELLE Sample #: WW 9844634
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.601	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.601	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.601	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.601	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.601	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.601	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.601	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0889	0.601	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0889	0.601	1
14188	Total PCBs	1336-36-3	N.D.	0.0889	0.601	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:23	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:15	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:25	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Sample Description: **100918-02-SW-A-B-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:50
SDG#: RNS23-07

BASF Corporation
ELLE Sample #: WW 9844635
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.7	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,430	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-02-SW-A-C-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 14:55
SDG#: RNS23-08

BASF Corporation
ELLE Sample #: WW 9844636
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.7	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,710	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-A-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:00
SDG#: RNS23-09

BASF Corporation
ELLE Sample #: WW 9844637
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-B-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:05
SDG#: RNS23-10

BASF Corporation
ELLE Sample #: WW 9844638
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	7.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	74,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.2	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-B-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:05
SDG#: RNS23-10

BASF Corporation
ELLE Sample #: WW 9844638
ELLE Group #: 1996734
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182871AA	10/14/2018 22:55	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182871AA	10/14/2018 22:55	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:34	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:21	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:45	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 11:48	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-B-1 Filtered Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:05
SDG#: RNS23-11

BASF Corporation
ELLE Sample #: WW 9844639
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:44	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:23	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:47	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-C-1 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:10
SDG#: RNS23-12

BASF Corporation
ELLE Sample #: WW 9844640
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,430	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18283121451B	10/10/2018 16:40	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18283385804A	10/11/2018 00:00	Hannah M Royer	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-B-2 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:25
SDG#: RNS23-13

BASF Corporation
ELLE Sample #: WW 9844641
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.120	0.598	1
14188	PCB-1221	11104-28-2	N.D. D1	0.120	0.598	1
14188	PCB-1232	11141-16-5	N.D. D1	0.120	0.598	1
14188	PCB-1242	53469-21-9	N.D. D1	0.120	0.598	1
14188	PCB-1248	12672-29-6	N.D. D1	0.120	0.598	1
14188	PCB-1254	11097-69-1	N.D. D1	0.120	0.598	1
14188	PCB-1260	11096-82-5	N.D. D1	0.120	0.598	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0885	0.598	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0885	0.598	1
14188	Total PCBs	1336-36-3	N.D.	0.0885	0.598	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	16.6	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,100	6,000	20,000	2

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182871AA	10/14/2018 23:17	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182871AA	10/14/2018 23:17	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 18:55	Kirby B Turner	1

*=This limit was used in the evaluation of the final result

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Sample Description: **100918-03-SW-U-B-2 Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:25
SDG#: RNS23-13

BASF Corporation
ELLE Sample #: WW 9844641
ELLE Group #: 1996734
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:25	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:49	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 11:56	Susan A Engle	2

*=This limit was used in the evaluation of the final result

Sample Description: **100918-03-SW-U-B-2 Filtered Grab Surface Water**
COC: 578239

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 13:25
SDG#: RNS23-14

BASF Corporation
ELLE Sample #: WW 9844642
ELLE Group #: 1996734
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.561	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.561	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.561	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.561	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.561	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.561	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.561	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0830	0.561	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0830	0.561	1
14188	Total PCBs	1336-36-3	N.D.	0.0830	0.561	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182830045A	10/12/2018 19:05	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182830045A	10/11/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182840705005A	10/12/2018 07:27	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182860571401	10/13/2018 11:51	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182840705005	10/11/2018 15:10	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182840571401	10/11/2018 16:25	JoElla L Rice	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182860571401	10/13/2018 06:43	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **100918-TB-01 Water**
COC: 577536

Project Name: **Rensselaer**

Submittal Date/Time: 10/10/2018 10:40
Collection Date/Time: 10/09/2018 17:00
SDG#: RNS23-15TB

BASF Corporation
ELLE Sample #: WW 9844643
ELLE Group #: 1996734
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182871AA	10/14/2018 21:50	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182871AA	10/14/2018 21:50	Don V Viray	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 17:14

Group Number: 1996734

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182871AA	Sample number(s): 9844629,9844633,9844638,9844641,9844643		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182830045A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182840705005A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182860571401	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642		
Mercury	N.D.	0.050	0.20
	NTU	NTU	NTU
Batch number: 18283121451A	Sample number(s): 9844629		
Turbidity	0.20 J	0.140	1.00
Batch number: 18283121451B	Sample number(s): 9844631-9844633,9844635-9844638,9844640		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18283385804A	Sample number(s): 9844629,9844631-9844633,9844635-9844638,9844640		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18284001101A	Sample number(s): 9844629,9844633,9844638,9844641		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 17:14

Group Number: 1996734

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182871AA	Sample number(s): 9844629,9844633,9844638,9844641,9844643								
Benzene	20	21.98	20	21.86	110	109	80-120	1	30
Chlorobenzene	20	23.17	20	22.78	116	114	80-120	2	30
1,2-Dichlorobenzene	20	23.39	20	23.36	117	117	80-120	0	30
1,3-Dichlorobenzene	20	23	20	22.58	115	113	80-120	2	30
1,4-Dichlorobenzene	20	23.21	20	22.98	116	115	80-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182830045A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642								
PCB-1016	5.01	4.65	5.01	4.77	93	95	50-140	3	36
PCB-1260	5.00	4.32	5.00	4.83	86	97	50-140	11	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182840705005A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642								
Arsenic	10	10.45			105		85-115		
Cadmium	5.00	5.24			105		85-115		
Chromium	50	51.65			103		85-115		
Copper	50	51.06			102		85-115		
Lead	15	15.37			102		85-115		
Zinc	500	537.4			107		85-115		
Batch number: 182860571401	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642								
Mercury	1.00	0.949			95		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18283121451A	Sample number(s): 9844629								
Turbidity	10	10			100		90-104		
Batch number: 18283121451B	Sample number(s): 9844631-9844633,9844635-9844638,9844640								
Turbidity	10	10			100		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18283385804A	Sample number(s): 9844629,9844631-9844633,9844635-9844638,9844640								
Total Suspended Solids	150000	148200			99		89-105		
Batch number: 18284001101A	Sample number(s): 9844629,9844633,9844638,9844641								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 17:14

Group Number: 1996734

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Hardness	40000	38450			96		85-110		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182840705005A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642 UNSPK: 9844629									
Arsenic	N.D.	10	10.29			103		70-130		
Cadmium	N.D.	5.00	5.29			106		70-130		
Chromium	0.897	50	51.33			101		70-130		
Copper	N.D.	50	51.75			104		70-130		
Lead	N.D.	15	15.91			106		70-130		
Zinc	13	500	527.2			103		70-130		
Batch number: 182860571401	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642 UNSPK: 9844634									
Mercury	N.D.	1.00	0.961			96		80-120		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182840705005A	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642 BKG: 9844629			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.897	0.781	14 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13	11.65	11 (1)	20
Batch number: 182860571401	Sample number(s): 9844629-9844630,9844633-9844634,9844638-9844639,9844641-9844642 BKG: 9844634			
Mercury	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/15/2018 17:14

Group Number: 1996734

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc N T U	DUP Conc N T U	DUP RPD	DUP RPD Max
Batch number: 18283121451B	Sample number(s): 9844631-9844633,9844635-9844638,9844640 BKG: 9844631			
Turbidity	13	13	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182871AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9844629	95	100	104	94
9844633	96	101	103	94
9844638	95	99	103	94
9844641	96	102	103	95
9844643	96	98	104	95
Blank	97	101	103	94
LCS	99	101	102	99
LCSD	99	104	102	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182830045A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9844629	84	73	81	74
9844630	79	71	76	69
9844633	75	64	70	63
9844634	84	77	82	75
9844638	74	65	72	65
9844639	71	69	67	68
9844641	84	76	82	75
9844642	79	71	76	69
Blank	83	62	80	63
LCS	89	61	87	61
LCSD	85	90	84	88
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1996734 Sample # 9844629-43

COC # 578239

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	Metals (filtered)	Metals (unfiltered)	N Mercury	N Hardness	H TSS	VOCs - 8260c	Turbidity - SM2130	Remarks
100918-01-SW-D-A-1	10/9/18	1410	✓		13	2	2	1	1	1	1	1	3	1	
100918-01-SW-D-B-1	10/9/18	1415	✓		2							1		1	
100918-01-SW-D-C-1	10/9/18	1420	✓		2							1		1	
100918-02-SW-A-A-1	10/9/18	1445	✓		13	2	2	1	1	1	1	1	3	1	
100918-02-SW-A-B-1	10/9/18	1450	✓		2							1		1	
100918-02-SW-A-C-1	10/9/18	1455	✓		2							1		1	
100918-03-SW-U-A-1	10/9/18	1300	✓		2							1		1	
100918-03-SW-U-B-1	10/9/18	1305	✓		13	2	2	1	1	1	1	1	3	1	
100918-03-SW-U-C-1	10/9/18	1310	✓		2							1		1	
100918-03-SW-U-B-2	10/9/18	1325	✓		11	2	2	1	1	1	1		3		

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/11/18

E-mail address: ____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Patrick Gehan	10/9/18	1700			
			Mir	10/10/18	1040

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.0 | 2.2 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1996734 Sample # 9844629-43

COC # 577536

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Geham	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ NPDES ☐ Surface ☑ | Other: ____

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	FN Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
100918-TB-01	10/9/18	1700	✓		1								1	

For Lab Use Only

FSC: _____

SCR#: _____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard (Rush)

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/11/18

E-mail address: _____

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

	Date	Time
Relinquished by: Patrick Geham	10/9/18	1700
Relinquished by:		
Relinquished by:		
Relinquished by:		
Relinquished by:		

	Date	Time
Received by:		
Received by:		
Received by:		
Received by:		
Received by: MMR	10/10/18	1040

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS _____ FedEx X Other _____

Temperature upon receipt 2.0/2.2 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229585

Group Number(s): ~~19966~~ 1996734

Client: BASF

Hudson River OU-2

③ KM2 10/10/18 2123

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/10/2018 10:40
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:35 on 10/10/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	2.0	DT	Wet	Y	Bagged	N
2	DT146	2.2	DT	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 17, 2018 17:20

Project: Rensselaer

Account #: 04285
Group Number: 1997383
SDG: RNS24
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101018-01-SW-U-A-1 Grab Surface Water	10/10/2018 11:40	9847135
101018-01-SW-U-A-1 Filtered Grab Surface Water	10/10/2018 11:40	9847136
101018-01-SW-U-B-1 Grab Surface Water	10/10/2018 11:45	9847137
101018-01-SW-U-C-1 Grab Surface Water	10/10/2018 11:50	9847138
101018-02-SW-A-A-1 Grab Surface Water	10/10/2018 12:20	9847139
101018-02-SW-A-A-1 Filtered Grab Surface Water	10/10/2018 12:20	9847140
101018-02-SW-A-B-1 Grab Surface Water	10/10/2018 12:30	9847141
101018-02-SW-A-C-1 Grab Surface Water	10/10/2018 12:35	9847142
101018-03-SW-D-A-1 Grab Surface Water	10/10/2018 10:55	9847143
101018-03-SW-D-A-1 Filtered Grab Surface Water	10/10/2018 10:55	9847144
101018-03-SW-D-B-1 Grab Surface Water	10/10/2018 11:05	9847145
101018-03-SW-D-C-1 Grab Surface Water	10/10/2018 11:10	9847146
101018-03-SW-D-A-3 Grab Surface Water	10/10/2018 14:00	9847147
101018-03-SW-D-A-3 Filtered Grab Surface Water	10/10/2018 14:00	9847148
101018-TB-01 Water	10/10/2018 15:00	9847149

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101018-01-SW-U-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:40
SDG#: RNS24-01

BASF Corporation
ELLE Sample #: WW 9847135
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.8 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.121	0.604	1
14188	PCB-1221	11104-28-2	N.D. D1	0.121	0.604	1
14188	PCB-1232	11141-16-5	N.D. D1	0.121	0.604	1
14188	PCB-1242	53469-21-9	N.D. D1	0.121	0.604	1
14188	PCB-1248	12672-29-6	N.D. D1	0.121	0.604	1
14188	PCB-1254	11097-69-1	N.D. D1	0.121	0.604	1
14188	PCB-1260	11096-82-5	N.D. D1	0.121	0.604	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0894	0.604	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0894	0.604	1
14188	Total PCBs	1336-36-3	N.D.	0.0894	0.604	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	83,800	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.2	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101018-01-SW-U-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:40
SDG#: RNS24-01

BASF Corporation
ELLE Sample #: WW 9847135
ELLE Group #: 1997383
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182881AA	10/15/2018 13:50	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182881AA	10/15/2018 13:50	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 13:11	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:07	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 06:50	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 19:30	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18284121451A	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:18	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:40
SDG#: RNS24-02

BASF Corporation
ELLE Sample #: WW 9847136
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 13:21	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:14	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 06:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101018-01-SW-U-B-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:45
SDG#: RNS24-03

BASF Corporation
ELLE Sample #: WW 9847137
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.8	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,060	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451A	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:18	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101018-01-SW-U-C-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:50
SDG#: RNS24-04

BASF Corporation
ELLE Sample #: WW 9847138
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,310	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451A	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:18	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-02-SW-A-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 12:20
SDG#: RNS24-05

BASF Corporation
ELLE Sample #: WW 9847139
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.5 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.2 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	78,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101018-02-SW-A-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 12:20
SDG#: RNS24-05

BASF Corporation
ELLE Sample #: WW 9847139
ELLE Group #: 1997383
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182881AA	10/15/2018 14:11	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182881AA	10/15/2018 14:11	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 13:32	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:16	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	2	182880571401	10/16/2018 06:54	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 19:38	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18284121451A	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 12:20
SDG#: RNS24-06

BASF Corporation
ELLE Sample #: WW 9847140
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.118	0.592	1
14188	PCB-1221	11104-28-2	N.D. D1	0.118	0.592	1
14188	PCB-1232	11141-16-5	N.D. D1	0.118	0.592	1
14188	PCB-1242	53469-21-9	N.D. D1	0.118	0.592	1
14188	PCB-1248	12672-29-6	N.D. D1	0.118	0.592	1
14188	PCB-1254	11097-69-1	N.D. D1	0.118	0.592	1
14188	PCB-1260	11096-82-5	N.D. D1	0.118	0.592	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0877	0.592	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0877	0.592	1
14188	Total PCBs	1336-36-3	N.D.	0.0877	0.592	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	9.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 13:42	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:18	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	2	182880571401	10/16/2018 06:56	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101018-02-SW-A-B-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 12:30
SDG#: RNS24-07

BASF Corporation
ELLE Sample #: WW 9847141
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.9	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,810	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451B	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-02-SW-A-C-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 12:35
SDG#: RNS24-08

BASF Corporation
ELLE Sample #: WW 9847142
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,760	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451B	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 10:55
SDG#: RNS24-09

BASF Corporation
ELLE Sample #: WW 9847143
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	0.3 J	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.7 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.85 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.1 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,100	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	24,500	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 10:55
SDG#: RNS24-09

BASF Corporation
ELLE Sample #: WW 9847143
ELLE Group #: 1997383
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182881AA	10/15/2018 14:33	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182881AA	10/15/2018 14:33	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 13:53	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:20	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	2	182880571401	10/16/2018 06:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18284001101A	10/11/2018 19:46	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18284121451B	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 10:55
SDG#: RNS24-10

BASF Corporation
ELLE Sample #: WW 9847144
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.133	0.665	1
14188	PCB-1221	11104-28-2	N.D. D1	0.133	0.665	1
14188	PCB-1232	11141-16-5	N.D. D1	0.133	0.665	1
14188	PCB-1242	53469-21-9	N.D. D1	0.133	0.665	1
14188	PCB-1248	12672-29-6	N.D. D1	0.133	0.665	1
14188	PCB-1254	11097-69-1	N.D. D1	0.133	0.665	1
14188	PCB-1260	11096-82-5	N.D. D1	0.133	0.665	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0984	0.665	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0984	0.665	1
14188	Total PCBs	1336-36-3	N.D.	0.0984	0.665	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	0.79 J	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.2 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 14:03	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 07:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-B-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:05
SDG#: RNS24-11

BASF Corporation
ELLE Sample #: WW 9847145
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	14,000	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451B	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-C-1 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 11:10
SDG#: RNS24-12

BASF Corporation
ELLE Sample #: WW 9847146
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	10	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18284121451B	10/11/2018 18:50	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18285385802A	10/12/2018 10:19	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-3 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 14:00
SDG#: RNS24-13

BASF Corporation
ELLE Sample #: WW 9847147
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.129	0.644	1
14188	PCB-1221	11104-28-2	N.D. D1	0.129	0.644	1
14188	PCB-1232	11141-16-5	N.D. D1	0.129	0.644	1
14188	PCB-1242	53469-21-9	N.D. D1	0.129	0.644	1
14188	PCB-1248	12672-29-6	N.D. D1	0.129	0.644	1
14188	PCB-1254	11097-69-1	N.D. D1	0.129	0.644	1
14188	PCB-1260	11096-82-5	N.D. D1	0.129	0.644	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0954	0.644	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0954	0.644	1
14188	Total PCBs	1336-36-3	N.D.	0.0954	0.644	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182881AA	10/15/2018 14:54	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182881AA	10/15/2018 14:54	Corie Mellinger	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 14:14	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-3 Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 14:00
SDG#: RNS24-13

BASF Corporation
ELLE Sample #: WW 9847147
ELLE Group #: 1997383
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 09:52	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 07:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-03-SW-D-A-3 Filtered Grab Surface Water**
COC: 578386

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 14:00
SDG#: RNS24-14

BASF Corporation
ELLE Sample #: WW 9847148
ELLE Group #: 1997383
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182890031A	10/17/2018 14:24	Jessica L Miller	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	2	182890031A	10/16/2018 17:30	Kate E Lutte	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182850705002A	10/15/2018 10:25	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 07:08	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182850705002	10/13/2018 04:11	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182850571401	10/12/2018 06:55	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	2	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

Sample Description: **101018-TB-01 Water**
COC: 578387

Project Name: **Rensselaer**

Submittal Date/Time: 10/11/2018 10:10
Collection Date/Time: 10/10/2018 15:00
SDG#: RNS24-15TB

BASF Corporation
ELLE Sample #: **WW 9847149**
ELLE Group #: **1997383**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	5182881AA	10/15/2018 12:22	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	5182881AA	10/15/2018 12:22	Corie Mellinger	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/17/2018 17:20

Group Number: 1997383

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: 5182881AA	Sample number(s): 9847135,9847139,9847143,9847147,9847149		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182890031A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182850705002A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182880571401	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148		
Mercury	N.D.	0.050	0.20
	NTU	NTU	NTU
Batch number: 18284121451A	Sample number(s): 9847135,9847137-9847139		
Turbidity	0.20 J	0.140	1.00
Batch number: 18284121451B	Sample number(s): 9847141-9847143,9847145-9847146		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18284001101A	Sample number(s): 9847135,9847139,9847143		
Total Hardness	N.D.	3,000	10,000
Batch number: 18285385802A	Sample number(s): 9847135,9847137-9847139,9847141-9847143,9847145-9847146		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/17/2018 17:20

Group Number: 1997383

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 5182881AA	Sample number(s): 9847135,9847139,9847143,9847147,9847149								
Benzene	20	21.74	20	21.87	109	109	80-120	1	30
Chlorobenzene	20	22.46	20	22.68	112	113	80-120	1	30
1,2-Dichlorobenzene	20	22.85	20	22.99	114	115	80-120	1	30
1,3-Dichlorobenzene	20	22.29	20	22.23	111	111	80-120	0	30
1,4-Dichlorobenzene	20	22.56	20	22.53	113	113	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182890031A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148								
PCB-1016	5.01	3.57	5.01	3.33	71	66	50-140	7	36
PCB-1260	5.00	4.70	5.00	4.54	94	91	50-140	3	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182850705002A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148								
Arsenic	10	10.93			109		85-115		
Cadmium	5.00	5.24			105		85-115		
Chromium	50	52.44			105		85-115		
Copper	50	52.46			105		85-115		
Lead	15	15.08			101		85-115		
Zinc	500	524.84			105		85-115		
Batch number: 182880571401	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148								
Mercury	1.00	0.957			96		85-115		
	NTU	NTU	NTU	NTU					
Batch number: 18284121451A	Sample number(s): 9847135,9847137-9847139								
Turbidity	10	9.70			97		90-104		
Batch number: 18284121451B	Sample number(s): 9847141-9847143,9847145-9847146								
Turbidity	10	9.70			97		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18284001101A	Sample number(s): 9847135,9847139,9847143								
Total Hardness	40000	38450			96		85-110		
Batch number: 18285385802A	Sample number(s): 9847135,9847137-9847139,9847141-9847143,9847145-9847146								

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/17/2018 17:20

Group Number: 1997383

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Suspended Solids	150000	143600			96		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182850705002A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148 UNSPK: 9847147									
Arsenic	N.D.	10	9.97			100		70-130		
Cadmium	N.D.	5.00	4.90			98		70-130		
Chromium	N.D.	50	50.64			101		70-130		
Copper	N.D.	50	56.53			113		70-130		
Lead	N.D.	15	15.1			101		70-130		
Zinc	N.D.	500	511.32			102		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182850705002A	Sample number(s): 9847135-9847136,9847139-9847140,9847143-9847144,9847147-9847148 BKG: 9847147			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18284121451A	Sample number(s): 9847135,9847137-9847139 BKG: 9847139			
Turbidity	9.00	9.10	1	8
Batch number: 18284121451B	Sample number(s): 9847141-9847143,9847145-9847146 BKG: 9847145			
Turbidity	11	12	9*	8

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/17/2018 17:20

Group Number: 1997383

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: 5182881AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9847135	95	100	106	95
9847139	95	101	106	96
9847143	95	99	107	94
9847147	95	99	106	93
9847149	96	101	105	95
Blank	96	101	105	95
LCS	98	101	105	99
LCSD	98	101	105	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182890031A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9847135	68	76	63	78
9847136	65	76	61	74
9847139	62	77	59	77
9847140	64	82	60	79
9847143	42	59	41	58
9847144	67	80	65	79
9847147	68	91	65	91
9847148	69	88	66	85
Blank	58	59	54	59
LCS	36	90	35	88
LCSD	37	65	36	65
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 4285 Group # 1997383 Sample # 9847135-49

COC # 578386

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ____

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only

FSC: ____

SCR#: ____

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (filtered)	PCBs (unfiltered)	F,N Metals (filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260c	Turbidity – SM2130	Remarks
101018-01-SW-U-A-1	10/10/18	1140	✓		13	2	2	1	1	1	1	1	3	1	
101018-01-SW-U-B-1	10/10/18	1145	✓		2							1		1	
101018-01-SW-U-C-1	10/10/18	1150	✓		2							1		1	
101018-02-SW-A-A-1	10/10/18	1220	✓		13	2	2	1	1	1	1	1	3	1	
101018-02-SW-A-B-1	10/10/18	1230	✓		2							1		1	
101018-02-SW-A-C-1	10/10/18	1235	✓		2							1		1	
101018-03-SW-D-A-1	10/10/18	1055	✓		13	2	2	1	1	1	1	1	3	1	
101018-03-SW-D-B-1	10/10/18	1105	✓		2							1		1	
101018-03-SW-D-C-1	10/10/18	1110	✓		2							1		1	
101018-03-SW-D-A-3	10/10/18	1400	✓		10	2	2	1	1	1			3		

Turnaround Time (TAT) Requested (please circle)

Standard ~~per contract~~ Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/12/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) per contract Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/10/18	1530			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	10/11/18	1010

EDD Required? (Yes) No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.9 | 0.9 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 4285 Group # 1997383 Sample # 9847135-49

COC # 578387

Client Information

Client: BASF

Acct. #:

Project Name/#: Hudson River OU-2

PWSID #:

Project Manager: John Bleiler

P.O. #: 229608

Sampler: Patrick Gehan

Quote #:

State where samples were collected: NY

For Compliance: Yes ☑ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ Potable ☐ Ground ☐ Water ☑ NPDES ☐ Surface ☐ Other: ____

Total # of Containers

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (Unfiltered)	F,N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	TSS	H VOCs - 8260c	Turbidity - SM2130
101018-TB-01	10/10/18	1500	✓		1								1	

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/18/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/10/18	1530			
			[signature]	10/11/18	1010

EDD Required? Yes No

If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 1.8 | 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229725

Group Number(s): 1997383

Client: BASF

Hudson River OU-2

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/11/2018 10:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	1
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): 1 HCl 101018-03-SW-D-A-3

Unpacked by Nicole Reiff (25684) at 12:43 on 10/11/2018

Samples Chilled Details: Hudson River OU-2

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.8	DT	Wet	Y	Bagged	N
2	DT146	0.9	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details: Hudson River OU-2

Sample ID on COC	Date/Time on Label	Comments
101018-02-SW-A-A-1	10/10/2018 12:30	

2425 New Holland Pike
Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 18, 2018 17:37

Project: Rensselaer

Account #: 04285
Group Number: 1997954
SDG: RNS25
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101118-01-SW-U-A-1 Grab Surface Water	10/11/2018 08:35	9849679
101118-01-SW-U-A-1 Filtered Grab Surface Water	10/11/2018 08:35	9849680
101118-01-SW-U-B-1 Grab Surface Water	10/11/2018 08:40	9849681
101118-01-SW-U-C-1 Grab Surface Water	10/11/2018 08:45	9849682
101118-02-SW-A-A-1 Grab Surface Water	10/11/2018 08:50	9849683
101118-02-SW-A-A-1 Filtered Grab Surface Water	10/11/2018 08:50	9849684
101118-02-SW-A-B-1 Grab Surface Water	10/11/2018 08:55	9849685
101118-02-SW-A-C-1 Grab Surface Water	10/11/2018 09:15	9849686
101118-03-SW-D-A-1 Grab Surface Water	10/11/2018 08:00	9849687
101118-03-SW-D-A-1 Filtered Grab Surface Water	10/11/2018 08:00	9849688
101118-03-SW-D-B-1 Grab Surface Water	10/11/2018 08:05	9849689
101118-03-SW-D-C-1 Grab Surface Water	10/11/2018 08:10	9849690
101118-TB-01 Water	10/11/2018 14:00	9849691

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101118-01-SW-U-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:35
SDG#: RNS25-01

BASF Corporation
ELLE Sample #: WW 9849679
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.117	0.587	1
14188	PCB-1221	11104-28-2	N.D. D1	0.117	0.587	1
14188	PCB-1232	11141-16-5	N.D. D1	0.117	0.587	1
14188	PCB-1242	53469-21-9	N.D. D1	0.117	0.587	1
14188	PCB-1248	12672-29-6	N.D. D1	0.117	0.587	1
14188	PCB-1254	11097-69-1	N.D. D1	0.117	0.587	1
14188	PCB-1260	11096-82-5	N.D. D1	0.117	0.587	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0869	0.587	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0869	0.587	1
14188	Total PCBs	1336-36-3	N.D.	0.0869	0.587	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.90 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	14.8 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	76,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.9	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101118-01-SW-U-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:35
SDG#: RNS25-01

BASF Corporation
ELLE Sample #: WW 9849679
ELLE Group #: 1997954
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182901AA	10/17/2018 18:05	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182901AA	10/17/2018 18:05	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 23:51	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:41	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 06:44	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571401	10/15/2018 16:20	JoElla L Rice	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 08:41	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18285121451A	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:21	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-01-SW-U-A-1 Filtered Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:35
SDG#: RNS25-02

BASF Corporation
ELLE Sample #: WW 9849680
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.573	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.573	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.573	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.573	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.573	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.573	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.573	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0849	0.573	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0849	0.573	1
14188	Total PCBs	1336-36-3	N.D.	0.0849	0.573	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.7 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/16/2018 00:01	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:53	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571401	10/16/2018 07:10	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571401	10/15/2018 16:20	JoElla L Rice	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101118-01-SW-U-B-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:40
SDG#: RNS25-03

BASF Corporation
ELLE Sample #: WW 9849681
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	9,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451A	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-01-SW-U-C-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:45
SDG#: RNS25-04

BASF Corporation
ELLE Sample #: WW 9849682
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.1	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451A	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-02-SW-A-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:50
SDG#: RNS25-05

BASF Corporation
ELLE Sample #: WW 9849683
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.112	0.558	1
14188	PCB-1221	11104-28-2	N.D. D1	0.112	0.558	1
14188	PCB-1232	11141-16-5	N.D. D1	0.112	0.558	1
14188	PCB-1242	53469-21-9	N.D. D1	0.112	0.558	1
14188	PCB-1248	12672-29-6	N.D. D1	0.112	0.558	1
14188	PCB-1254	11097-69-1	N.D. D1	0.112	0.558	1
14188	PCB-1260	11096-82-5	N.D. D1	0.112	0.558	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0826	0.558	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0826	0.558	1
14188	Total PCBs	1336-36-3	N.D.	0.0826	0.558	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.72 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	75,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	8,960	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101118-02-SW-A-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:50
SDG#: RNS25-05

BASF Corporation
ELLE Sample #: WW 9849683
ELLE Group #: 1997954
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182901AA	10/17/2018 18:29	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182901AA	10/17/2018 18:29	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/16/2018 00:12	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:55	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 09:52	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 09:09	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18285121451A	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-02-SW-A-A-1 Filtered Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:50
SDG#: RNS25-06

BASF Corporation
ELLE Sample #: WW 9849684
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.109	0.546	1
14188	PCB-1221	11104-28-2	N.D. D1	0.109	0.546	1
14188	PCB-1232	11141-16-5	N.D. D1	0.109	0.546	1
14188	PCB-1242	53469-21-9	N.D. D1	0.109	0.546	1
14188	PCB-1248	12672-29-6	N.D. D1	0.109	0.546	1
14188	PCB-1254	11097-69-1	N.D. D1	0.109	0.546	1
14188	PCB-1260	11096-82-5	N.D. D1	0.109	0.546	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0808	0.546	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0808	0.546	1
14188	Total PCBs	1336-36-3	N.D.	0.0808	0.546	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	10 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/16/2018 00:22	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:57	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 09:58	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1

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Analysis Report

Sample Description: **101118-02-SW-A-B-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:55
SDG#: RNS25-07

BASF Corporation
ELLE Sample #: WW 9849685
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.0	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,820	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451B	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101118-02-SW-A-C-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 09:15
SDG#: RNS25-08

BASF Corporation
ELLE Sample #: WW 9849686
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	7.5	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451B	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-03-SW-D-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:00
SDG#: RNS25-09

BASF Corporation
ELLE Sample #: WW 9849687
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.9 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.6 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,900	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	8.1	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	7,760	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101118-03-SW-D-A-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:00
SDG#: RNS25-09

BASF Corporation
ELLE Sample #: WW 9849687
ELLE Group #: 1997954
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182903AA	10/18/2018 00:48	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182903AA	10/18/2018 00:48	Don V Viray	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/16/2018 00:33	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 08:58	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:00	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 09:34	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18285121451B	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-03-SW-D-A-1 Filtered Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:00
SDG#: RNS25-10

BASF Corporation
ELLE Sample #: WW 9849688
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.110	0.548	1
14188	PCB-1221	11104-28-2	N.D. D1	0.110	0.548	1
14188	PCB-1232	11141-16-5	N.D. D1	0.110	0.548	1
14188	PCB-1242	53469-21-9	N.D. D1	0.110	0.548	1
14188	PCB-1248	12672-29-6	N.D. D1	0.110	0.548	1
14188	PCB-1254	11097-69-1	N.D. D1	0.110	0.548	1
14188	PCB-1260	11096-82-5	N.D. D1	0.110	0.548	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0811	0.548	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0811	0.548	1
14188	Total PCBs	1336-36-3	N.D.	0.0811	0.548	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182850034A	10/16/2018 00:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182850034A	10/15/2018 08:00	Kayla A Yuditsky	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
06031	Chromium	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
06033	Copper	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
06035	Lead	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
06049	Zinc	EPA 200.8 rev 5.4	1	182860705003A	10/15/2018 09:00	Choon Y Tian	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:02	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182860705003	10/14/2018 05:03	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **101118-03-SW-D-B-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:05
SDG#: RNS25-11

BASF Corporation
ELLE Sample #: WW 9849689
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.4	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	6,720	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451B	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-03-SW-D-C-1 Grab Surface Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 08:10
SDG#: RNS25-12

BASF Corporation
ELLE Sample #: WW 9849690
ELLE Group #: 1997954
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	6.0	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	5,970	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18285121451B	10/12/2018 18:20	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18288385803A	10/15/2018 15:22	Alexa Sanchez	1

*=This limit was used in the evaluation of the final result

Sample Description: **101118-TB-01 Water**
COC: 578328

Project Name: **Rensselaer**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/11/2018 14:00
SDG#: RNS25-13TB

BASF Corporation
ELLE Sample #: **WW 9849691**
ELLE Group #: **1997954**
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182901AA	10/17/2018 17:42	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182901AA	10/17/2018 17:42	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2018 17:37

Group Number: 1997954

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182901AA	Sample number(s): 9849679,9849683,9849691		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: W182903AA	Sample number(s): 9849687		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182850034A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182860705003A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182880571401	Sample number(s): 9849679-9849680		
Mercury	N.D.	0.050	0.20
Batch number: 182880571402	Sample number(s): 9849683-9849684,9849687-9849688		
Mercury	N.D.	0.050	0.20
	NTU	NTU	NTU
Batch number: 18285121451A	Sample number(s): 9849679,9849681-9849683		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2018 17:37

Group Number: 1997954

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Turbidity	0.20 J	0.140	1.00
Batch number: 18285121451B	Sample number(s): 9849685-9849687,9849689-9849690		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18288385803A	Sample number(s): 9849679,9849681-9849683,9849685-9849687,9849689-9849690		
Total Suspended Solids	N.D.	1,000	3,000
Batch number: 18289001101A	Sample number(s): 9849679,9849683,9849687		
Total Hardness	N.D.	3,000	10,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182901AA	Sample number(s): 9849679,9849683,9849691								
Benzene	20	21.11			106		80-120		
Chlorobenzene	20	21.97			110		80-120		
1,2-Dichlorobenzene	20	22.48			112		80-120		
1,3-Dichlorobenzene	20	22.72			114		80-120		
1,4-Dichlorobenzene	20	22.74			114		80-120		
Batch number: W182903AA	Sample number(s): 9849687								
Benzene	20	20.87			104		80-120		
Chlorobenzene	20	21.98			110		80-120		
1,2-Dichlorobenzene	20	22.71			114		80-120		
1,3-Dichlorobenzene	20	22.81			114		80-120		
1,4-Dichlorobenzene	20	22.99			115		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182850034A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688								
PCB-1016	5.01	3.80	5.01	4.22	76	84	50-140	10	36
PCB-1260	5.00	3.30	5.00	3.93	66	79	50-140	18	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182860705003A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688								
Arsenic	10	10.47			105		85-115		
Cadmium	5.00	5.14			103		85-115		
Chromium	50	52.87			106		85-115		
Copper	50	50.62			101		85-115		
Lead	15	15.74			105		85-115		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2018 17:37

Group Number: 1997954

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Zinc	500	509.1			102		85-115		
Batch number: 182880571401	Sample number(s): 9849679-9849680								
Mercury	1.00	0.957			96		85-115		
Batch number: 182880571402	Sample number(s): 9849683-9849684,9849687-9849688								
Mercury	1.00	0.917			92		85-115		
	N T U	**N T U**	**N T U**	**N T U**					
Batch number: 18285121451A	Sample number(s): 9849679,9849681-9849683								
Turbidity	10	9.80			98		90-104		
Batch number: 18285121451B	Sample number(s): 9849685-9849687,9849689-9849690								
Turbidity	10	9.80			98		90-104		
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18288385803A	Sample number(s): 9849679,9849681-9849683,9849685-9849687,9849689-9849690								
Total Suspended Solids	150000	144200			96		89-105		
Batch number: 18289001101A	Sample number(s): 9849679,9849683,9849687								
Total Hardness	40000	37820	40000	38240	95	96	85-110	1	3

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182860705003A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688 UNSPK: 9849679									
Arsenic	N.D.	10	10.8			108		70-130		
Cadmium	N.D.	5.00	4.89			98		70-130		
Chromium	0.903	50	55.43			109		70-130		
Copper	N.D.	50	52.59			105		70-130		
Lead	N.D.	15	16.23			108		70-130		
Zinc	14.76	500	527.2			102		70-130		
Batch number: 182880571401	Sample number(s): 9849679-9849680 UNSPK: 9849679									
Mercury	N.D.	1.00	0.953			95		80-120		
Batch number: 182880571402	Sample number(s): 9849683-9849684,9849687-9849688 UNSPK: 9849683									
Mercury	N.D.	1.00	0.946			95		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2018 17:37

Group Number: 1997954

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18289001101A	Sample number(s): 9849679,9849683,9849687 UNSPK: 9849683									
Total Hardness	75860	80000	169500			117*		85-110		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Batch number: 182860705003A	Sample number(s): 9849679-9849680,9849683-9849684,9849687-9849688 BKG: 9849679			
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.903	0.759	17 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	14.76	14.68	1 (1)	20
Batch number: 182880571401	Sample number(s): 9849679-9849680 BKG: 9849679			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 182880571402	Sample number(s): 9849683-9849684,9849687-9849688 BKG: 9849683			
Mercury	N.D.	N.D.	0 (1)	20
	N T U	N T U		
Batch number: 18285121451B	Sample number(s): 9849685-9849687,9849689-9849690 BKG: 9849687			
Turbidity	8.10	8.00	1	8
	ug/l	ug/l		
Batch number: 18289001101A	Sample number(s): 9849679,9849683,9849687 BKG: 9849683			
Total Hardness	75860	78800	4 (1)	7

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182901AA

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/18/2018 17:37

Group Number: 1997954

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182901AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9849679	94	99	98	91
9849683	94	100	97	92
9849691	93	99	97	92
Blank	93	101	98	91
LCS	94	95	99	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182903AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9849687	93	99	97	90
Blank	94	98	97	91
LCS	95	102	100	94
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182850034A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9849679	61	68	58	65
9849680	61	67	59	66
9849683	64	70	63	66
9849684	62	67	60	65
9849687	57	67	55	66
9849688	65	70	63	66
Blank	71	83	67	80
LCS	59	41	56	41
LCSD	64	57	61	56
Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 1997954 Sample # 9849679-91

COC # 578328

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water ☑ Potable ☐ Ground ☐ Surface ☐ NPDES ☐ | Other: ___

Analysis Requested

Preservation and Filtration Codes

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	F PCBs (Unfiltered)	F/N Metals (Filtered)	N Metals (Unfiltered)	N Mercury	N Hardness	H TSS	H VOCs - 8260 c	Turbidity - SM2130
101118-01-SW-U-A-1	10/11/18	0835	✓		13	2	2	1	1	1	1	1	3	1
101118-01-SW-U-B-1	10/11/18	0840	✓		2							1		1
101118-01-SW-U-C-1	10/11/18	0845	✓		2							1		1
101118-02-SW-A-A-1	10/11/18	0850	✓		13	2	2	1	1	1	1	1	3	1
101118-02-SW-A-B-1	10/11/18	0855	✓		2							1		1
101118-02-SW-A-C-1	10/11/18	0915	✓		2							1		1
101118-03-SW-D-A-1	10/11/18	0800	✓		13	2	2	1	1	1	1	1	3	1
101118-03-SW-D-B-1	10/11/18	0805	✓		2							1		1
101118-03-SW-D-C-1	10/11/18	0810	✓		2							1		1
101118-TB-01	10/11/18	1400	✓		1								1	

For Lab Use Only
FSC: ___
SCR#: ___

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Remarks

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/13/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/11/18	1500			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by [signature]	10/12/18	1020

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ___ FedEx X Other ___

Temperature upon receipt 0.6 & 0.9 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229880

Group Number(s): 1997954

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/12/2018 10:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Kristin Zeigler (2123) at 12:56 on 10/12/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	0.6	DT	Wet	Y	Bagged	N
2	DT42-01	0.9	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
101118-03-SW-D-B-1	10/11/2018 08:10	
101118-03-SW-D-C-1	10/11/2018 08:35	

2425 New Holland Pike
Lancaster, PA 17605-2425

T : 717-656-2300
F : 717-656-2681
www.LancasterLabs.cor

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

BASF Corporation
100 Park Avenue
Florham Park NJ 07932-0685

Report Date: October 22, 2018 09:25

Project: Rensselaer

Account #: 04285
Group Number: 1998313
SDG: RNS26
PO Number: BASFRNNY.P093
State of Sample Origin: NY

Electronic Copy To	Environmental Standards, Inc.	Attn: Amanda Cover
Electronic Copy To	BASF Corporation	Attn: Douglas Reid-Green
Electronic Copy To	AECOM	Attn: John Bleiler
Electronic Copy To	AECOM	Attn: Ryan McCarthy
Electronic Copy To	AECOM	Attn: Lori Herberich

Respectfully Submitted,

Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
101218-01-SW-U-A-1 Grab Surface Water	10/12/2018 08:50	9851433
101218-01-SW-U-A-1 Grab Surface Water Filtered	10/12/2018 08:50	9851434
101218-01-SW-U-B-1 Grab Surface Water	10/12/2018 08:55	9851435
101218-01-SW-U-C-1 Grab Surface Water	10/12/2018 09:00	9851436
101218-02-SW-A-A-1 Grab Surface Water	10/12/2018 09:25	9851437
101218-02-SW-A-A-1 Grab Surface Water Filtered	10/12/2018 09:25	9851438
101218-02-SW-A-B-1 Grab Surface Water	10/12/2018 09:30	9851439
101218-02-SW-A-C-1 Grab Surface Water	10/12/2018 09:35	9851440
101218-03-SW-D-A-1 Grab Surface Water	10/12/2018 08:00	9851441
101218-03-SW-D-A-1 Grab Surface Water Filtered	10/12/2018 08:00	9851442
101218-03-SW-D-B-1 Grab Surface Water	10/12/2018 08:05	9851443
101218-03-SW-D-C-1 Grab Surface Water	10/12/2018 08:10	9851444
101218-TB-01 Water	10/12/2018 13:00	9851445

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **101218-01-SW-U-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:50
SDG#: RNS26-01

BASF Corporation
ELLE Sample #: WW 9851433
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	1 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.127	0.635	1
14188	PCB-1221	11104-28-2	N.D. D1	0.127	0.635	1
14188	PCB-1232	11141-16-5	N.D. D1	0.127	0.635	1
14188	PCB-1242	53469-21-9	N.D. D1	0.127	0.635	1
14188	PCB-1248	12672-29-6	N.D. D1	0.127	0.635	1
14188	PCB-1254	11097-69-1	N.D. D1	0.127	0.635	1
14188	PCB-1260	11096-82-5	N.D. D1	0.127	0.635	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0939	0.635	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0939	0.635	1
14188	Total PCBs	1336-36-3	N.D.	0.0939	0.635	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.75 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	13.5 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,200	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	16,900	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101218-01-SW-U-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:50
SDG#: RNS26-01

BASF Corporation
ELLE Sample #: WW 9851433
ELLE Group #: 1998313
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182921AA	10/19/2018 19:50	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182921AA	10/19/2018 19:50	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/16/2018 22:58	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:11	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:04	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705001	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 09:54	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18286121451A	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:57	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-01-SW-U-A-1 Grab Surface Water Filtered**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:50
SDG#: RNS26-02

BASF Corporation
ELLE Sample #: WW 9851434
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.114	0.568	1
14188	PCB-1221	11104-28-2	N.D. D1	0.114	0.568	1
14188	PCB-1232	11141-16-5	N.D. D1	0.114	0.568	1
14188	PCB-1242	53469-21-9	N.D. D1	0.114	0.568	1
14188	PCB-1248	12672-29-6	N.D. D1	0.114	0.568	1
14188	PCB-1254	11097-69-1	N.D. D1	0.114	0.568	1
14188	PCB-1260	11096-82-5	N.D. D1	0.114	0.568	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0841	0.568	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0841	0.568	1
14188	Total PCBs	1336-36-3	N.D.	0.0841	0.568	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	11.9 J	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/16/2018 23:09	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:41	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:06	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705001	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-01-SW-U-B-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:55
SDG#: RNS26-03

BASF Corporation
ELLE Sample #: WW 9851435
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451A	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:57	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-01-SW-U-C-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:00
SDG#: RNS26-04

BASF Corporation
ELLE Sample #: WW 9851436
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	12	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	15,100	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:57	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-02-SW-A-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:25
SDG#: RNS26-05

BASF Corporation
ELLE Sample #: WW 9851437
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.8 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.115	0.576	1
14188	PCB-1221	11104-28-2	N.D. D1	0.115	0.576	1
14188	PCB-1232	11141-16-5	N.D. D1	0.115	0.576	1
14188	PCB-1242	53469-21-9	N.D. D1	0.115	0.576	1
14188	PCB-1248	12672-29-6	N.D. D1	0.115	0.576	1
14188	PCB-1254	11097-69-1	N.D. D1	0.115	0.576	1
14188	PCB-1260	11096-82-5	N.D. D1	0.115	0.576	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0853	0.576	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0853	0.576	1
14188	Total PCBs	1336-36-3	N.D.	0.0853	0.576	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.87 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	1.1 J	1.1	3.0	1
06049	Zinc	7440-66-6	14.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	82,600	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	17	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	21,200	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101218-02-SW-A-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:25
SDG#: RNS26-05

BASF Corporation
ELLE Sample #: WW 9851437
ELLE Group #: 1998313
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182921AA	10/19/2018 20:14	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182921AA	10/19/2018 20:14	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/16/2018 23:21	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705001A	10/15/2018 17:43	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:12	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705001	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 10:02	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:57	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-02-SW-A-A-1 Grab Surface Water Filtered**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:25
SDG#: RNS26-06

BASF Corporation
ELLE Sample #: WW 9851438
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.111	0.556	1
14188	PCB-1221	11104-28-2	N.D. D1	0.111	0.556	1
14188	PCB-1232	11141-16-5	N.D. D1	0.111	0.556	1
14188	PCB-1242	53469-21-9	N.D. D1	0.111	0.556	1
14188	PCB-1248	12672-29-6	N.D. D1	0.111	0.556	1
14188	PCB-1254	11097-69-1	N.D. D1	0.111	0.556	1
14188	PCB-1260	11096-82-5	N.D. D1	0.111	0.556	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0822	0.556	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0822	0.556	1
14188	Total PCBs	1336-36-3	N.D.	0.0822	0.556	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	17.8	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/16/2018 23:32	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:18	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:14	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705002	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-02-SW-A-B-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:30
SDG#: RNS26-07

BASF Corporation
ELLE Sample #: WW 9851439
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	15	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	20,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:57	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-02-SW-A-C-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 09:35
SDG#: RNS26-08

BASF Corporation
ELLE Sample #: WW 9851440
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	14	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	19,400	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:58	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-03-SW-D-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:00
SDG#: RNS26-09

BASF Corporation
ELLE Sample #: WW 9851441
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	0.6 J	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1
PCBs	**EPA 608.3 Dec. 2016**		**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.124	0.622	1
14188	PCB-1221	11104-28-2	N.D. D1	0.124	0.622	1
14188	PCB-1232	11141-16-5	N.D. D1	0.124	0.622	1
14188	PCB-1242	53469-21-9	N.D. D1	0.124	0.622	1
14188	PCB-1248	12672-29-6	N.D. D1	0.124	0.622	1
14188	PCB-1254	11097-69-1	N.D. D1	0.124	0.622	1
14188	PCB-1260	11096-82-5	N.D. D1	0.124	0.622	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0920	0.622	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0920	0.622	1
14188	Total PCBs	1336-36-3	N.D.	0.0920	0.622	1
Metals	**EPA 200.8 rev 5.4**		**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	0.79 J	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	12.7 J	6.2	15.0	1
	EPA 245.1 rev 3		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1
Wet Chemistry	**EPA 130.2 modified**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	77,300	6,000	20,000	2
	SM 2130 B-2011		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

*=This limit was used in the evaluation of the final result

Sample Description: **101218-03-SW-D-A-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:00
SDG#: RNS26-09

BASF Corporation
ELLE Sample #: WW 9851441
ELLE Group #: 1998313
Matrix: Surface Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182921AA	10/19/2018 20:37	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182921AA	10/19/2018 20:37	Abigail Roselli	1
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/16/2018 23:43	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:21	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:16	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705002	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1
12147	Total Hardness	EPA 130.2 modified	1	18289001101A	10/16/2018 10:10	Susan A Engle	2
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:58	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-03-SW-D-A-1 Grab Surface Water Filtered**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:00
SDG#: RNS26-10

BASF Corporation
ELLE Sample #: WW 9851442
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
PCBs		**EPA 608.3 Dec. 2016**	**ug/l**	**ug/l**	**ug/l**	
14188	PCB-1016	12674-11-2	N.D. D1	0.113	0.563	1
14188	PCB-1221	11104-28-2	N.D. D1	0.113	0.563	1
14188	PCB-1232	11141-16-5	N.D. D1	0.113	0.563	1
14188	PCB-1242	53469-21-9	N.D. D1	0.113	0.563	1
14188	PCB-1248	12672-29-6	N.D. D1	0.113	0.563	1
14188	PCB-1254	11097-69-1	N.D. D1	0.113	0.563	1
14188	PCB-1260	11096-82-5	N.D. D1	0.113	0.563	1
14188	PCB-1262	37324-23-5	N.D. D1	0.0833	0.563	1
14188	PCB-1268	11100-14-4	N.D. D1	0.0833	0.563	1
14188	Total PCBs	1336-36-3	N.D.	0.0833	0.563	1
Metals Dissolved		**EPA 200.8 rev 5.4**	**ug/l**	**ug/l**	**ug/l**	
06025	Arsenic	7440-38-2	N.D.	0.68	2.0	1
06028	Cadmium	7440-43-9	N.D.	0.15	1.0	1
06031	Chromium	7440-47-3	N.D.	0.70	4.0	1
06033	Copper	7440-50-8	N.D.	9.9	40.0	1
06035	Lead	7439-92-1	N.D.	1.1	3.0	1
06049	Zinc	7440-66-6	N.D.	6.2	15.0	1
		EPA 245.1 rev 3	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.050	0.20	1

Sample Comments

State of New York Certification No. 10670
This sample was field filtered for dissolved metals and PCBs.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14188	PCB (608.3) 250 ml	EPA 608.3 Dec. 2016	1	182880010A	10/17/2018 00:17	Kirby B Turner	1
11960	Method 608 PCB Water Ext.	EPA 608.3 Dec. 2016	1	182880010A	10/15/2018 20:40	Christine E Gleim	1
06025	Arsenic	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
06028	Cadmium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
06031	Chromium	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
06033	Copper	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
06035	Lead	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
06049	Zinc	EPA 200.8 rev 5.4	1	182870705002A	10/15/2018 16:23	Patrick J Engle	1
00259	Mercury	EPA 245.1 rev 3	1	182880571402	10/16/2018 10:18	Damary Valentin	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	182870705002	10/15/2018 05:12	James L Mertz	1
05714	PW/WW Hg Digest	EPA 245.1 rev 3	1	182880571402	10/16/2018 06:18	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-03-SW-D-B-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:05
SDG#: RNS26-11

BASF Corporation
ELLE Sample #: WW 9851443
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2130 B-2011**		**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	9.3	0.140	1.00	1
	SM 2540 D-2011		**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	10,700	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:58	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-03-SW-D-C-1 Grab Surface Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 08:10
SDG#: RNS26-12

BASF Corporation
ELLE Sample #: WW 9851444
ELLE Group #: 1998313
Matrix: Surface Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry		**SM 2130 B-2011**	**N T U**	**N T U**	**N T U**	
12145	Turbidity	n.a.	11	0.140	1.00	1
		SM 2540 D-2011	**ug/l**	**ug/l**	**ug/l**	
13858	Total Suspended Solids	n.a.	11,600	1,000	3,000	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12145	Turbidity	SM 2130 B-2011	1	18286121451B	10/13/2018 14:00	Luz M Groff	1
13858	Total Suspended Solids	SM 2540 D-2011	1	18289385801A	10/16/2018 10:58	Angelica Cintron	1

*=This limit was used in the evaluation of the final result

Sample Description: **101218-TB-01 Water**
COC: 578237

Project Name: **Rensselaer**

Submittal Date/Time: 10/13/2018 09:30
Collection Date/Time: 10/12/2018 13:00
SDG#: RNS26-13TB

BASF Corporation
ELLE Sample #: WW 9851445
ELLE Group #: 1998313
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Chlorobenzene	108-90-7	N.D.	0.2	1	1
11997	1,2-Dichlorobenzene	95-50-1	N.D.	0.2	5	1
11997	1,3-Dichlorobenzene	541-73-1	N.D.	0.2	5	1
11997	1,4-Dichlorobenzene	106-46-7	N.D.	0.2	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11997	VOCs- 5ml Water by 8260C	SW-846 8260C	1	W182921AA	10/19/2018 14:14	Abigail Roselli	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W182921AA	10/19/2018 14:14	Abigail Roselli	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: BASF Corporation
Group Number: 1998313
Reported: 10/22/2018 09:25

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: W182921AA	Sample number(s): 9851433,9851437,9851441,9851445		
Benzene	N.D.	0.2	1
Chlorobenzene	N.D.	0.2	1
1,2-Dichlorobenzene	N.D.	0.2	5
1,3-Dichlorobenzene	N.D.	0.2	5
1,4-Dichlorobenzene	N.D.	0.2	5
Batch number: 182880010A	Sample number(s): 9851433-9851434,9851437-9851438,9851441-9851442		
PCB-1016	N.D.	0.0740	0.500
PCB-1221	N.D.	0.0740	0.500
PCB-1232	N.D.	0.0740	0.500
PCB-1242	N.D.	0.0740	0.500
PCB-1248	N.D.	0.0740	0.500
PCB-1254	N.D.	0.0740	0.500
PCB-1260	N.D.	0.0740	0.500
PCB-1262	N.D.	0.0740	0.500
PCB-1268	N.D.	0.0740	0.500
Total PCBs	N.D.	0.0740	0.500
Batch number: 182870705001A	Sample number(s): 9851433-9851434,9851437		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	10.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182870705002A	Sample number(s): 9851438,9851441-9851442		
Arsenic	N.D.	0.68	2.0
Cadmium	N.D.	0.15	1.0
Chromium	N.D.	0.70	4.0
Copper	N.D.	9.9	40.0
Lead	N.D.	1.1	3.0
Zinc	N.D.	6.2	15.0
Batch number: 182880571402	Sample number(s): 9851433-9851434,9851437-9851438,9851441-9851442		
Mercury	N.D.	0.050	0.20
	NTU	NTU	NTU
Batch number: 18286121451A	Sample number(s): 9851433,9851435		
Turbidity	0.20 J	0.140	1.00

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/22/2018 09:25

Group Number: 1998313

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	N T U	N T U	N T U
Batch number: 18286121451B	Sample number(s): 9851436-9851437,9851439-9851441,9851443-9851444		
Turbidity	0.20 J	0.140	1.00
	ug/l	ug/l	ug/l
Batch number: 18289001101A	Sample number(s): 9851433,9851437,9851441		
Total Hardness	N.D.	3,000	10,000
Batch number: 18289385801A	Sample number(s): 9851433,9851435-9851437,9851439-9851441,9851443-9851444		
Total Suspended Solids	N.D.	1,000	3,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: W182921AA	Sample number(s): 9851433,9851437,9851441,9851445								
Benzene	20	20.99	20	20.99	105	105	80-120	0	30
Chlorobenzene	20	21.47	20	21.77	107	109	80-120	1	30
1,2-Dichlorobenzene	20	21.9	20	22.15	109	111	80-120	1	30
1,3-Dichlorobenzene	20	22.28	20	22.42	111	112	80-120	1	30
1,4-Dichlorobenzene	20	22.11	20	22.56	111	113	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182880010A	Sample number(s): 9851433-9851434,9851437-9851438,9851441-9851442								
PCB-1016	5.01	3.61	5.01	3.11	72	62	50-140	15	36
PCB-1260	5.00	3.81	5.00	4.08	76	82	50-140	7	38
	ug/l	ug/l	ug/l	ug/l					
Batch number: 182870705001A	Sample number(s): 9851433-9851434,9851437								
Arsenic	10	9.85			98		85-115		
Cadmium	5.00	5.30			106		85-115		
Chromium	50	52.79			106		85-115		
Copper	50	50.91			102		85-115		
Lead	15	15.53			104		85-115		
Zinc	500	528.67			106		85-115		
Batch number: 182870705002A	Sample number(s): 9851438,9851441-9851442								
Arsenic	10	10.65			107		85-115		
Cadmium	5.00	5.22			104		85-115		
Chromium	50	49.87			100		85-115		
Copper	50	50.53			101		85-115		
Lead	15	15.5			103		85-115		
Zinc	500	523.89			105		85-115		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/22/2018 09:25

Group Number: 1998313

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182880571402	Sample number(s): 9851433-9851434,9851437-9851438,9851441-9851442								
Mercury	1.00	0.917			92		85-115		
	N T U	N T U	N T U	N T U					
Batch number: 18286121451A	Sample number(s): 9851433,9851435								
Turbidity	10	9.90			99		90-104		
Batch number: 18286121451B	Sample number(s): 9851436-9851437,9851439-9851441,9851443-9851444								
Turbidity	10	9.90			99		90-104		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18289001101A	Sample number(s): 9851433,9851437,9851441								
Total Hardness	40000	37820	40000	38240	95	96	85-110	1	3
Batch number: 18289385801A	Sample number(s): 9851433,9851435-9851437,9851439-9851441,9851443-9851444								
Total Suspended Solids	150000	143800			96		89-105		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182870705001A	Sample number(s): 9851433-9851434,9851437 UNSPK: 9851433									
Arsenic	N.D.	10	10.96			110		70-130		
Cadmium	N.D.	5.00	5.30			106		70-130		
Chromium	0.748	50	52.95			104		70-130		
Copper	N.D.	50	52.89			106		70-130		
Lead	N.D.	15	16.5			110		70-130		
Zinc	13.46	500	541.04			106		70-130		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182870705001A	Sample number(s): 9851433-9851434,9851437 BKG: 9851433			

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: BASF Corporation
Reported: 10/22/2018 09:25

Group Number: 1998313

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	ug/l	ug/l		
Arsenic	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.748	N.D.	200* (1)	20
Copper	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Zinc	13.46	14.58	8 (1)	20
	N T U	N T U		
Batch number: 18286121451B	Sample number(s): 9851436-9851437,9851439-9851441,9851443-9851444 BKG: 9851437			
Turbidity	17	17	0	8

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260C
Batch number: W182921AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9851433	95	95	95	89
9851437	95	95	95	89
9851441	95	93	96	90
9851445	93	97	96	91
Blank	94	97	97	90
LCS	95	93	98	93
LCSD	95	96	98	93
Limits:	80-120	80-120	80-120	80-120

Analysis Name: PCB (608.3) 250 ml
Batch number: 182880010A

	Tetrachloro-m-xylene-D1	Decachlorobiphenyl-D1	Tetrachloro-m-xylene-D2	Decachlorobiphenyl-D2
9851433	61	85	57	83
9851434	44	82	44	78
9851437	54	80	52	77
9851438	48	93	45	93
9851441	58	87	56	85
9851442	50	80	48	80
Blank	59	34	55	32
LCS	58	46	55	43
LCSD	54	81	50	78

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: BASF Corporation
Group Number: 1998313
Reported: 10/22/2018 09:25

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PCB (608.3) 250 ml
Batch number: 182880010A

Limits:	33-137	10-148	33-137	10-148

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 4285 Group # 1998313 Sample # 985/433-45

COC # 578237

Client Information

Client: BASF	Acct. #:
Project Name/#: Hudson River OU-2	PWSID #:
Project Manager: John Bleiler	P.O. #: 229608
Sampler: Patrick Gehan	Quote #:
State where samples were collected: NY	For Compliance: Yes ☑ No ☐

Matrix: Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☐ NPDES ☑ Surface ☐ | Other: ___

Analysis Requested — Preservation and Filtration Codes

For Lab Use Only
FSC: ___
SCR#: ___

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 P=H_3PO_4
F=Field Filtered O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	F PCBs (Filtered)	PCBs (unfiltered)	F Metals (Filtered)	N Metals (unfiltered)	N Mercury	N Hardness	TSS	H VOCs – 8260C	Turbidity – SM2130	Remarks
101218-01-SW-U-A-1	10/12/18	0850	✓		13	2	2	1	1	1	1	1	3	1	
101218-01-SW-U-B-1	10/12/18	0855	✓		2							1		1	
101218-01-SW-U-C-1	10/12/18	0900	✓		2							1		1	
101218-02-SW-A-A-1	10/12/18	0925	✓		13	2	2	1	1	1	1	1	3	1	
101218-02-SW-A-B-1	10/12/18	0930	✓		2							1		1	
101218-02-SW-A-C-1	10/12/18	0935	✓		2							1		1	
101218-03-SW-D-A-1	10/12/18	0800	✓		13	2	2	1	1	1	1	1	3	1	
101218-03-SW-D-B-1	10/12/18	0805	✓		2							1		1	
101218-03-SW-D-C-1	10/12/18	0810	✓		2							1		1	
101218-TB-01	10/12/18	1300	✓		1								1		

Turnaround Time (TAT) Requested (please circle)
Standard (Rush)
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days: 10/14/18

E-mail address: Ryan.McCarthy@aecom.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) (per contract) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/12/18	1430			
			[signature]	10-13-18	930

EDD Required? (Yes) No
If yes, format: per contract

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ___ FedEx ___ Other ___

Temperature upon receipt 0.5 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 229999

Group Number(s): 1998313

Client: BASF

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/13/2018 9:30
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 11:50 on 10/13/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.2	DT	Wet	Y	Bagged	N
2	DT131	0.5	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.